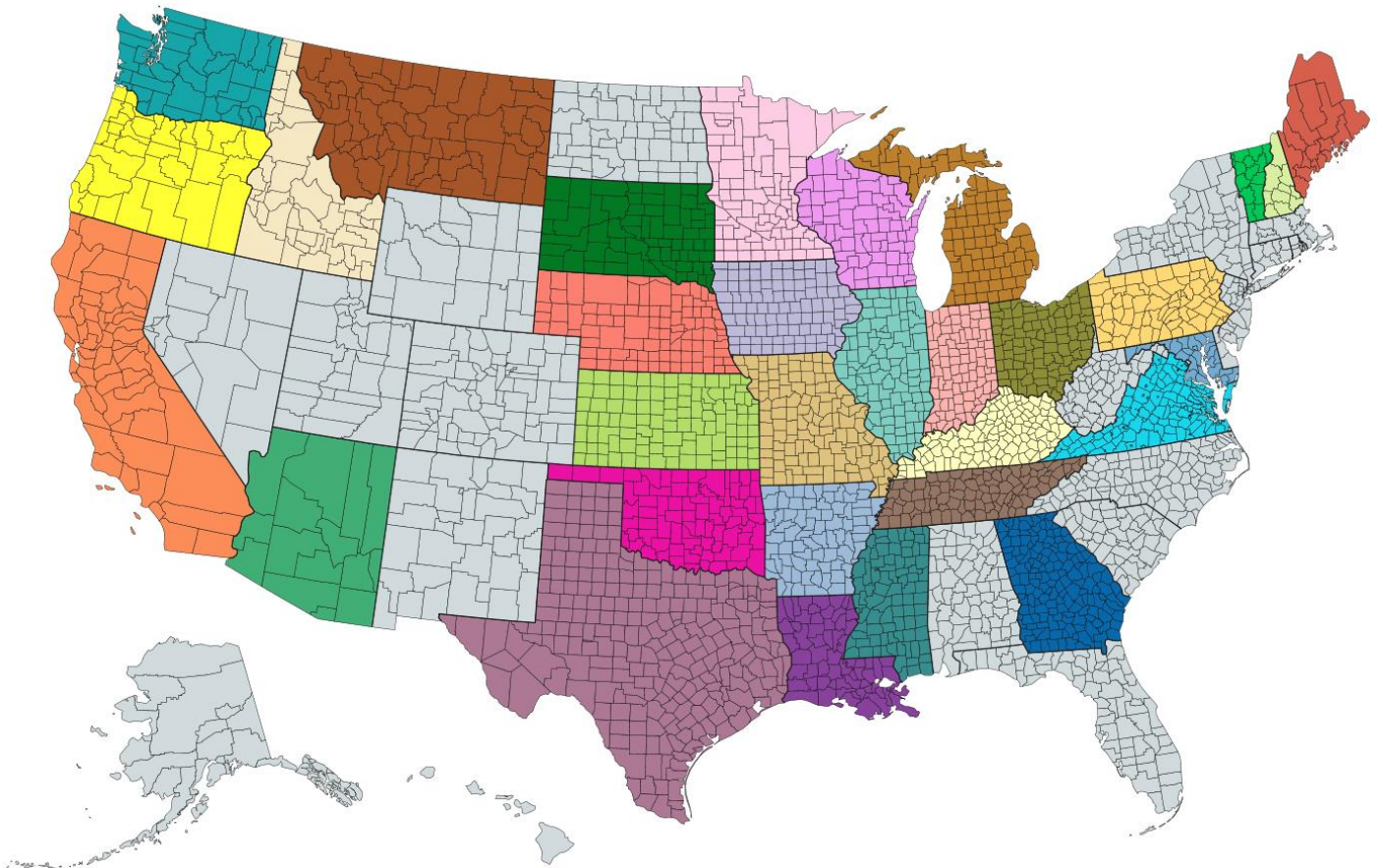




Sourcebook

Rural Health Outreach Grant Program

2015 - 2018



Health Resources and Services Administration • 5600 Fishers Lane, Rockville, MD 20857 • 301-443-0835

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U.S. Department of Health and Human Services
Health Resources and Services Administration



Sourcebook

2015-2018 Rural Health Care Services Outreach Grant Recipients

The Rural Health Care Services Outreach Program is authorized by Section 330A of the Public Health Service Act (42 U.S.C. 254c), as amended. The program supports projects that demonstrate creative or effective models of outreach and service delivery in rural communities. Funding can be used to meet a broad range of health care needs from health promotion and disease prevention to expanding oral and mental health services to case management for rural HIV patients. These projects address the needs of a wide range of population groups including, but not limited to, low-income populations, the elderly, pregnant women, infants, adolescents, rural minority populations and rural populations with special health care needs. The community being served must be involved in the development and ongoing operations of the program, to appropriately address the needs of the population. All projects are responsive to any unique cultural, social, religious and linguistic needs of the target population.

The emphasis of this grant program is on service delivery through collaboration, adoption of an evidence-based or promising practice model, demonstration of health outcomes, replicability and sustainability. Proposed projects have an outcomes-oriented approach that will enhance and sustain the delivery of effective health care in rural communities by tracking specific health indicators that will demonstrate the impact of their project at the end of their grant period. Projects are based on evidence-based or promising practice models and demonstrate health status improvement in rural communities. Outreach projects can take the framework of an evidence-based or promising practice model and tailor it to their community's need and organization.

This Source Book provides a description of the 60 initiatives funded under the Rural Health Care Services Grant Program in the 2015 – 2018 funding cycle. The following information for each grantee is included: Organizational Information, Consortium Partners, Community Characteristics, Program Services, Outcomes, Challenges & Innovative Solutions, Sustainability, and Implications for other Communities.

2015 - 2018 Rural Health Outreach Grantees Grant Recipients
(Listed by State)

State	Grant Organization Name	Page
Arizona		
	Mariposa Community Health Center, Inc.	1
	Rio Rico Fire District Station	8
	Summit Healthcare Association	16
Arkansas		
	Arcare	25
California		
	Palo Verde Health Care District	30
	Redwood Community Action Agency	35
Colorado		
	All American Families	43
	Tri-County Health Network	52
Georgia		
	Tanner Medical Center, Inc.	62
Idaho		
	St Luke's McCall, Ltd.	69
	St. Mary's Hospital, Inc.	79
Illinois		
	Sinnissippi Centers, Inc.	86
	Stephenson County Health Department	93
	Transitions Of Western Illinois, Inc.	103
Indiana		
	Affiliated Service Providers Of Indiana (ASPIN), Inc.	110
Iowa		
	Child Abuse Prevention Services	116
Kansas		
	Community Health Center Of Southeast Kansas, Inc.	122
	Unified School District #498 Marshall County Kansas/Valley Heights School District 498	130
Kentucky		
	Montgomery County Health Department	139
	Mountain Comprehensive Care Center, Inc.	147
	Northeast Kentucky Regional Health Information Organization, Inc.	151
Louisiana		
	Innis Community Health Center, Inc.	158
Maine		
	Aroostook County Action Program	166
	Healthy Acadia	172
	Mount Desert Island Hospital	182
Maryland		
	Garrett County Memorial Hospital	189
	Somos, Inc.	194
Michigan		
	Harbor Beach Community Hospital, Inc.	200
Minnesota		
	Centracare Health System - Long Prairie	206
	Mississippi Headwaters Area Dental Health Center	213
Mississippi		
	Delta Health Alliance, Inc.	220

2015 - 2018 Rural Health Outreach Grantees Grant Recipients
(Listed by State)

State	Grant Organization Name	Page
	Tallahatchie General Hospital & Extended Care Facility	226
Missouri		
	Northeast Missouri Health Council, Inc.	232
	Ozarks Medical Center	239
	Washington County Memorial Hospital	246
Montana		
	Granite County Hospital District	253
Nebraska		
	East Central District Health Dept.	258
New Hampshire		
	Mid-State Health Center	263
	North Country Health Consortium	271
Ohio		
	Ohio Northern University, Inc.	279
	Ohio University	288
	Trinity Hospital Twin City	297
Oklahoma		
	Rural Health Project Inc.	306
Oregon		
	Yellowhawk Tribal Health Center	312
Pennsylvania		
	Armstrong-Indiana-Clarion Drug And Alcohol Commission, Inc.	320
	Butler Healthcare Providers	328
	J C Blair Memorial Hospital	336
	St. Luke's Miners Memorial Hospital	343
	UPMC Bedford	350
Saipan		
	Commonwealth Healthcare Corporation	358
South Dakota		
	Delta Dental Philanthropic Fund	363
	Sanford Health Network	370
	The University Of South Dakota	380
Texas		
	Plainview Foundation For Rural Health Advancement	387
Vermont		
	Bi-State Primary Care Association, Inc.	397
Virginia		
	Bay Rivers Telehealth Alliance	404
	St. Mary's Health Wagon, Inc.	413
	Strength in Peers	418
Washington		
	Yakima Valley Farm Workers Clinic	424
Wisconsin		
	Prairie Du Chien Memorial Hospital Association, Incorporated	432

Arizona

Part I: Organizational Information

Grant Number	D04RH28385
Grantee Organization	Mariposa Community Health Center
Organization Type	Community Health Center
Address	1852 N. Mastick Way, Nogales, AZ 85621
Grantee organization website	www.mariposa.net
Outreach grant project title	Vivir Mejor! Consortium
Project Director	Name: Patty Molina
	Title: Senior Director/Community Health Services
	Phone number: 520-375-6050
	Fax number: 520-761-2153
	Email address: pmolina@mariposachc.net
Project Period	2015 – 2018
Funding level for each budget period	May 2015 to April 2016: \$200,000
	May 2016 to April 2017: \$200,000
	May 2017 to April 2018: \$200,000

Part II: Consortium Partners

* Indicates consortium partners who signed a Memorandum of Understanding/Agreement

Partner Organization	Location (town/county/state)	Organizational Type
University of Arizona *	Tucson, Pima County, AZ	University
Carondelet Holy Cross Hospital*	Nogales, Santa Cruz County, AZ	Hospital
Nogales Community Food Bank*	Nogales, Santa Cruz County, AZ	Food Bank
Rio Rico Community Center*	Rio Rico, Santa Cruz County, AZ	Community Center
Nogales Community Development*	Nogales, Santa Cruz County, AZ	Economic Development Corporation
Dinobones*	Rio Rico, Santa Cruz County, AZ	Community Center
Adolescent Wellness Network	Nogales, Santa Cruz County, AZ	Network

Part III: Community Characteristics

A. Area

The Communities of Nogales and Rio Rico in Santa Cruz County, Arizona

B. Community description

Santa Cruz County is the smallest county in Arizona with a population of 47,420 (2017). The county's profile is heavily influenced by the international border it shares with Sonora, Mexico. More than 80.6% of the county is Hispanic, compared to 29.2% of Arizona. More than 95% of the Nogales population is Hispanic, mostly of Mexican-American origin. The County's median household income trails the state household income by about \$5,000, but the Nogales median household income trails the state level by \$20,000 per household. The November 2017 unemployment rate was 11.6%, compared to 5.0% for Arizona. Nearly 20% (19.1%) of county residents live in poverty, compared to 14.6% statewide. Only 6 out of ten adults graduate from high school (60.7%), compared to eight out of ten adults (81.0%) in Arizona. Santa Cruz County is a medically underserved area and was designated by the U.S. Department of Health and Human Services as a Health Personnel Shortage Area (HPSA), a Medically Underserved Population (MUP), a Medically Underserved Area (MUA) and a Dental HPSA. The number of Arizona Health Care Cost Containment System (AHCCCS) enrollees in Santa Cruz County (32.2%) are almost double those of the state (18.4%). Clearly, this shows that our county is a high need area with few employment opportunities and limited services.

C. Need

The focus of our Rural Health Care Outreach Services Program, Vivir Mejor!, is to specifically address healthy eating as one of the obesity prevention and reduction strategies identified in the Santa Cruz County Health Improvement Plan (CHIP) published in May 2013. Healthy weight and diabetes emerged as one of three priority areas for the CHIP, and, as a result, the following goals were included in the 2013 Santa Cruz County CHIP:

- Increase access to healthy food options and promotion of healthy eating
- Increase access to and utilization of active living and recreation opportunities

The leading cause of death in both Santa Cruz County and the state of Arizona is cardiovascular disease causing 25.1 and 28 percent of deaths, respectively. Obesity is related to many chronic diseases that affect Santa Cruz County residents, including cardiovascular disease, hypertension, and diabetes. More than one in four (26%) of Santa Cruz County adults had a BMI over 30, compared to 25% of Arizona adults. The rate of obesity among Santa Cruz County adults has increased by two percent according to the average annual prevalence of 24.0 percent from 2001-2007

Part IV: Program Services

A. Evidence-based and/or promising practice model(s)

The following are six evidence-based and/or promising practice model(s) that we utilized in the Vivir Mejor! program

- Use of the *Su Corazon, Su Vida curriculum* to promote heart health and reduce obesity and chronic disease risk
- Use of the *La Vida Buena Curriculum* to promote healthy eating to reduce diabetes risk among children and adolescents
- Use of **incentives to encourage purchase and consumption of fresh fruits and vegetables** among low-income families via food security instruments and/or at local farmers markets
- Use of *Community Health Workers* as both providers of education and support for self-care
- Use of a *Patient Navigator* model that includes integration of CHWs as part of the patient's coordinated care team
- Use of *Lay Leaders* to extend services and build community capacity via trained community members as peer educators

B. Description of Activities

In 2015, we began the weekly Promotora - delivered heart disease prevention education classes (*Su Corazon, Su Vida/ Your Heart, Your Life*), to both provider referred Mariposa Community Health Center (MCHC) patients and walk-in community members. We shortened the original eight-week intervention to five sessions when attrition became a challenge. In keeping with the goal of the program to promote healthy eating and food preparation, there was an emphasis on teaching participants how to substitute less healthy ingredients with healthy options and encouraging the daily consumption of a variety of fruits and vegetables. In addition, we continued to offer the Yoga and Body Strengthening classes we have provided to the community since 2011 as a supplement to the health education. We also expanded the classes to the northern part of the county (Rio Rico) because of multiple requests from residents for physical activity classes that were closer to where they live. We offered the classes four times a week in Rio Rico and Nogales and generally got between 20-30 participants attending each class.

We also offered the **Nutrition Counseling** (collaborating with Holy Cross Hospital) sessions to provider-referred, high-risk patients of MCHC. A bilingual Certified Diabetes Educator who has worked in this community for over 20 years provided the nutrition counseling. The initial session would be for 30 minutes, with two possible follow-ups, when necessary. The focus of the session was to develop an appropriate meal plan for the patient and to provide basic nutrition education, portion size, weight control and label reading.

Participants of the Vivir Mejor! Program received a large food box from the **Nogales Community Food Bank**, which they could redeem with vouchers given to them as incentives. The food box contained items such as whole-wheat pasta, canned tuna and salmon, low salt canned vegetables, lentils, pinto beans, no-sugar canned fruit, and a large box of oatmeal.

The youth- focused *La Vida Buena* (The Good Life) component has undergone changes since it began in late 2015, mostly in relation to participant age eligibility. We targeted children 10-14 years of age who were referred to the program by Mariposa Community Health Center pediatricians. The program offered a weekly two-hour session for four weeks. Class topics were My Plate, Fats & Sugars, Fitness and Portion/Serving Size. Healthy snacks were either prepared ahead of time by the class facilitator or else participants were invited to help with snack preparation. Some of the snacks were cauliflower rice, bruschetta, fennel salad and other nutritious options. Another strategy used to introduce new fruits or vegetables to the participants was blind taste testing. This activity was especially popular because of its highly interactive quality in addition to being a great way to introduce participants to fruits/vegetables they had never eaten before. A 30-minute physical activity segment formed part of every session, as well. One or both parents were encouraged to attend the first and last sessions with their child in order to ensure that the parent

was aware of the key points of the program. Unfortunately, this did not always happen consistently and there were some parents who did not attend.

The **Lay Leader program** is in its fifth year and continues to provide informal, small group health education in the community. Three trained Lay Leaders teach a modified version of the *Su Corazon, Su Vida* classes in their homes or in the homes of participants. The Lay Leaders have managed to connect with community members who don't or can't attend the classes we offer in addition to also reaching out to a variety of age groups.

C. Role of Consortium Partners

The following is a description of the roles and responsibilities of each of the contracted partners:

- The **Nogales Community Food Bank (NCFB)**, provided heart-healthy food boxes as an incentive to 120 program participants who have attended either the *Su Corazon, Su Vida* classes or the one-on-one nutrition consultations provided to referred patients by the Certified Diabetes Educator (CDE).
- As mentioned above, **Carondelet Holy Cross Hospital (CHCH)** provided 30-minute nutrition consultations to 154 high-risk, provider-referred patients. The patient's height and weight, BMI, and blood pressure are measured at each session. The Certified Diabetes Educator uses a variety of food models to educate the patient on portion size. A meal plan is developed and a follow-up consultation is scheduled, as needed.
- The **University of Arizona, Arizona Prevention Resource Center**, our evaluator for the program, has worked very closely with the consortium partners and has used a participatory model of evaluation, ensuring that principal partners are involved in the evaluation process. In addition to developing the baseline and post-questionnaires, the team provided data collection training to program staff as well as helpful feedback from an evaluation standpoint and generally kept activities on track.

The **Rio Rico Community Center** served as an accessible and centrally located facility for Rio Rico residents who attended the *La Vida Buena* youth-focused program. It has a kitchen that was used to prepare healthy snacks and food demonstrations, a large outdoor area that is appropriate for physical activity and was, overall, a flexible community partner always willing to accommodate the *La Vida Buena* schedule.

- **Nogales Community Development's** primary involvement was to attend some of the consortium meetings and provide feedback or ideas, update the group on its organizations' activities and to track the number of vouchers that *Vivir Mejor!* participants redeemed at the *Nogales Mercado*.
- **Dinobones** (it used to be a preschool, hence the name!) served as a large facility where we were able to schedule physical activity classes five days a week. Because it is located in Rio Rico, we were happy to partner with the owner and provide a much needed service in that community.
- The **Santa Cruz County Adolescent Wellness Network** serves as the liaison to school districts and other youth-serving organizations, as well as youth themselves through our *Positive Youth Leadership Team* (advisory council).

Part V: Outcomes

A. Outcomes and Evaluation Findings

The following is a highlight of outcomes and other evaluation findings for each main program strategy based on current data:

- **Strategy 1: Su Corazón, Su Vida**
By year two there were 300 visits to the program *Su Corazón, Su Vida* and/or exercise classes. The *Vivir Mejor!* Program staff delivered ten rounds of classes and of these, 78% of participants attended at least five classes and filled out a post survey. One-hundred eight (108) participants who attended the *Su Corazon, Su Vida* classes completed pre/post questionnaires. The Lay Leaders conducted six sessions, with 46 participants filling out a post survey. As of January 2018, 154 participants had completed the Lay Leader classes.
- **Strategy 2: La Vida Buena Classes for Youth**
Over the course of year one, *Mariposa Community Health Center (MCHC)* conducted *La Vida Buena* classes with adolescents ranging from elementary through high school. Based on the response of participants, *Mariposa Community Health Center* decided that the target age for the curriculum would be adolescents aged 11-14. *MCHC* conducted five *La*

Vida Buena groups over the course of the second year with a total of 73 students, 63 of whom (86%) finished four of the five classes. The age of participants ranged from 11 to 18. For the most part, the age of each group tended to cluster, with the exception of the group conducted with MCHC Summer Youth Institute, which is larger and range from 15-18. As of January 2018, 115 participants out of 141 completed the four-week intervention.

- **Strategy 3: Improve Access to Local Food System & Food Security Programs**

The Nogales Community Food Bank currently provides food boxes for adults who participate in the *Su, Corazon Su Vida* program. These boxes include fresh produce to encourage eligible SCSV participants to incorporate fruits and vegetables into their diets. In year two, a total of 125 participants received food boxes. Additionally, SCSV participants received vouchers redeemable at the Nogales Farmer's Market. Ninety-six (96) SCSV participants have received four (4) vouchers each, with a value of five dollars per voucher. In year three of the program, the idea came up to take a closer look at how participants who receive a food box feel about its contents and what, if any impact, does the food box have on their future dietary decisions. The evaluator conducted interviews with some of the food box recipients and the data from those interviews will be included in the Final Assessment Report.

- **Strategy 4: Promote Healthy Food Preparation via Cooking Classes**

In order to provide Santa Cruz County residents with an opportunity to learn healthy food preparation skills, participants of the *Su Corazon Su Vida* classes are encouraged to bring healthy prepared food to classes to share and demonstrate how they are applying what they have learned. Many of the participants brought in foods because they were quite enthusiastic about sharing their recipes with others.

The application of information in the classes to healthy food-preparation topics appears to be an effective approach. At post test, one-third of participants in both the CHW and lay leader groups felt more confident about their ability to cook healthy food than they did prior to the classes.

- **Strategy 5: Nutrition Counseling**

During year two, 76 high-risk patients completed initial counseling session. Of these patients, 35 had at least one additional visit, with 14 having more than two visits. Nine patients had three visits, four patients had four visits and one patient had five visits. Twenty-one (21) of these patients had A1c measurements taken during both the initial appointment and the 3-month follow-up. Analysis indicates a decrease in mean A1c from 8.61 to 7.25 . These results confirm the findings of evaluation data from Vivir Mejor! nutritional counseling in previous years.

- **Strategy 6: Expand the Use of Promotoras de Salud**

Previous evaluation results have shown that Vivir Mejor! participants who receive Diabetes Education and other support from promotoras de salud (formerly referred to as community care coordinators and patient navigators) have improved chronic-disease prevention outcomes. Over the past year, two promotoras focused on enhancing service delivery to Mariposa Community Health Center high-risk patients throughout the county. The promotoras work one-on-one with patients to provide diabetes education, facilitate self-management, address social and economic barriers to health, and assist with accessing primary care and social services. Patients are identified through provider referral, Mariposa's care coordination program, partnership and referrals from a local EMS Community Paramedicine program, and word-of-mouth. These patients are referred to other Vivir Mejor! services such as nutrition counseling, and chronic-disease prevention classes.

In 2017, Mariposa Community Health Center had 1,855 patients with a diabetes diagnosis. Of these, 595 (32%) patients had a recorded lab value for HbA1C over 8%, making them eligible for diabetes services. The promotoras provided services to 185 (32%) of these patients.

B. Recognition

In 2016, we had the manuscript "Rural Collaborative Model for Diabetes Prevention and Management: A Case Study" accepted for publication in *Journal of Health Care for the Poor and Underserved* (Supplement to Volume 27, Number 4) This was followed by the second peer-reviewed journal article of the same name published in the *Journal of Health Promotion Practice*.

In the winter of 2017 the Coordinator for the *Rural Women's Health Network*, through the Arizona Alliance for Community Health Centers, invited the Vivir Mejor! Program Manager to present the program during a webinar. Later that spring, Vivir Mejor! Program Manager and promotora once again presented the program at the *Rural Women's Health Symposium* in Sedona, Arizona.

Part VI: Challenges & Innovative Solutions

The challenges we experienced during these last three years were similar to the ones we experienced during the first three-year Outreach grant cycle. The principal challenge was attrition. This was especially challenging with the *La Vida Buena* youth focused component. One of the ways that we were able to overcome the problem, at least partially, was to provide the program in an accelerated format to 40 adolescents that participated in a Summer Youth Institute, a seven-week leadership program offered by Mariposa Community Health Center annually since 2002. This turned out to be an effective way to deliver the sessions and the participants reported that they enjoyed the nutrition information and the blind taste testing of new foods best of all.

No-shows to the nutrition counseling sessions continued to be a challenge throughout the last three years. Our staff regularly made reminder phone calls the day before the appointments but, even taking this measure, we still experienced a high rate of missed appointments.

Part VII: Sustainability

A. Structure

The Vivir Mejor! Consortium will continue to serve as the advisory group to multiple initiatives that will be implemented by Mariposa Community Health Center (MCHC). We plan to continue meeting quarterly with MCHC maintaining the lead role. We will support the existing partnerships in any way we can while seeking to create new partnerships in our effort to advance a culture of health in Nogales and its surroundings. The partnerships that have been established through the Consortium over the last three years have led to other collaborations on projects such as Nogales Complete Streets and the Expanded Food and Nutrition Education Program.

The current partners that have made informal commitments to continue to be part of the Consortium are:

- University of Arizona Cooperative Extension
- Nogales Community Food Bank
- Rio Rico Community Center
- University of Arizona, Prevention Research Center
- WIC
- Carondelet Holy Cross Hospital
- Adolescent Network
- Nogales Community Development

B. On-going Projects and Activities/Services To Be Provided

i) Will all, some or none of the elements of the program be sustainable once Outreach grant funding has ended? Please check the appropriate selection.

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained (i.e. the program will completely end after the grant period)

ii) Identify the projects and activities that will be sustained beyond Outreach grant period.

The activities that will continue will be the following:

La Vida Buena (LVB) - The youth program component will continue, albeit in a revised format thanks to a new three-year award from the Office of Minority Health. Healthy eating and physical activity to address childhood obesity will be the principal focus, but for a younger population (5-8 yrs.) than who we have served during the last three years. Two Promotoras and two Teen Health Facilitators will conduct the classes during the eight-week intervention. Consortium partners Nogales Community Development, Nogales Community Food Bank and Os3 Bike Movement are on board as contracted partners.

Lay Leaders - The three Lay Leaders have been with the program for over five years and are experienced conducting outreach and facilitating classes for small groups. They have expressed an interest in continuing to share their knowledge with others and they have also been very receptive to providing help and support during community events and other efforts that involve community health. Considering that our Community Health Services department relies so heavily on grant funding, this model of sustainability is of great interest to us as well as to potential funders.

Physical Activity Classes - We plan to continue offering physical activity classes in both Nogales and Rio Rico. Fortunately, we can count on another three years of funding for Vivir Mejor! thanks to the new Outreach grant award, which will enable us to contract physical activity instructors. However, we have also met with the Executive Director of the Housing Authority and have tentative plans to offer physical activity in a gym that is centrally located in the housing project and is currently very underutilized.

C. Sustained Impact

The impacts of the activities described below have the most potential to be sustained. They are:

Promotora Outreach/Integration

The Promotora model has been a cornerstone of *Platicamos Salud* (Let's Talk Health), the Community Health Services department of Mariposa Community Health Center (MCHC), for over 26 years. Our culturally competent programs are staffed by individuals whose job titles include promotora, case-manager, case-monitor, teen health facilitator, health educator and most recently, lifestyle coach. Community outreach is an ongoing activity that all promotora staff shares. Promotora integration in clinic coordination has now become a permanent feature at MCHC and has strengthened the link between clinic and community health services.

Consortium Partnerships

Over the past six years, the Vivir Mejor! Consortium has evolved into a mature and well-established multi-agency partnership that consistently reaches out to welcome new members and shares successes and new opportunities. It has also become the advisory group for four initiatives, including *Familia Saludable* (Healthy Family), a Texas A & M family-centered childhood obesity five year research project; Nogales Complete Streets, a foundation-funded technical assistance effort to increase physical activity by advocating for infrastructure change in downtown Nogales; *La Vida Buena* (the Good Life), a federally-funded three-year childhood obesity research project; and *Comer Bien* (Eat Well), a one-year project that addresses uncontrolled diabetes by increasing access to healthy foods and developing partnerships between providers and local markets.

Su Corazón, Su Vida (SCSV) & La Vida Buena (LVB)

The adult and youth focused health education components of the program are essential because they provide information in a way that is easy to understand, culturally appropriate and relevant to the health needs of the community. Group classes are a way to provide social interaction and support to those who might otherwise feel isolated or depressed. We made changes/adjustments to both the interventions based on what worked better; the duration of both was decreased, we added more cooking demonstrations because they are a practical and fun way to teach, and we permitted participants, in the case of SCSV, to attend the five weeks multiple times because many of them reported that they learned something different each time!

Food Boxes

Ongoing access to the food bank is vital in a community where there is such widespread need. We discovered that some of our participants had never accessed the food bank before but their participation in the program provided that opportunity and they are now more likely to continue seeking that help when necessary.

Lay Leaders

Lay Leaders are individuals who began as program participants and who enthusiastically embraced the lifestyle changes they learned about in the program and went on to be trained and teach others in the community. Having trained Lay Leaders helps to build a new capacity in the community for addressing chronic disease beyond the clinic setting.

Part VIII: Implications for Other Communities

Having implemented the Vivir Mejor! Consortium program for the past six years, it has become clear that this is a model that can be utilized in a variety of settings and communities. Over the program's lifespan, the CHW model that it incorporates (in a culturally competent way), has received much more recognition as a way to reduce healthcare costs, expand reach to a hard-to-reach population and provide services in a caring and sensitive manner. The curricula we used, *Su Corazon, Su Vida* and *La Vida Buena* can both be adapted to other communities and in the case of *La Vida Buena*, other age groups. The use of Lay Leaders has also allowed us to effectively teach individuals who, because of their schedules and barriers such as lack of available/affordable childcare or transportation, would not be able to participant in any kind of class-type setting.

Part IX: Success, Increased Capacity, and Contributions to Change

A. Defining Success

- i) How do you define "success" for your grant program? Please check the appropriate selection(s). You may choose more than one option. If other, please describe.
- Access to a new or expanded health service
 - Increased number of people receiving direct services
 - Improved quality of health services
 - Operational efficiencies or reduced costs
 - Integration of process improvement into daily workflow
 - Continuation of program activities after grant funding
 - Continuation of network or consortium after grant funding
 - Health improvement of an individual
 - Health improvement among your program participants
 - Health improvement among your community
 - Enhanced staff capacity, new skills, or education received
 - Improved capacity to adapt to changes in healthcare

- ii) Do you believe that your program has achieved success? If so, how?

Vivir Mejor! Consortium has achieved success because many of the activities we have implemented in the community have raised awareness, increased knowledge and helped create lifestyle changes among participants. In some instances, participants' families have also benefitted from the changes made, as reported by them. I also believe that the consortium we have developed over the past six years has become much stronger and its members have expanded their understanding of other types of work implemented by partners.

Additionally, it has become clear that the providers at Mariposa Community Health Center have bought into our program model and demonstrate this by referring more patients to nutrition counseling as well as the La Vida Buena classes. In fact, the Program Coordinator and Manager were invited to attend the monthly pediatric meeting to give an overview of the youth focused program. The providers expressed a great interest in the program and were especially happy to know they could refer overweight or obese children ages 10-14 yrs. to the program.

B. Organizational Capacity

How has the federal funding of your grant program increased local capacity at your organization, within your network, and/or in your community? Please check the appropriate selection. If other, please describe.

- Formalized networks or coalition
- Developed new partnerships or relationships
- Enhanced skills, education, or training of workforce
- Enhanced data collection and analysis

C. Contributions to Change

Change in individuals' lives, your organization, consortium, or community:

The facilitator for the Su Corazon, Su Vida classes reported back in 2016 about a Hispanic male participant, over 60 years old who began attending classes consistently. When the class cycle ended, he would repeat the next cycle all over again. He was determined to lower his A1C, which started out at 13 % and a year and a half later had decreased to 5%. He also took the initiative to bring healthy snacks to class to share with the other participants. He also informed our staff that he was so encouraged by the changes he was making, partly due to the support of Vivir Mejor! staff and his fellow participants, that he planted his own garden and was, among other things, growing "nopales", a commonly used food (cactus) in Mexico.

Change in policies, systems, and environment:

In 2017, a change was made to improve the way that the Community Health Services Department within Mariposa Community Health Center (MCHC) provides clear, consistent and descriptive information on its many programs and ever evolving calendars to health center staff. This change came about thanks to Vivir Mejor! and the realization that many providers were confused about when and where classes were held, information on participant eligibility and other important information. A department calendar was developed and uploaded into MCHC's intranet system and is updated monthly.

Arizona

Part I: Organizational Information

Grant Number	D04RH28429
Grantee Organization	Rio Rico Fire District
Organization Type	Rural EMS Provider/County Fire District
Address	822 Pendleton Drive, Rio Rico, AZ 85648
Grantee organization website	www.rioricofire.org
Outreach grant project title	Community Healthcare Integrated Paramedicine Program: Santa Cruz County, AZ
Project Director	Name: Matthew Eckhoff
	Title: Director
	Phone number: 602-481-851
	Fax number: 520-281-7670
	Email address: meckhoff@rioricofire.org
Project Period	2015 – 2018
Funding level for each budget period	May 2015 to April 2016: \$184,730
	May 2016 to April 2017: \$185,675
	May 2017 to April 2018: \$182,665

Part II: Consortium Partners

* Indicates consortium partners who have signed a Memorandum of Understanding/Agreement

Partner Organization	Location (town/county/state)	Organizational Type
Arizona Poison & Drug Information Center (AzPDIC)*	Tucson/Pima/Arizona	University
Arizona Center for Rural Health (AzCRH)*	Tucson/Pima/Arizona	University, State Office of Rural Health
Southeastern Arizona Area Health Education Center (SEAHEC)*	Nogales/Santa Cruz/Arizona	Area Health Education Center
Carondelet Holy Cross Hospital (CHCH)*	Nogales/Santa Cruz/Arizona	Critical Access Hospital
Nogales Fire Department*	Nogales/Santa Cruz/Arizona	Municipal Fire/EMS Service
Tubac Fire District*	Tubac/Santa Cruz/Arizona	Rural Fire/EMS District
Mariposa Community Health Center (MCHC)	Nogales/Santa Cruz/Arizona	Federally Qualified Health Center
Sonoita-Elgin Fire District*	Sonoita/Santa Cruz/Arizona	Rural Fire/Emergency Medical Services District (through 11/2017)

Part III: Community Characteristics

A. Area

The Community Healthcare Integrated Paramedicine Program (CHIPP) serves the communities of Rio Rico, Nogales, Tubac and Sonoita-Elgin, in Southern Arizona's Santa Cruz County.

B. Community description

Many residents use EMS services for low-acuity medical complaints because they either do not have access to primary care services and/or lack chronic disease and medication management skills. This is exacerbated by the fact that the county is very rural and community members can be very isolated from existing medical services. Community members may not have transportation, may be unable to travel the 20-30 miles necessary to obtain healthcare services, or may not even know where to go or whom to call to receive appropriate services. In addition, many community members only speak Spanish and therefore have additional difficulties seeking out appropriate medical services. Lack of access to appropriate healthcare services can lead to an exacerbation of chronic illness as community members will wait until they have a medical emergency to take care of their health.

needs. More serious medical cases are transported sixty miles north to Tucson, Arizona, area hospitals for acute and long-term treatment.

C. Need

The program was designed to reduce the environmental factors in homes contributing to poor health and falls; assist patient adherence to the use of medications as prescribed by doctors; increase number of individuals in the service area who have primary care providers; reduce hospital readmissions due to non-compliance with prescribed medications or challenges following discharge plan and reduce the number of emergency department visits. These areas of focus stem from the Santa Cruz County community health profile that highlights that five of the six leading causes of death in the county can be attributed to chronic disease.

Cardiovascular disease is the leading cause of death in Santa Cruz County, with 25% of deaths attributed to the disease. Malignant neoplasms are the second leading cause of death (24%), followed by accident (5%). Chronic lower respiratory disease, chronic liver disease and cirrhosis, and diabetes each account for 4% of deaths.

Part IV: Program Services

A. Evidence-based and/or promising practice model(s)

The Santa Cruz County- Community Healthcare Integrated Paramedicine Project (SCC-CHIPP) in Arizona is based upon the Community Paramedicine Model: "a new model of community-based healthcare in which paramedics function outside their customary emergency response and transport roles in ways that facilitate more appropriate use of emergency care resources and/or enhance access to primary care for medically underserved populations."¹

The model was developed in response to the lack of access to primary and behavioral health care in rural areas and in an effort to quell high utilization of costly emergency services for primary care needs.¹ In the past several years a growing number of EMS providers in the United States have turned to the Community Paramedicine Model as a method to reduce Emergency Medical Services (EMS) use for non-emergencies and address the burgeoning primary and behavioral health care needs of rural communities.

The Community Paramedicine Model has been widely used in Australia and Canada for many years though a formal program was not implemented in the United States until 2009.² *The International Roundtable on Community Paramedicine* developed a curriculum for Community Paramedicine in the United States, and pilot programs were implemented in Minnesota and Colorado in 2009 and 2010 respectively.² Since 2009, many rural counties have adopted the Community Paramedicine Model, and these two programs have been nationally recognized for their accomplishments. The Rural Assistance Center recognizes both Eagle County Paramedic Services in Colorado and Humboldt General Hospital EMS Rescue in Winnemucca, Nevada as examples of successful Community Paramedicine programs.³

Since initial success of these Community Paramedicine programs, a variety of other programs have preliminary promise in Arizona and nationally which continues to speak to the success of using rural EMS resources to bridge identified gaps in care.

The Community Paramedicine program through Humboldt General Hospital EMS Rescue was created in order to reduce Emergency Department visits and hospital readmissions. "When patients call 9-1-1 to have HGH EMS Rescue take them to the emergency room because they are experiencing adverse symptoms related to poor management of a chronic disease, responders have the option of treating and releasing the patient home rather than bringing that patient into the hospital for an unnecessary visit. The program also offers in-home flu shots, blood pressure checks, blood sugar checks and much more."⁵ The director of the program was recognized as one of the "10 Innovators" in the development of EMS in 2011 by the *Journal of Emergency Medical Services*.⁵

As the Community Paramedicine Model is fairly new in the United States, many of these programs are still in the implementation stage and have not been evaluated; hence there is a dearth of data in the peer-reviewed literature on the success of such programs. Recent (2017) updates to evaluation efforts in California has shown no adverse outcome attributable to any of the state's community paramedicine pilot projects. The projects were found to enhance patients' well-being by improving the coordination of medical, behavioral health, and social services, and decreasing health care costs by reducing ambulance transports, ED visits, and hospital readmissions¹⁰.

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10. Evaluation of California's Community Paramedicine Pilot Program. 2017. Available from: <https://healthforce.ucsf.edu/publications/evaluation-california-s-community-paramedicine-pilot-program>

B. Description of Activities

The Community Healthcare Integrated Paramedicine Program (CHIPP) focused upon 3 core activities: Train Community Paramedics, Enroll CHIPP Participants, and Implement CHIPP Intervention activities. The following overall goals and actuals were attained:

Train the Community Paramedic Workforce (Goal: 21, Actual: 31 core CPs trained, 45 additional individuals attended portion of trainings), with 26 training hours offered for core CP curriculum. Continuing education has since been offered to support the core curriculum.

Enroll Participants (Goal: Y1: 25 Y2: 45 Y3: 45, Actual: Y1: 21, Y2: 74, Y3: Pending aggregate county data (38 including Rio Rico and partial partner data accounted for 4/30/2018). Year 1 was with training and enrollment through Rio Rico Fire District only, Year 2 added Nogales Fire Department, Sonoita-Elgin Fire District, and Tubac Fire District. Year 3 included all partner sites.

Implement Intervention Activities (Goal Y1-Y3: 110, Actual: Y1-Y3, pending final data analysis, 133). Intervention activities included a variety of in-person visits with a participant attended by a community paramedic and community EMT. During these interventions the CHIPP team assessed participant clinically, socially and environmentally.

In addition to core CHIPP intervention activities, CHIPP personnel were also able to implement electronic tracking of CHIPP participants and referral mechanism for EMS patients refusing care or being transported out of county. This added program benefit was able to support patient referral to local primary care provider practices for ongoing management and/or additional referral to medical/social/community-based resources.

- 175 referrals have been made from January 1, 2017 through April 29, 2018 using this process to connect EMS/CP patients to usual source of primary care or to the local federally qualified health center for medical, social and behavioral services in the case no primary care provider is established/patient requests support with health insurance navigation.

C. Role of Consortium Partners

SEAHEC

- Conduct assessment of training needed by the Rio Rico Fire District community paramedics to carry out their role in accomplishing Initiative goals and outcomes
- Recruit and register participants for the personnel trainings
- Plan and implement the needed trainings during the program period
- Provide documentation of earned CE/CME credits for the trainings described herein and,
- Conduct an evaluative assessment of trainees to determine success in meeting learning goals, and additional training needs

AzPDIC

- Plan and implement pharmacology and medication reconciliation trainings
- Collect and analyze data on medications management

CHCH/MCHC

- Obtain consent from its patients to refer them into the Community Integrated Healthcare Paramedicine Program
- Offer access to hospital re-admission data and hospital discharge orders for patients who have consented to be part of the program and allow the information to be shared between the organizations

The University of Arizona, Office of Rural Health

- Provide evaluation services of program goals and outcomes

Part V: Outcomes

A. Outcomes and Evaluation Findings (do not submit your Evaluation Report in lieu of completing this section)

Given the nature of this county-wide partnership, many results noted below are preliminary and pending aggregate analysis as noted.

- **Train the community paramedicine workforce:** Year 1-3 goal: 21. Year 1-3 actual: 31 core Community Paramedics trained, 218 individuals signed in to sessions across Santa Cruz County.
- **Identify and enroll CP participants:** Year 1-3 goal: 115, Year 1-3 actual: 138 (pending Year 3 aggregate finalization).
- **Increased the number of participants adhering to medication:** Year 1-3 goal: 50% increase. Year 1-2 actual: 100% increase, pending aggregate analysis.
- **Reduced 911 calls for participants:** Year 1-3 goal: 50% reduction. Year 1-2 actual: 76.2% reduction, pending aggregate analysis.
- **Increased linkage of participants to a medical home/PCP:** Year 1-3 goal: 50% increase. Year 1-2 actual: 100% increase, pending aggregate analysis.
- **Number of environmental hazards/fall hazards within the home:** Year 1-3 goal: 75% reduction. Year 1-3 actual: Year 1-3: 72% reduction in fall hazards, pending aggregate analysis.
- **Achieve exemplary patient satisfaction:** Year 1-3 goal: 95%. Year 1-2 actual: 100%, pending Year 3 collection and final analysis.
- **Number of low acuity emergency department visits:** Year 1-3 goal: 50% reduction. Year 1-3 actual: 58.4% reduction noted, pending aggregate analysis.
- **Average yearly hospital readmission rate for participants:** Year 1-3 goal: 30% reduction. Year 1-2 actual: 75% reduction noted, pending aggregate analysis.

The consortium established:

- A relationship with those hospitals and patient care coordinators so that we can conduct a post discharge home visit and help monitor those individuals and support connection to local resources upon return home in the case alternate services are not available or if a gap exists between time of discharge and start of in-home services.
- A network of Fire-based EMS agencies, primary care providers, home health, behavioral health, economic security, and legal assistance providers that meet on an ongoing basis to discuss resources available for the community.
- Statewide momentum to coordinate and advocate for advancing MIH-CP consistency and continuing efforts to engage payers via the AzMIH Network (currently forming 3.2018).

B. Recognition

Several, see '[CHIPP News & Presentations](https://drive.google.com/file/d/1wRkxLedUSRv9QPO_mxN35vgY3-6vE-KK/view?usp=sharing)' (https://drive.google.com/file/d/1wRkxLedUSRv9QPO_mxN35vgY3-6vE-KK/view?usp=sharing)

Part VI: Challenges & Innovative Solutions

CHIPP aims to address these challenges by bringing health education and monitoring into the homes of individuals suffering from chronic disease and/or over-utilizing EMS. Community integrated paramedic teams, all of whom speak Spanish, will act as the eyes and ears of physicians and be able to offer individualized education, monitoring, and care to participants. They will also connect participants with needed healthcare services, such as referring participants to a primary care provider that can better manage the

participant's case or referring participants to one of the allied health services in the county, such as a diabetes management class. The community paramedics can then act as a patient navigator and as a mediator between the individual and healthcare services.

EMS in Santa Cruz County is accessible by both English and Spanish-speakers and can come to the individual, calling 911 is the rational choice when confronted with health problems for many high-utilization EMS users.

Bringing health education and monitoring into the homes of individuals suffering from chronic disease and/or over-utilization of EMS is at the center of the CHIPP. Community integrated paramedic teams, all of whom speak Spanish, act as the eyes and ears of physicians and be able to offer individualized education, monitoring, and care to participants. They will also connect participants with needed healthcare services, such as referring participants to a primary care provider that can better manage the participant's case or referring participants to one of the allied health services in the county, such as a diabetes management class. The community paramedics can then act as a patient navigator and as a mediator between the individual and healthcare services.

Thematic, and ongoing, challenges observed throughout the course of the CHIPP were related to

- Geographic service availability; transportation further complicates access to care
- Data collection consistency; each participating CHIPP agency and resource agencies often utilize different and unshared electronic or manual record systems
- High Medicaid enrollment, Low Medicare eligibility among seniors complicates navigation of community members to ongoing medical, social and behavioral care

Part VII: Sustainability

A. Structure

The efforts of CHIPP will continue, with modifications, upon the end of available HRSA Outreach funding. Substantial progress was made during the course of the project that will continue via formal and informal partnerships established during the project period (e.g., increased collaboration between RRFD (and county-wide MIH partners) with health, social service, and community-based organizations). Work will continue locally and at the state level to disseminate successful practices and apply to emerging policy (Treat & Refer).

Work continues to coordinate referral to CP services (e.g., enhanced communication with local critical access hospital to refer back to available CHIPP resources upon emergency or inpatient discharge). This will be a key point of collaboration between RRFD, and other county CHIPP providers, and the local critical access hospital, regional hospitals, home health, primary care, and social service partners.

Consultation with the Arizona Poison and Drug Information Center will continue via utilization of the statewide AzPDIC hotline by CP/EMS personnel. Resources to support continuation of case-review/support by the AzPDIC will continue.

AHEC- as a continuing partner in education/workforce development.

CRH- as a continuing partner in coordination/collaboration statewide/nationally.

B. On-going Projects and Activities/Services To Be Provided

i) Will all, some or none of the elements of the program be sustainable once Outreach grant funding has ended? Please check the appropriate selection.

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained (i.e. the program will completely end after the grant period)

ii) Identify the projects and activities that will be sustained beyond Outreach grant period.

The core functions of CHIPP will be sustained within RRFD. Other partner agencies are also interested in continuing to support providing CP services without formal workplan agreements. Each agency is using a model that fits into existing organizational staffing structures while also being mindful of available resources and appropriate process to attend to emergency calls for service. Thanks to putting common practices into place, we believe the intended impact of engaging local fire/EMS professionals with other health system partners to improve community member outcomes/quality of life will

continue. State policy to incentivize fire/EMS professionals linking patients to a source of care other than and ED when appropriate will also support the continuation of this practice.

RRFD will continue to provide core CP services, which include:

- Identify and enroll participants age 55 and older who suffer from chronic disease or represent a high-use of emergency services.
- Implement intervention activities with the overarching goal of improving the health and quality of life of CHIPP participants
- Increase the number of participants adhering to medication
- Reduce 911 calls for participants
- Increase linkage of participants to a medical home/PCP
- Realize cost savings per participant

Partners in the Tubac, Sonoita-Elgin and Nogales fire agencies have indicated interest in maintaining services as well, however, no formal MOU or work plan exists in each of these efforts.

The CHIPP initiative has allowed Rio Rico Fire District to lead in the continuing evolution in the greater EMS sphere to advance the culture of prevention to connect community members with available resources and tools to address root issues of health. This transcends the traditional EMS model of an emergency call, response and transport to and emergency department. This important work will continue to decouple payment for service from transportation.

C. Sustained Impact

Locally:

- Improved communication among consortium/community partners
 - This will continue and has certainly been positively impacted locally to enhance communication among the many partners in the care of our community members. We believe this will support better patient outcomes via strengthening the safety net for our most vulnerable community members.
- Community support/participant satisfaction has been high, we have observed requests from community members increase for this enhanced role of fire/EMS and believe the preventive role of fire/EMS providers will continue to grow
- Training to address chronic disease management and support have been implemented and refresher topics are continually requested and offered in addition to traditional emergency training for fire/EMS personnel.

Statewide:

- There is a continuing evolution in MIH services throughout Arizona. Ongoing work with stakeholders to grow program consistency and ability to scale across communities in Arizona continues. There is broad interest in and support in MIH initiatives from providers and regulators alike.
- Stakeholder engagement to raise awareness of MIH and advocacy to build MIH services into workplans (discharge planning, population health management, alternate destinations/treatment without transport, and treat on scene) continues.

Part VIII: Implications for Other Communities

A variety of other communities (in Arizona and beyond) have requested support with MIH-CP initiatives with respect to utilization of existing resources without identified funding stream to offset operational expenses for a stand-alone program. Although this can work, our experience has indicated the realities of time necessary to plan, design, implement and oversee such a program. Without the dedication of personnel to accomplish CP-related tasks we found such a program difficult to bring to local scale.

Active sharing/dissemination of resources locally and nationally via RRFD website, presentations, publications, resource tool development with partners have been great ways to share with other communities. We also realized (by actively profiling other Arizona CP programs) that there are a variety of models that have arisen. Although national resources are very helpful to inform local CP practices, RRFD understands the unique landscape of Arizona and the even more unique profile of each individual community within Arizona. Designing a local CP effort requires a combination of establishing core processes while also coupling these with local needs.

Qualitative measures:

- Community input/satisfaction

- Reflections from the workforce have been a part of CHIPP in Year 1-2 and currently underway for Year 3. These reflections inform continued programmatic refinements

Part IX: Success, Increased Capacity, and Contributions to Change

A. Defining Success

- i) How do you define “success” for your grant program? Please check the appropriate selection(s). You may choose more than one option. If other, please describe.
- Access to a new or expanded health service
 - Increased number of people receiving direct services
 - Improved quality of health services
 - Operational efficiencies or reduced costs
 - Integration of process improvement into daily workflow
 - Continuation of program activities after grant funding
 - Continuation of network or consortium after grant funding
 - Health improvement of an individual
 - Health improvement among your program participants
 - Health improvement among your community
 - Enhanced staff capacity, new skills, or education received
 - Improved capacity to adapt to changes in healthcare
- ii) Do you believe that your program has achieved success? If so, how?
 Considering local, statewide, and national factors we believe CHIPP has achieved success with many lessons learned and continuing improvements to be made. As measured using the above metrics for success, CHIPP has been on the forefront of building MIH-CP capacity in Arizona. MIH services have essentially gone from 1 formal program in Arizona in 2013 to 36+ as last measured in early 2017. The broader goal to build momentum around the concept is coupled with the responsibility to share best/promising practices in the field to continue to adapt to changes in the healthcare system. Program funding has directly contributed to the greater environmental shift in Arizona’s EMS system.

B. Organizational Capacity

How has the federal funding of your grant program increased local capacity at your organization, within your network, and/or in your community? Please check the appropriate selection. If other, please describe.

- Formalized networks or coalition
- Developed new partnerships or relationships
- Enhanced skills, education, or training of workforce
- Enhanced data collection and analysis

C. Contributions to Change

Change in individuals’ lives, your organization, consortium, or community:

Often, CHIPP personnel are faced with the uniqueness of the individual circumstances surrounding a participant’s health and social circumstances. Often, optimal patient health may be hindered by challenges related to health literacy and health system navigation. One situation where CHIPP personnel were faced with such unique circumstances arose during a daily review of 911 calls. Upon the review of a particular case it was identified that an elderly individual had fallen, 9-1-1 was activated and the crew responded to find an elderly female whom had fallen and received a hip injury. The patient was transported for emergency care. CHIPP personnel subsequently contacted the patient for an update and to offer services. The patient was being discharged home, according to the family member spoken too. They were confused as to why the patient was being discharged. The family had been told that the patient was approved for conditional AHCCCS services that wouldn’t cover admission into a rehab facility to recover from the hip fracture. The family was willing to self-pay for services but were not given an estimate of cost or the choice to self-pay. CHIPP intervened knowing the importance of rehab after a hip fracture. CHIPP contacted the admission director at a regional skilled nursing facility as well as the local critical access hospital case management team to inquire about the cost of admission into those facilities for rehab. CHIPP also called the charge nurse on the floor where the patient was to inquire as to whom the case worker was. It turned out that the case worker was new and it didn’t occur to them to offer the family the option of self-pay. Once they understood that they were willing to self-pay, he was able to send the referral to Santa Rita for the skilled nursing services the patient needed. The family was extremely satisfied in the services offered by CHIPP. The patient was able to recover

fully in a facility and is doing well. If the patient had been discharged after surgery without rehab they had a high risk of being readmitted to the hospital via EMS.

Change in policies, systems, and environment:

Over the course of the last several years, CHIPP personnel have interacted with a variety of health system and social service providers to enhance the reach of the fire/EMS community beyond the 911-based interaction. CHIPP personnel take the time to screen all 911 calls to link community members to local resources as appropriate. Ongoing work continues to support linking patients to their usual source of primary care or link to primary care services in the case the patient is not established. A core tenet of CHIPP is to ensure linkage of community members to available and appropriate services to ensure holistic support of social and health-related conditions. Our local federally qualified health center has been such a champion in supporting such linkage. To date, over 160 resource referral connections have been made by CHIPP to the local FQHC. Such linkages will continue to evolve and are already beginning to be replicated in other communities as EMS providers continue to integrate with the broader health care system.

This project directly impacted RRFD's ability to support system level changes in Arizona:

- A key piece of this project was related to reimbursement reform for EMS providers in Arizona via the Treat and Refer Recognition Program development (2016) and subsequent outreach, resource development, and updates (2017-18) via partnership with Arizona Medicaid, Arizona Department of Health Services and health system stakeholders.
- Creation of the Arizona MIH Network is currently underway as part of HRSA Rural Health Network Development Planning Grant to directly support the dissemination of lessons learned throughout Arizona in order to enhance state-wide MIH service development and quality
- Leveraging partnerships for this project: Rio Rico has been in partnership with the Vitalyst Health Foundation (Arizona-wide). Through VHF investment via consultation, convening, stakeholder engagement, and resource development. System-level work completed in partnership with Vitalyst is available at: <http://vitalysthealth.org/?s=community+paramedicine> Vit
- Payer contract negotiation between largest Medicaid, Medicare, and commercial health plan in Arizona to reimburse for CP services continues to be explored and negotiated to strike a balance between maximum benefit to the patient and feasibility on the part of CP providers

Arizona

Part I: Organizational Information

Grant Number	D04RH28214
Grantee Organization	Summit Healthcare Association
Organization Type	Hospital
Address	2200 East Show Low Lake Road, Show Low, AZ
Grantee organization website	www.summithealthcare.net
Outreach grant project title	Rural Health Care Services Outreach
Project Director	Name: Angela Kolling/Fredda Kermes
	Title: Chief Marketing and Development Officer
	Phone number: 928-537-6829
	Fax number:
	Email address: afabian@summithealthcare.net
Project Period	2015 - 2018
Funding level for each budget period	May 2015 to April 2016: \$177,614
	May 2016 to April 2017: \$177,614
	May 2017 to April 2018: \$177,614

Part II: Consortium Partners

* Indicates consortium partners who signed a Memorandum of Understanding/Agreement

Partner Organization	Location (town/county/state)	Organizational Type
Banner Behavioral Health Hospital	Scottsdale, Maricopa, Arizona	Hospital
Southwest Telehealth Resource Center	Tucson, Pima, Arizona	Telehealth Resource Center
Community Counseling Center (renamed Change Point Integrated Healthcare)	Show Low, Navajo, Arizona	Behavioral Health Organization
Arizona Telemedicine Program	Tucson, Pima, Arizona	University Medical Center
Navajo County Juvenile Detention Center	Holbrook, Navajo, Arizona	County Jail Detention Center
Navajo County Public Health	Show Low, Navajo, Arizona	County Public Health Department

Part III: Community Characteristics

A. Area

Portions of Navajo County, Arizona including the cities of Holbrook, Show Low, Pinetop-Lakeside, Heber-Overgaard, Snowflake, Vernon, Taylor and Eager

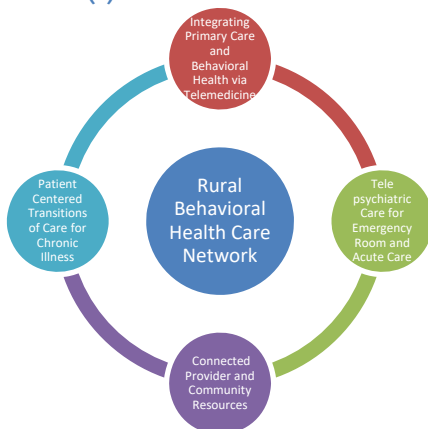
B. Community description

The entire service area is designated by HRSA as both a Health Professional Shortage area and a Medically Underserved Community/Populations area with 33% of the population living below the poverty line. There is ample room for improvement to meet community health care needs including access to primary care, specialists and especially mental and behavioral health needs.

C. Need

The Rural Health Care Network Consortium was developed Banner Behavioral Health and Banner Telehealth, Change Point Integrated Health, Arizona Telemedicine Program and Southwest Telemedicine Resource Center. In addition to the need to address identified gaps in care for mental health issues our work plan has focused on expanding other telehealth services to improve access to care for other specialties and services in our service areas.

A. Evidence-based and/or promising practice model(s)



The practice model as illustrated was developed and has been implemented in part to build a connecting network to improve the healthcare outcomes of the community. This has been accomplished by ongoing networking with consortium partners in the regional areas. Processes have been set up to facilitate patient connection to psychiatric or behavioral health provider within a primary care setting. In addition, telespecialty services have been provided or in development to bring access to needed specialty care to the community. An accountable care organization has been implemented to aid transitions of care especially in the higher risk chronic disease patient population with a focus on integrated behavioral health. Focus continues for Summit Healthcare to develop a Patient Centered Medical Home. This practice model fits well with the journey to provide the right care at the right time in the right place with the aid of telemedicine encounters.

B. Description

During the grant period activities have focused around the development of consortium relationships, education for multiple stakeholders, developing Telehealth partnerships, processes and workflows, procuring and setting up Telehealth equipment, delivery of healthcare to patients, and continuous learning related to the use of Telehealth to address patient care needs for mental health and specialty care. This has been accomplished through:

- Regular meetings with stakeholders and consortium members
- Addition of budgeted staff resources at Summit Healthcare
- Multiple Telehealth presentations to health care providers, leaders and community groups
- Attendance at Telehealth educational venues including the American Telemedicine Association (ATA) annual conference, Telehealth Service Provider Showcase, webinars and continuous review of Telehealth related blogs and articles.
- Establishment of Telehealth Advisory Committee at Summit Healthcare
- Participation in Telehealth networking groups including the Northern Arizona Telehealth Alliance
- Appointment to serve on the Arizona Telemedicine Council
- Development of educational programs and competencies for telepresenters
- Development and implementation of remote patient monitoring program for high need patients with chronic illness
- Successful establishment of regular meetings with clinic leaders which has resulted in strong collegial partnership to promote and sustain the use of Telehealth in clinic setting
- Relentless pursuit of additional partnerships to provide specialty Telehealth services
- Participation with Navajo county community health assessment and plans to meet needs
- Participation with Navajo County Drug Prevention Coalition to bring national speaker to local areas to provide education to healthcare providers
- Participation on the North Eastern Arizona Region (NEAR) care team to develop accountable care and clinical integrated network with focus on use to Telehealth to deliver services

C. Role of Consortium Partners

Banner Behavioral Health

Banner Behavioral Health role was to partner to provide Telepsychiatric services to Summit Healthcare inpatient and emergency room patients. They were active partners in assessing needs and the development of work flow. Despite multiple attempts

psychiatric providers were not able to be credentialed and provide consistent availability to provide the service. This effort was abandoned with Banner Behavioral Health.

Community Counseling Centers

Community Counseling Centers (named changed to Change Point Integrated Healthcare) has remained active partner with frequent interaction to continue to work on providing Telepsychiatric provider consults in primary care offices. Credentialing issues have been an obstacle to success, however successful credentialing was recently accomplished with a plan to resume services in May 2018. A huge contribution from Change Point Integrated Health is the development and implementation of a Crisis Stabilization Unit for Behavioral and Substance Abuse Issues which show promise to reduce unnecessary emergency room visits for some patients. In addition, Change Point has developed primary care services in the counseling center. Recently Change Point restarted the White Mountain Safe House, a domestic violence shelter that closed in the fall of 2017. Key contributors include Trina McCray, Bradley Head, Kristi Iannucci, Shawna Yellow Hair, and Nathan Shaw.

Arizona Telemedicine Program

The Arizona Telemedicine Program is a large, multidisciplinary, university-based program that provides telemedicine services, distance learning, informatics training, and telemedicine technology assessment capabilities to communities throughout Arizona, the sixth largest state in the United States, in square miles. The program has succeeded in creating partnerships among a wide variety of not-for-profit and profit healthcare organizations and has created new interagency relationships within the state government. Functioning as a "virtual corporation," the Arizona Telemedicine Program is creating new paradigms for healthcare delivery over the information superhighway. The program is recognized as one of the premier programs at the University Of Arizona College Of Medicine and has received numerous awards at the national level for its research and innovations. Dr. Weinstein is a key leader and has had a career-long interest in telemedicine.

In 1996, the Legislature of the State of Arizona funded the Arizona Telemedicine Program and mandated that it provide telemedicine services to a broad range of healthcare service users including geographically isolated communities, Indian tribes, and Department of Corrections rural prisons. Leveraging the state startup funds, the Arizona Telemedicine Program succeeded in obtaining additional funding and support from many healthcare systems, state agencies, federal grant programs, and third-party payors.

Currently the Arizona Telemedicine Program is providing medical services via both real-time and store-and-forward technologies in twenty communities. This year, 500 hours of continuing medical education and continuing education will be delivered to thirty-four communities using bi-direction video conferencing. The Arizona Telemedicine Program has created two additional statewide programs, Project Nightingale and e-Healthcare Arizona. Project Nightingale, created by Dr. Weinstein, is a unique, dedicated broadband healthcare infrastructure which functions as a telecommunications collaborative providing access to T-1/ATM telecommunications on a private network throughout the state on a cost-sharing basis. e-Healthcare Arizona provides state agencies with a vehicle for collaborating on various programs in disease prevention, public education, correctional telemedicine and, more recently, children's healthcare and home health nursing. In addition, the Arizona Telemedicine Program has recently instituted innovative programs in home health care for patients with artificial hearts awaiting transplantation, patients requiring ostomy home-nursing services, and children in need of occupational and physical therapy. Telenursing services are being implemented in Phoenix schools. Perhaps the greatest accomplishment of the Arizona Telemedicine Program has been to create strong ties between the University Of Arizona College Of Medicine, various healthcare providers, and the state legislature. Bridges built between state agencies, local governments and legislative bodies are fostering a high level of awareness of the importance of telemedicine and e-health to achieving the state's healthcare goals. The program also serves as a platform upon which the state's only College of Medicine can demonstrate its value to exceptionally broad constituencies throughout Arizona and the nation as a clinical research center, a tertiary care facility, and as an educational institution. This consortium partner has been invaluable in the provision of education and networking opportunities.

The Southwest Regional Telemedicine Resource Center (SWTRC) was created to advance the effective use of telemedicine services throughout the Southwest. Telemedicine has been shown empirically to improve access to quality medical care for many patients living in rural and medically underserved areas. The SWTRC assists start-up telehealth programs in their development and serves as a resource for existing programs regarding changes in technology and other issues affecting telehealth in the Southwest region.

The SWTRC provides services in each of the following modes: one-to-one, peer-to-peer, and one-to-many. The SWTRC serves hospitals, clinics, public health offices, and private-practice healthcare providers in the broader Southwest region. Those seeking advice come from a variety of backgrounds, including clinicians (MD, DO, DDS), healthcare providers (RN, LPN, PhD), hospital administrators (CEO, CFO, COO), technologists (CIO, network manager, network engineer), telemedicine site coordinators,

medical students, medical residents, researchers, and community representatives interested in telemedicine. A \$975,000 cooperative agreement grant from the Office for the Advancement of Telehealth will allow the center—part of the Arizona Telemedicine Program headquartered at the University of Arizona Colleges of Medicine in Tucson and Phoenix - to continue offering telehealth services to health-care providers in Arizona, New Mexico, Colorado, Utah and Nevada through August 2020. Key members for the SWTRC that have been exceptionally helpful in the consortium efforts include Kris Erps, Elizabeth Krupinski, PhD, Janet Majors, Ronald Weinstein MD, and Nancy Rowe.

Part V: Outcomes

A. Outcomes and Evaluation Findings

Creating awareness of the benefits of telehealth programs to increase access to care in our rural regional area has been an ongoing focus. Multiple education programs have been conducted for community groups, regional healthcare providers, community members and leaders. This has resulted in growing support for development and use of telehealth as strategy to provide access to care.

Change Point Crisis Prevention Units - A significant and needed service was identified by the consortium for a behavioral health crisis stabilization unit. The purpose is to provide urgent care to person with mental health and behavioral issues in the right place at the right time, avoiding use of SHRMC emergency room when appropriate for care. The Change Point Crisis Stabilization Unit opened for services in the fall 2017.

e-ICU – A partnership with Advanced ICU was researched, developed and implemented in October 2016. This service provides 24/7 remote monitoring and intensivist coverage for Summit Intensive care unit. Outcomes to date include reduced mortality and decreased LOS for both intensive care and hospitalized patients.

Telepain - Through use of telehealth equipment in outlying clinic areas Pain specialist visits have been conducted for patients in outlying communities reducing significant travel time.

Remote patient monitoring – Currently 50 + patients have received remote patient monitoring services with a reduction of readmissions realized.

Telenephrology and Teledialysis – A partnership with Arizona Kidney, Diabetes, and Hypertension (AKDHC) providers has resulted in remote nephrology consults to Summit inpatient renal patients. This has allowed the development of inpatient dialysis services preventing expensive and inconvenient patient transfers out of the area.

Telestroke – Acute vascular neurologist activation for acute ischemic stroke patients provides this emergent specialty care to improve patient outcomes. In addition, having this service evolved into the development of stroke team and stroke unit to decrease transfers of patients out of the area.

Videoconferencing availability in majority of Summit patient rooms. This has resulted in members of health care team to join patient care conferences and enhanced in room language translation and services for patients needing sign language interpretation, and pediatrician “tuck in rounds” for pediatric inpatients.

Development of North East Arizona Regional clinically integrated network that includes the development of an Integrated Behavioral health department to serve Summit primary care clinics that will utilize telehealth as an access point.

B. Recognition

Award: Advanced ICU (AICU) awarded Summit Healthcare Chief Medical Officer for outstanding leadership in advancing care of critically ill patients in conjunction with e- ICU services.

Summit Healthcare and the Rural Healthcare Network Consortium Telehealth programs have been featured in the *Summit Cares* Community publication which is distributed by mail throughout the region.

Summit Healthcare: Meeting Rural Community Needs is “Our Vision” was a feature blog post in the Southwest Telehealth Resource Center website.

Part VI: Challenges & Innovative Solutions

The Rural Health Care Network Consortium was developed by Banner Behavioral Health and Banner Telehealth, Change Point Integrated Health, Arizona Telemedicine Program and Southwest Telemedicine Resource Center. In addition to the need to address mental health issues our work plan has focused on expanding other telehealth services to improve access to care for other specialties and services in our service areas. During the course of our Outreach grant consortium member changes have occurred. Telestroke services and Teleneurology services partnership was changed from Mayo Telestroke program to a program partnership with Banner Neurology services to facilitate more of a connected network process. SHRMC and Banner partnered to develop this new program together. The program was not sustainable related to capacity of Teleneurology providers. Telestroke and Teleneurology services for SHRMC ER and inpatient services was suspended for approximately one year while identifying and contracting with a new partner. Mayo Telestroke program was re-engaged and is functioning successfully. Teleneurology services are not available with Mayo program to date and a Teleneurology services is currently being sought.

The partnership with Navajo County Detention Center was implemented with telemedicine equipment provided to the center and training of nursing and allied staff to connect with Summit Primary Care Providers. Due to a change in medical direction at the Navajo County Jail the decision was made that services from SHRMC were no longer needed. Also, as result of budget issues Navajo County made the decision to close the juvenile detention center. In addition, Summit Healthcare clinic located on the Navajo County Jail complex was asked to move from the premises due to Navajo County budget constraints and need for the clinic space. Tele pain visits for this area were temporarily on hold while Summit telemedicine clinic services were relocated.

Despite dedicated persistence and repeated failed attempts to implement SHRMC Emergency room and inpatient Telepsychiatric patient consults with Banner Behavioral Health the decision was made between SHRMC and Banner Behavioral Health to abandon this project partnership. Barriers included difficulty with adequate capacity for Banner psychiatrists and psychiatric nurse practitioners to be scheduled for consults with any consistency. Additionally, the Banner system was working to scale these services within the Banner system and experiencing some provider capacity issues. Lastly credentialing issues between Banner provider and SHRMC were unable to be overcome.

The consortium partnership with Change Point Integrated Health has remained strong. Members have worked closely with frequent meetings to develop a Telepsychiatric program to serve SHRMC outlying community primary care sites. Workflow, reimbursement, contracting, equipment and software platform all developed and functional. State and CMS licensing for the provision of Telepsychiatric services obtained with no deficiencies. SHRMC primary care clinic staff became integral members of this effort and this has aided collaboration in the network. The biggest barrier to timely implementation revolved around successful credentialing of Telepsychiatric providers. Credentialing was completed for a provider and services initiated but not sustained as Change Point experienced a sudden and unexpected loss of providers for staffing Telepsychiatry visits. Additional Change Point providers are currently in the credentialing process again and are expected to be approved by the end of first quarter 2018 with Telepsychiatric services resumed. Initial meeting was held with local elementary school regarding integrating telemedicine healthcare services into the school system. Pediatric providers only recently available and are interested to work towards this process. This will be addressed in the future.

Consortium partners which have remained stable include Change Point Integrated Health, The Arizona Telemedicine Program and the Southwest Telemedicine Resource Center. Connections and discussions with Change Point are ongoing with frequent meetings. Networking continues with the Arizona Telemedicine Program and Southwest Telemedicine Resource Center through regular networking with these groups state and regional sponsored networking meetings. This has been invaluable in learning from others and sharing information with those implementing telemedicine in Arizona.

Additionally, this grant program project coordinators participate in Navajo Community and regional drug prevention programs for conducting community needs assessments and planning to address identified health needs. The consortium has been successful to educate many stakeholders, community members and groups regarding telehealth programs.

Part VII: Sustainability

A. Structure

Change Point Integrated Health, Arizona Telemedicine Program and Southwest Telemedicine Program partners have agreed to continue to be part of consortium. In addition, the Navajo County Public Health department has been added. Consortium members partner with the Navajo County Public Health department to conduct community health needs assessments and develop community health priorities together. The Arizona Telemedicine Program (ATP) has been funded by the Arizona State Legislators since 1996 and is housed within the University of Arizona, College of Medicine. Since 2009, the Southwest Telehealth Resource Center, a subsidiary of ATP, has been federally funding by Health Resources & Services Administration to provide technical

assistances to promote Telehealth in Nevada, Utah, Colorado, New Mexico and Arizona. Our current federal funding runs through August 2020.

B. On-going Projects and Activities/Services to Be Provided

i) Will all, some or none of the elements of the program be sustainable once Outreach grant funding has ended? Please check the appropriate selection.

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained (i.e. the program will completely end after the grant period)

ii) Identify the projects and activities that will be sustained beyond Outreach grant period.

The use of Telehealth to provide access to care is a strategic goal for the NEAR care team. Utilizing additional new payment codes and seeking to influence telehealth reimbursement with payer will continue to be pursued. In addition, seeking opportunities to provide convenience and access for follow up care for bundled payment may result in cost avoidance. Summit and Change Point are committed to recruit and add additional providers and telepresenters as services are obtained.

C. Sustained Impact

The partnerships developed around telehealth have resulted in strong shared vision with frequent and ongoing interactions. Networking with the Arizona Telemedicine program and Southwest Telemedicine Resource Center, Change Point and Banner Health has aided increased knowledge and problem solving as well as an opportunity to share our successes at a state-wide level.

Summit and community leadership clearly understands and articulates the importance of telehealth as a crucial strategy to provide increased access to necessary care to the service area. The use of telehealth to provide needed and otherwise difficult access to care is a strategic goal for the NEAR care team.

Part VIII: Implications for Other Communities

As part of the journey to develop telehealth services to meet health care needs it became evident that setting up processes and structures for guidance was necessary. Lessons learned included:

- Set up an internal telehealth advisory committee comprised of organization senior leadership including providers, Information Technology, Quality, Medical Staff Services, and Clinic leadership to help define strategy and support implementation
- Communicate progress and programs frequently to many stakeholder groups including community groups, hospital governing body, providers and staff, and community members
- Develop consistent process "road map for success" and standardized workflow process
- Examine how to measure outcomes in the early stages of program development and examine how data collection can be built to the least cumbersome
- Stay up to date with rapidly evolving information regarding telehealth and use cases
- Utilize tools available in organizations such as the American Telemedicine Association and Telehealth Resource Center.
- Tools such as the Lexicon of Assessment and Outcome Measures for Telemental Health (TMH) offers measurement definitions that can apply to other telehealth programs. Key measures are patient and provider satisfaction, appointment No Show Rates, readmission rates for chronic disease patients with remote patient monitoring, distance to service and training
- Continue to keep the strategy of telehealth solutions as part of every access to care planning conversation

Part IX: Success, Increased Capacity, and Contributions to Change

A. Defining Success

i) How do you define "success" for your grant program? Please check the appropriate selection(s). You may choose more than one option. If other, please describe.

Access to a new or expanded health service

Increased number of people receiving direct services

- Improved quality of health services
- Operational efficiencies or reduced costs
- Integration of process improvement into daily workflow
- Continuation of program activities after grant funding
- Continuation of network or consortium after grant funding
- Health improvement of an individual
- Health improvement among your program participants
- Health improvement among your community
- Enhanced staff capacity, new skills, or education received
- Improved capacity to adapt to changes in healthcare

ii) Do you believe that your program has achieved success? If so, how?

Implemented processes in our program have been successful as patient transfers out of the community have been avoided in the implementation of Telestroke and Telenephrology programs. Mortality and length of stay have been reduced with the implementation of e-ICU services. In addition, the pursuit and development of multiple telehealth programs have resulted in a major change in access to needed specialty care.

B. Organizational Capacity

How has the federal funding of your grant program increased local capacity at your organization, within your network, and/or in your community? Please check the appropriate selection. If other, please describe.

- Formalized networks or coalition
- Developed new partnerships or relationships
- Enhanced skills, education, or training of workforce
- Enhanced data collection and analysis
- Other: The use of telehealth as means to provide access to care in rural community is now a strong strategic goal for the organization

C. Contributions to Change

The establishment of Telepain services in remote clinics has resulted in the delivery of this specialty service by a physician pain specialist to rural areas of Holbrook and Eager Arizona which are approximately 50 miles from the pain specialist's clinic. This has resulted in patient avoidance of travel time, cost of transportation, and adherence to appointments. This patients and provider have expressed high satisfaction with this service.

The establishment of the Telestroke, e-ICU and Telenephrology programs at Summit Healthcare have resulted in these services being delivered locally, greatly reducing the need for patients to be transferred out of the community to receive these lifesaving and life altering services. Without these programs patients would need to be transported by air transportation to hospitals approximately 200 miles away at an average cost of \$60,000.00 for the transport. In addition, this would result in hardship for families to travel and increased costs for lodging, travel and time off from work and family duties. This has assisted Summit Healthcare fulfill mission of "Trusted to Deliver Compassionate Care Close to Home".

These programs have been lifesaving. The use of e-ICU has resulted in 25 lives saved since inception. Feedback in community has been that patients with chronic kidney disease requiring hemodialysis would avoid seeking needed care at the Summit emergency room before Telenephrology was established related to the fear of being transported out of the area. This patient population would avoid seeking care for surgery or other serious illness needs. Nephrology patients are now being admitted for necessary healthcare.

The use of Telenephrology resulted in the development of a new inpatient dialysis service line which aids this patient population. On average 25 Telenephrology consults are conducted monthly since the program was implemented and inpatient dialysis is performed.

The grant program has resulted in the knowledge of Telehealth has a key strategy for providing needed access to care in the community. This has been a journey that began with much skepticism among healthcare providers and community that has evolved to acceptance, excitement and support for growing many Telehealth programs. This is evidenced by funding strategies to include Telehealth costs for specialty consultants and Telehealth staff to be included in Summit Healthcare operational budget.

Additional equipment will be purchased through remaining Summit foundation funds designated through Telehealth. The organization reaps the benefit for revenue related to capturing patients who would otherwise travel outside the area for care or be transferred from the hospital emergency room or inpatient bed. Staff salaries and additional equipment needed will be funded through operational budget. The current movement to pay for value and outcomes supports the need to use Telehealth strategies to provide the right care at the right time and cost avoidance for complications and readmissions. Through our newly established Integrated Behavioral Health program patients will be connected to Behavioral Health Therapists through live in clinic visits as well as through videoconferencing equipment. Additionally, Telehealth strategies are a focus in the NEAR ACO and development of population health programs. It is now common place for planning for new services to have the question "Can we find a Telehealth solution?"

Key contributions to change included the development of exceptional partnerships between programs that have been able to be implemented. Examples include:

Telepsychiatry

Identifying and partnering with internal and external behavioral health and Telehealth opportunities continues to be the goal of Summit and the consortium. Work continues to successfully credential Change Point Telepsychiatry providers to perform consults in Summit outlying clinics. In addition, we have entered into a contract with an additional Telepsychiatry group for consults in outlying primary care clinics with implementation meeting scheduled. Mental health care and substance abuse issues continue to be high community needed. Integrating behavioral health and primary care has become an essential strategy for health promotion and disease management.

e-ICU

The partnership with AICU remains successful and reporting of progress and partnering with intensivist staff to enhance outcomes continues with monthly and quarterly meetings. Expanding the use continuum of behavioral care in the intensive care unit to prevent post intensive care post-traumatic stress and delirium is joint project to improve outcomes. The goal to provide evidenced based high-quality care to reduce mortality, length of ICU and hospital stay, and costs continue as desired outcome.

Telestroke

With release of the American Heart Association 2018 Ischemic Stroke Guidelines the use of Telestroke is considered standard treatment and this service is integral for Summit Healthcare to achieve strategic goal of becoming a Primary Stroke Center in 2018. This certification will enhance the quality of care for stroke patients in our service area. Use of Telestroke program is essential to impact outcomes for ischemic stroke patients in the White Mountain communities.

Integrated Behavioral Health

The use of Telehealth equipment to connect behavioral health providers to primary care patients is a key strategy for the NEAR care team and Integrated Behavioral Health program. In addition, virtual Diabetes Self-Management Classes will be shared from classroom site to other Summit Clinic sites as part of Diabetes care stepped program within NEAR care team to enhance patient participation for this chronic disease management diagnosis as we focus on population health management.

Remote Patient Monitoring

The use of Remote Patient Monitoring has proven to be a successful program to engage patient in disease management and has reduced readmissions in the cohorts utilizing this system. This successful program is supported to continue. Recent legislation for Center for Medicare and Medicaid (CMS) Reimbursement will promote sustainability for this program.

Telenephrology

Telenephrology has had significant impact on reducing the number of renal patient transfers for acute inpatient dialysis. This partnership has been exceptionally successful as we were able to train AKDHC providers in the utilization of Telehealth consults and obtain medical staff direction to create our own internal inpatient dialysis program. The need for this care is critical to our community and will continue.

Virtual Teleconferencing

The use of video conferencing in hospital patient rooms is planned to expand with virtual connections for patients and family members, providers, and health care team members to provide connected care and communication. The infrastructure is in place, training in progress and more use cases will be realized.

Telegenetics

A partnership has been developed with Dignity Health to provide a Telegenetics program. This will allow for access for oncology patients to a genetic counselor reducing costly time and travel for this service. This is part of ongoing strategy for our Cancer Center of Excellence strategy and will continue.

Telepain

Our current program is successful and effective will continue. Patient satisfaction has been high and has reduced time and travel to access this valuable service. This program is essential especially as work is needed to combat the current opioid crisis.

Telecardiology

Local cardiologist expressed desire to provide Telecardiology visits to outlying clinics. Training in process. This will reduce travel and time for this established patient base and reduce no show rates. This program is in early planning stages.

Teleinternal Medicine

Local Internal Medicine provider expressed desire to provide Telehealth visits to outlying clinics. Training in process. This will reduce travel and time for this established patient base and reduce no show rates. This program is in early planning stages.

Teleperinatology

Agreement in place to provide access to perinatologist for high risk pregnant women. This population commonly will not travel out of area for this service related to travel and lodging costs. This service will allow appropriate specialty care for this high-risk population and improve maternal and child outcomes.

Telepediatrics Subspecialties

Active work in progress to obtain partnership for pediatric Telecardiology and pediatric Teleneurology specialists to improve necessary access to care and reduce this will reduce travel and time reduce no show rates at tertiary provider clinics.

Virtual Urgent Care

Summit strategic goal is to partner with virtual urgent care provider for low acuity urgent care visits for Summit employees and community. This will provide convenient access for non-emergent care and reduce inappropriate emergency room visits and long waits to see primary care providers. This is key strategy to provide the right care and the right time.

Video sitters

Pilot program is being launched in Summit Emergency room to utilize video conferencing for monitoring patients that would otherwise require one to one staffing. This will provide a more cost-effective use of staff while ensuring safe continuous monitoring for affected patients.

Arkansas

Part I: Organizational Information

Grant Number	D04RH28381
Grantee Organization	ARcare
Organization Type	FQHC
Address	117 South 2 nd Street Augusta, AR 72006
Grantee organization website	www.arcare.net
Outreach grant project title	Aging Well Network
Project Director	Name: Ms. Joey Miller
	Title: Chief Operations Officer
	Phone number: 870-347-3316
	Fax number: 870-347-2882
	Email address: joey.miller@arcare.net
Project Period	2015 – 2018
Funding level for each budget period	May 2015 to April 2016: \$200,000
	May 2016 to April 2017: \$190,523
	May 2017 to April 2018: \$197,748

Part II: Consortium Partners

* Indicates consortium partners who signed a Memorandum of Understanding/Agreement

Partner Organization	Location (town/county/state)	Organizational Type
Caldwell Pharmacy*	Wynne/Cross, AR	Pharmacy
Legacy Hospice*	Wynne/Cross, AR	Home Health/Hospice
ARcare*	Augusta/Cross, AR	Federally Qualified Health Center

Part III: Community Characteristics

A. Area

Cross County, Arkansas

B. Community description

The target population for the Aging Well Network is adults age 50 and over in Cross County, Arkansas. These 7,000 individuals comprise 28.3% of the population, which is higher than the state average of 26.4% and the national average of 25.1% (U.S. Census, 2008-2012 ACS). The county's entire population is less than 18,000 and is largely white and African American, with only a small Hispanic population. In Cross County, incomes are low, and poverty is high, especially among the elderly. The per capita income for Cross County residents is \$8,700 less every single year than it is for the average U.S. resident. Not surprisingly, a higher percentage of Cross County residents receive SNAP benefits. Poverty rates for the total population are measurably higher than in the state and nation, but the poverty rate among those over age 65 is more than double the national rate. Considering the economic characteristics of the service area, it is not surprising that residents of Cross County exhibit markedly higher than average rates of obesity and high cholesterol and lower than average rates of physical activity and consumption of at least five fruits and vegetables daily. In Cross County, almost half of all residents (44.4%) are obese compared with a little more than a quarter of all U.S. residents (27.5%).

C. Need

Best practices and our own experience in ARcare clinics indicate that older patients usually need longer appointment times with their physician than the average primary care appointment. Older adults need someone with the time and resources to inquire after their holistic health – to determine if they are falling, if they are eating properly, if their medications are causing any negative interactions, if they need physical or occupational therapy, or if they need referrals to social support services that can improve their nutrition or transport them to follow up appointments. Frequently we notice patients who are completing treatment for cancer are

so relieved to have their cancer under control that they are neglecting other health issues, such as their blood sugar, cholesterol, weight, or dementia. Not only do such patients benefit most from a medical home approach, but their health outcomes improve when they have access to a physician who specializes in geriatric care.

Part IV: Program Services

A. Evidence-based and/or promising practice model(s)

The Aging Well Network adopted the following evidence-based models for the project: Falls Prevention- A Matter of Balance: Chronic Disease - AADE Chronic Care Model, and Fitness - Silver & Fit. While there is no evidence-based model for the medication management, it follows this process: The pharmacist has a print out of all current medications for the patient. The pharmacist then reviews the list, one medication at a time with the patient – questioning their daily habit for that medication and their understanding of the medication, its name, what it is prescribed for, what time they should take it, and how often they are taking it, etc. If there are any changes to be made, the pharmacist will tell the patient and talk with the provider about the changes needed. Both the provider and pharmacist meet with the patient before they leave in order to answer any other questions or make any other recommendations.

Description of Activities

The major program activities for this Outreach Grant were: 1) Open and equip the Longevity Center, including the Fitness Center; 2) Conduct comprehensive strategic marketing, outreach and education to develop community knowledge of the center and generate physician referrals; 3) Conduct patient outreach to encourage participation; 4) Assess patients and refer to appropriate programs, services and/or partners; and 5) Deliver planned programs and services, such as falls prevention, medication management, physical activity and nutrition education, and chronic disease management.

B. Role of Consortium Partners

Caldwell Pharmacy provided medication management services to eligible patients by coming to the medical clinic twice a month in the first year & three times/month in Years 2 and 3 of the project. They worked with the provider and patients on their medication reconciliations. In addition, the pharmacy assisted with any medical equipment and falls prevention assessments, and provided pharmaceutical support to the clinical staff and patients regarding aging and chronic diseases. Caldwell Pharmacy provided the pharmacist for this program.

Legacy is the Hospice provider for Cross County, AR. The regional office is located in Brinkley, AR. The role of this organization is to work directly with the nursing staff, ARcare providers, and pharmacy to assess and assist the patients that are in their care. Legacy coordinates with the Network on services or social needs that the patient may have. Clinic staff coordinates transportation, support groups, social services and family assistance that are needed. In addition, the enhancement or expansion of services for assessments of fall prevention, medication management, enabling services, and continuity of care from the provider to home are coordinated with the Network.

ARcare is the only Federally Qualified Health Center in Cross County, Arkansas, as well as the only FQHC in a 13- county surrounding area. ARcare's role as lead applicant has been responsibility for all legal, financial, and reporting obligations of the grant and Network. ARcare assisted in program development of aging, chronic disease, and wellness program models. ARcare employed the Project Director and any support staff needed to implement the program and managed contractual agreements on behalf of the Network, such as with an external evaluator. ARcare coordinated outreach to member services and continuity of care. ARcare houses the Wellness Center component for group and individual physical activity and nutrition services. ARcare engages in clinical services with the patients by referral from primary care providers, home health, hospice, and self-referrals for longevity assessments and care plans. ARcare operates the Wellness Center and coordinates enabling services through our partners to assist the patients in a full range of care options. ARcare also coordinates transportation services to meet patient needs.

Part V: Outcomes

A. Outcomes and Evaluation Findings (do not submit your Evaluation Report in lieu of completing this section)

During the three year project period, 584 new patients enrolled in the Longevity Center program resulting in 1,296 medical encounters. Of the 584 patients, 258 have improved their blood pressure rates; 244 of the 584 have been diagnosed with diabetes and 174 of those have improved their A1c levels. All of the patients (584) have had a fall risk assessments. Medication management services were delivered to 273 patients, with 210 of those patients receiving changes to their medications as a result of the service. The Fitness Center saw 200 patients during the project period for exercise opportunities.

B. Recognition

The Aging Well Network project was featured as a Rural Health Model & Innovation Project on the Rural Health Innovation Hub in February 2018. <https://www.ruralhealthinfo.org/project-examples/1004>

Part VI: Challenges & Innovative Solutions

This Network did not experience any major challenges throughout this program period for implementation and development. The three partners have worked well over many years which strengthened this program and its mission. Difficulties were initially overcome through outreach and awareness activities to inform the community of the program and all the value-added services that the program could provide. In the third year of the program, the demand for the fitness center outgrew the space available. Therefore, the Network invested in a larger facility for the wellness and group fitness classes.

An innovative solution to no-shows was the collaboration with our Coordinated Care Program in implementing annual wellness visits and health coaching for this target population. This collaboration has helped to reduce the number of no-shows for clinic appointments and follow-up care to treatment.

Part VII: Sustainability

A. Structure

At this time, we are not certain if the Consortium will continue. However, the partnerships between the organizations will continue beyond the length of the grant funded project.

B. On-going Projects and Activities/Services To Be Provided

i) Will all, some or none of the elements of the program be sustainable once Outreach grant funding has ended? Please check the appropriate selection.

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained (i.e. the program will completely end after the grant period)

ii) Identify the projects and activities that will be sustained beyond Outreach grant period.

All of the project activities will continue – chronic disease management, fall prevention, physical activity and nutrition education, as well as medication management. It has not been fully decided how long the partner, Caldwell Pharmacy, will provide the medication management services. ARcare is considering taking this service in-house; however, that could take another year. These services are just part of everyday clinic life at the Longevity Center. Some of the funding to continue these services will be provided through our HRSA Community Health Centers 330 Grant, and some will be absorbed by ARcare.

C. Sustained Impact

The long-term effect for our community is the overall improvement in health outcomes and quality of life for this aging population. The success of the program is the result of the partners working together to assist patients in setting goals and following up on those goals. Through this Aging Well Network, the community has received one-on-one education as well as group education on fall prevention, nutrition education, physical activity, including ways to improve strength and balance, and caregiver support. These services and partnerships will continue past this grant funding. This project has not only impacted this particular community, but other communities in our service area. We have expanded the Longevity Center model to two other ARcare sites, and we are partnering with other agencies in those communities to be able to offer the same type of services to patients.

Part VIII: Implications for Other Communities

The Aging Well Network and the Longevity Program can provide an example for other communities that are interested in expanding their primary care program to assist elderly patients with long-term health goals. The experiences that our team has had while assisting this population through illnesses, hip replacements, diabetic changes, etc. have been life-changing. Overall, the patients love the lengthier appointments with their providers, meetings with the pharmacist on their medication, and basically all the care they are receiving in this Center. The Fitness Center has been a huge success for our patients. It is a place of care, rehabilitation, and

fellowship for healing their mind, body, and soul. Clinically, the collaboration of the interdisciplinary team – having each member reviewing the patient’s case and care plan - is very effective for the patient in understanding their treatment plan and goals. The results are much more effective and efficient for the patient and the care team. Medication errors have decreased, and lifestyles have improved. One quality measure that may prove beneficial for other communities is the improvements in the blood pressure levels and A1c levels for these patients. Of the 584 patients seen in the Longevity Center, 258 (45%) have improved their blood pressure rates; 244 of the 584 have been diagnosed with diabetes, of those, 174 (72%) have improved their A1c levels.

Part IX: Success, Increased Capacity, and Contributions to Change

A. Defining Success

- i) How do you define “success” for your grant program? Please check the appropriate selection(s). You may choose more than one option. If other, please describe.
- Access to a new or expanded health service
 - Increased number of people receiving direct services
 - Improved quality of health services
 - Operational efficiencies or reduced costs
 - Integration of process improvement into daily workflow
 - Continuation of program activities after grant funding
 - Continuation of network or consortium after grant funding
 - Health improvement of an individual
 - Health improvement among your program participants
 - Health improvement among your community
 - Enhanced staff capacity, new skills, or education received
 - Improved capacity to adapt to changes in healthcare
- ii) Do you believe that your program has achieved success? If so, how?
YES – The program has been recognized as an innovative model on the Rural Health Information Hub. In addition, the improved health outcomes of program participants are significant.

B. Organizational Capacity

How has the federal funding of your grant program increased local capacity at your organization, within your network, and/or in your community? Please check the appropriate selection. If other, please describe.

- Formalized networks or coalition
- Developed new partnerships or relationships
- Enhanced skills, education, or training of workforce
- Enhanced data collection and analysis

C. Contributions to Change

Change in individuals’ lives, your organization, consortium, or your community.

Here are a few quotes from some of our patients who have utilized the Longevity Center and its services:

“She (Denise the APRN) takes the time to make sure all of my questions are answered at every visit. Not only have they (nurses and front desk at clinic) helped to improve my health, there’s a social element to my visits. Everyone is always friendly and talks to me. I actually enjoy getting out of the house to see the doctor!”

“Ms. Allison (wellness coordinator) is a polite and encouraging instructor. I’m battling COPD and heart problems. I need this exercise class every day to get through the day and also help me to complete tasks at home.”

“This is the GREATEST thing I’ve ever done. If I didn’t start, I don’t know where I’d be.” (referring to the physical activity classes)

Change in policies, systems changes, and environment:

We have successfully implemented Lean process improvements within the ARcare system. Although this was not implemented with funding through this grant, we have implemented this process throughout the agency. In the past, the most frequently we could effectively disseminate progress towards clinical quality measures was on a monthly basis through a paper report. We have

purchased software called iDashboards that will allow us to create custom graphs or dashboards for each clinical quality measure. These electronic results will be pushed out to each clinic and displayed on the LED monitors that are located in each clinic. The data will be specific to the clinic. With this design in place, we will be capable of updating data at least weekly and once fully automated, data can be updated several times a day. The LED monitors will allow us to provide more relevant, current data to clinical staff that will make the data more actionable. The monitors will be located in an area that is highly visible to staff throughout the day so that if they see they are falling behind on a measure they will have the opportunity to address it immediately. We will also be able to provide reminder bulletins that cover approved workflows to ensure data is captured accurately.

California

Part I: Organizational Information

Grant Number	D04RH28245
Grantee Organization	Palo Verde Hospital District
Organization Type	Hospital
Address	250 N. 1 st . Street, Blythe, CA 92225
Grantee organization website	www.paloverdehospital.org
Outreach grant project title	Palo Verde Children's Outreach Program
Project Director	Name: Sandra Anaya
	Title: Project Director
	Phone number: 760-922-5150
	Fax number:
	Email address: Sandra.anaya@paloverdehospital.org
Project Period	2015 – 2018
Funding level for each budget period	May 2015 to April 2016: \$200,000
	May 2016 to April 2017: \$200,000
	May 2017 to April 2018: \$200,000

Part II: Consortium Partners

* Indicates consortium partners who signed a Memorandum of Understanding/Agreement

Partner Organization	Location (town/county/state)	Organizational Type
Desert Learning Center	Blythe, CA	Elementary School K-8
Palo Verde School District	Blythe, CA	School District K-12
Escuela De La Raza	Blythe, CA	Head Start Programs Non-Profit
Rec Center	Blythe, CA	Non-Profit
Palo Verde Hospital	Blythe, CA	Hospital

Part III: Community Characteristics

A. Area

The Palo Verde Children's Outreach Program (PVCOP) has served one county and 4 communities. These communities are surrounding areas located 30 miles within the Palo Verde District in Blythe, CA; Palo Verde, Ripley, Mesa Verde, and Blythe, CA.

B. Community description

The Palo Verde Valley is surrounded by desert and farmland on the Southern California/Arizona Border along the Colorado River. Therefore, most of the population is made up of Hispanic farmland workers. In this service area the predominate and target population is the Latino population by 68.2%; unfortunately, the poverty rate and low-income status for the target population also exceed the state and national rates; reaching about 19.2% of families with children under the age of 18 years. Since there are extremely hot summers reaching over 110 degrees in the summer, it's difficult for these children to play and exercise outdoors. Consequently, most children within this area become overweight/obese, and have symptoms of depression and/or suicidal ideations. Furthermore, the Palo Verde Valley is considered under the Health Professional Shortage Area (HPSA) area with no specialty care physicians in the area. Therefore, it correlates to why there is an identified gap in services regarding depression, diabetes prevention and education and care coordination/case management services.

C. Need

Since there is a high need for health prevention in diabetes and obesity awareness, the PVCOP has provided services for care coordination/case management, BMI clinical measures/monitoring, waist circumference and weight gain monitoring, nutritional and physical education curriculum. These activities have addressed the high need of awareness in obesity, diabetes prevention, and/or other health disparities such as, depression and suicidal ideations.

Part IV: Program Services

A. Evidence-based and/or promising practice model(s)

The Palo Verde Children's Outreach Program (PVCOP) has been proactive in the implementation of two evidence-based health models, "Bienstar and SPARK", to include the influencing of health beliefs, knowledge/educational nutritional awareness, physical educational activities during and after school by providing ongoing care coordination/case management services and monitoring of dietary fiber intake.

In addition, the Bienestar Curriculum, and the SPARK program target the Hispanic population in diabetes and obese prevention therefore, it has been utilized within the school and home settings. These curriculums have focused on the unmet health needs of educational obesity, diabetes prevention and awareness, reduction in BMI and waist circumference, for at risk children Kindergarten-12th grade, pre and post-test evaluations, health education materials for teachers, health educators, parents and students therefore, has been a successful model.

B. Description of Activities

The Palo Verde Children's Outreach Program (PVCOP) serves four schools in one county-Riverside County in Southern California for children ages 6 to 12yrs and/or Kindergarten to Sixth grade. The PVCOP has four activities within the school and afterschool setting. 1) Community diabetes prevention management education classes for 90% of students and parents with signed consent forms; currently reached 94% of target population in meeting goals 2) Screening clinical services, BMI and waist circumference for clinical measures for students and parents whom signed a consent for participating in the program; 32% were identified as having gained weight from Year 1 to Year 3, as they moved to higher grades. Therefore, health education interventions moved into the home environment for nutritional health curriculum for family. However, 47% of students achieved lower BMI with parent/community health support within their 2nd year of the program. Therefore, it was proven that with curriculum and instruction in home and school, students sustained lower BMI measures. 3) Care coordination and case management is provided to students and parents who are above the 95th percentile for BMI with a referral to nutritionist/Primary Care Physician; currently of the 12,408 individuals reached, 97% of them improved their knowledge and resources of recommendations for self-management and nutritional values. In addition, 35% of them continued nutritional plan and care coordination with their Primary Care Physician. 4) Afterschool health education and self-monitoring program for students and parents with signed consent form. During the afterschool session, the Bienestar and Spark curriculum is being implemented.

C. Role of Consortium Partners

The most important variable in the infrastructure and coordination in developing the PVCOP was to select a strong community-based consortium. The consortium team consist of five community-based organizations. Upon this being constructed by the Palo Verde Health Department administrative team, the consortium has been working in a cohort alliance targeting the reduction of obesity, diabetes, coordinate, review of goals, objectives, time- management, plan referral process, coordinate community health events, monitor BMI and waist circumferences of the baseline/outcomes measurements.

The consortium teams are grouped in pairs and work with an assigned school. The members are the point of contact for their assigned schools to ensure that their school is on task with the BMI/A1c screenings measures, curriculum and instruction participation and are leaders of the Parent Teacher Association (PTA) volunteers. The teams meet every other week to review, develop, share and discuss new ideas. Some of the topics of discussions are review of goals, objectives, time management, referrals, community events, and outcomes measures. The management teams are treated equal and work collaboratively with the students, school officials, parents and the community while implementing diabetes and obesity awareness.

Part V: Outcomes

A. Outcomes and Evaluation Findings

The outcomes correlate to the identified lack of specialty care for diabetes, obesity, educational health programs, or health care coordination services in school and/or home setting. The PVCOP has provided the need for service of care coordination/case management services to children who are overweight, whom clinical screening was over the 95% in BMI and waist circumference out of 90 percent of all students enrolled. Therefore, the PVCOP has currently reached 94.4% of the students served in clinical screenings. However, only 36% of these students lowered their BMI, due to starting the project late, not enough training or staff turnover rate too high. Additional efforts from PVCOP have been made to the high-risk children and their parents/guardians in referring to the community clinic, weekly individual health nutritional education and physical activities, and care coordination for continued monitoring of their BMI and waist circumference.

However, there were additional a gap identified during this project; the need for integrated health services for students and parents related to depression, substance abuse and suicidal ideations. Therefore, this project will continue to evolve into integrated care for the high-risk population addressing these unmet needs. In addition to, improved nutritional practice in schools/homes, increased physical activity, increased access to health programs, care coordination/case management care for high risk children, and new collaborative services provided through local community-based partnerships.

B. Recognition

There have been several recognitions during the longevity of this grant; The Palo Verde Times, The Prime Initiative and the FORH has recognized the PVCOP's accomplishments in utilizing this grant as the anchor for the rural community in diabetes prevention and integrated health services. The Palo Verde Times issued an article providing community recognition to the Palo Verde Children's Outreach Program and the importance of obesity and diabetes prevention, the Prime Initiative asked for a poster presentation at the annual California Health and Human Service (Public Hospital Redesign and Incentives in Medi-Cal (PRIME) seminar, and the Federal Office of Rural Health Policy (FORHP) provided a live webinar with the PVCOP Administrator regarding rural health disparities and prevention.

Part VI: Challenges & Innovative Solutions

Some challenges consisted of lack of parent and child participation, stereo typing within the school setting for children whom obese, other health disparities superseded in reaching goals such as depression or drugs, staff turnover, resignation of Primary Care Physician, not enough time to train health *promotoras* health workers and not enough time to complete the project due to having a late start.

Within the second year of this grant, the challenges identified and addressed by implementing integrated health services into the project. Some of the need for integrated health services (behavior health and physical health) within the school and home setting were to assess students and parents with PHQ-2/9 depression screenings, the training of health workers addressing bullying and referral-based health needs, and the PVCOP collaboration with the city and state for additional outside assistance in hiring qualified physicians and health officials. With these challenges being addressed, it has begun to give insight and awareness to the community in forming solutions in a collaborative approach with the PVCOP.

Part VII: Sustainability

A. Structure

They consist of five community organizations; Palo Verde Hospital District, Palo Verde Union School District, Desert Learning Center (private school), Escuela De La Raza and the Rec n Crew. These partnerships are a large part of the Palo Verde community and have been locals for two to three generations therefore, they would like to continue in helping this community in their health needs.

Additionally, the consortium has come together as strong community leaders to meet the children's healthcare needs; therefore, they work diligently in meeting by-monthly or more frequent to develop the infrastructure for PVCOP and have agreed to continue on board as the community consortium.

B. On-going Projects and Activities/Services To Be Provided

i) Will all, some or none of the elements of the program be sustainable once Outreach grant funding has ended? Please check the appropriate selection.

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained (i.e. the program will completely end after the grant period)

ii) Identify the projects and activities that will be sustained beyond Outreach grant period.

During the three years of the outreach grant, the consortium has identified new ways of serving to improve the PVCOP: adding additional consortium members for continuity of care like the California Women's Association of Agriculture, adding new procedures for school promotoras and training development, and adding new providers to enhance and expand the services in specialty care. In addition, there have been new capacity in developing more training for community workers/health promotoras. These health workers have been trained by the New Life Curriculum from San

Antonio Texas; this is an addition from the Bienestar Curriculum. Therefore, serves the underserved, diabetic, high-risk population. The PVCOP has also added Escuela De La Raza to their consortium whom will assist in providing additional space for physical activity, after school implementation of depression screening PHQ-9/2, and health care preventative training for community members. Additional projects identified to be sustained beyond the grant period are clinical screenings, BMI and waist circumference calculations, referrals to behavioral health and depression screenings.

C. Sustained Impact

The PVCOP will work in cohort with local physicians for these policy practices and implementations. Some of the policy billing and coding will consist of the Medicaid, CA PRIME Initiative, and Medicare billing and coding for care coordination, A1c, BMI calculation, depression, and alcohol screening. With these implementations, in addition to the volunteering of health promotoras, the PVCOP will be able to sustain and continue to provide a continuum of care for this population.

Part VIII: Implications for Other Communities

The PVCOP's experience during this grant period was in great benefit to the community and surrounding areas because it formed an alliance between the hospital, clinic, local organizations and community; the hospital is now seen as the anchor of the community in bringing together individuals for better health outcomes. For example, Riverside County assisting care coordination and screenings of local high-risk patients has created better outcomes in diabetes prevention but also in reduction in students missing school days for being sick and decreased Emergency Department (ED) inpatient mental health/depression suicidal visits. Another huge factor is the role of the school district in allowing this program in their schools. It has driven a health awareness that was much needed and provided in identifying a gap in services; in which, Palo Verde Hospital is addressing with integrated care coordination in the home environment.

Part IX: Success, Increased Capacity, and Contributions to Change

A. Defining Success

i) How do you define "success" for your grant program? Please bold/highlight your selection. You may choose more than one option. If other, please describe.

- Access to a new or expanded health service
- Increased number of people receiving direct services
- Improved quality of health services
- Operational efficiencies or reduced costs
- Integration of process improvement into daily workflow
- Continuation of program activities after grant funding
- Continuation of network or consortium after grant funding
- Health improvement of an individual
- Health improvement among your program participants
- Health improvement among your community
- Enhanced staff capacity, new skills, or education received
- Improved capacity to adapt to changes in healthcare

i) Do you believe that your program has achieved success? If so, how?

Yes, the PVCOP was able to succeed in raising awareness for diabetes prevention and obesity. However, it was also able to integrate additional services for other health needs identified during the longevity of this grant. Such as, depression screening, PHQ 2/9, and train local health promotoras in health awareness, education and referral process.

B. Organizational Capacity

How has the federal funding of your grant program increased local capacity at your organization, within your network, and/or in your community? Please bold/highlight all that apply. If other, please describe.

- Formalized networks or coalition
- Developed new partnerships or relationships
- Enhanced skills, education, or training of workforce
- Enhanced data collection and analysis

During the grant period, the PVCOP was able to increase collaboration and capacity outside the walls of the hospital in several areas, as highlighted below. While learning and implementing networking strategies in forming partnerships, the PVCOP expanded outside the walls of the hospital and integrate collaborative co-hort approach with the local and nearby community. Some of these networks consisted of Riverside County assisting in our partnership in referrals to mental health, use of facility in the Ripley and Mesa Verde areas, and support with the local community. Another partnership created was with the local college in assisting with their nursing Licensed Vocational Nurse (LVN) Program; their support and coalition is imperative to the community and this project. Lastly, the Bienestar Curriculum has all the tools for this area regarding diabetes prevention, the skills taught in the school and at home are easily learned by most children and parents. Therefore, makes the simplicity of the health education feasible to practice.

C. Contributions to Change

One story involves an 87 pound kindergarten female whom was depressed, being bullied and having issues at school with teachers. This student had moved from Northern CA and had gained a lot of weight during the summer here in Palo Verde (hence the summers are over 100 degrees). After a referral from the teacher and home visits to the parents, the student started participating at the afterschool program (Rec Center) while mom watch her carb intake. There was also referral to the counselors for individual therapy for the child's depression. Overall, the child lost some weight by her 2nd year in the program. The parents were very excited and have been participating ever since, in which have also lost weight.

During the duration of this grant, the school officials and nutritionist have practices healthy habits by not rewarding students with candy, potato chips or other sugar products. They have also added a walk to school with your parent day; this is to lead a healthy life. And the biggest achievement of this grant is that it was the anchor for the community to come together in collaboration facing health needs for better outcomes.

California

Part I: Organizational Information	
Grant Number	D04RH28428
Grantee Organization	Redwood Community Action Agency
Organization Type	Non-profit community action agency
Address	904 G Street, Eureka, CA 95501
Grantee organization website	http://www.rcaa.org
Outreach grant project title	Redwood Community Action Agency's TOOTH Plus
Project Director	Name: Lorey Keele
	Title: Community Services Director
	Phone number: 707-269-2052
	Fax number: 707-442-2430
	Email address: lkeele@rcaa.org
Project Period	2015 – 2018
Funding level for each budget period	May 2015 to April 2016: \$199,864.20
	May 2016 to April 2017: \$199,512.33
	May 2017 to April 2018: \$199,722.58

Part II: Consortium Partners		
* Indicates those consortium partners who have signed a Memorandum of Understanding/Agreement		
Partner Organization	Location (town/county/state)	Organizational Type
Redwood Community Action Agency (Lead)	Eureka/Humboldt/California	Non-profit community action agency
*North Coast Children's Services	Arcata/Humboldt/California	Local non-profit serving children and families
*Changing Tides Family Services	Eureka/Humboldt/California	Local non-profit serving children and families
*Humboldt County Office of Education	Eureka/Humboldt/California	County Office of Education
*Bayview Consulting	Manila/Humboldt/California	Local health consultant
*California Center for Rural Policy	Arcata/Humboldt/California	Humboldt State University
*Precision Intermedia	Fortuna/Humboldt/California	Local multimedia marketing agency
Humboldt County Department of Health and Human Services	Eureka/Humboldt/California	County Health Department

Part III: Community Characteristics

A. Area

The TOOTH Plus outreach grant program served Humboldt County, California. Humboldt County is located on the far north coast and is one of the largest counties in California by geography, covering 3,572 square miles. Humboldt is located in a densely forested and mountainous region about 225 miles north of San Francisco.

The specific target populations for the outreach grant included: Children ages 3-6 in Early Head Start, Head Start, State preschool programs, home-based and childcare centers, and kindergarten, pregnant and nursing women, care providers for children ages 0-6, parents, and the community-at-large.

B. Community description

The population of Humboldt County is approximately 135,000 or 37.7 people per square mile in comparison to California which averages 217.2 residents per square mile and classifies rural as 52 residents or fewer per square mile. There are seven incorporated cities ranging in population size from 400 to 28,000 residents. Approximately half of the population lives in these

incorporated communities. Forty-three percent of the residents live in the area surrounding Humboldt Bay, in the cities of Arcata (21,546), Fortuna (13,772) and Eureka (28,000). These incorporated are the chief population growth areas for Humboldt County and follow Highway 101, the major connector of services along the North Coast. In Humboldt County, more than a quarter of the students entering kindergarten have untreated dental decay. Geographic isolation, lack of transportation and limited access to dental care contribute to Humboldt County's ranking in number one in among California counties for emergency room visits for preventable dental conditions. Between 2008 and 2013, at least 675 children received hospital-based dentistry services of which 75 percent were ages 0-5 and 90 percent were Medi-Cal patients.

C. Need

Local needs assessments and surveys revealed that Humboldt County community members have issues and concerns around healthcare access, availability of preventative services and oral health knowledge. Barriers to getting proper medical and dental care have been explored and include lack of access due to a dental professional shortage, few Medi-Cal providers and lack of insurance. The oral health enhancing activities funded through TOOTH Plus were planned to address/overcome the following barriers and community-specific challenges: transportation barriers, improving access to preventive oral health care for Humboldt's Latino population, and improving access to preventive oral health care for Humboldt's Native communities.

Part IV: Program Services

A. Evidence-based and/or promising practice model(s)

The promising practice models that were used for TOOTH Plus were identified in the brief, *Promising Practices to Improve Access to Oral Health Care in Rural Communities*, issued through the NORC Walsh Center for Rural Health Analysis in February 2013. The associated health promotion and dental disease activities were also evidenced-based and endorsed by the American Academy of Pediatric Dentistry. TOOTH Plus was based on the design of the California Children's Dental Disease Prevention Program (CCDDPP) which was replicated in 31 counties from 2004-2009 with the goal of contributing to the achievement of the Healthy People 2010 Oral Health Objectives.

Community Outreach and Engagement Model: This model includes "strategies to increase knowledge and awareness of the importance of oral health" including "targeted outreach in hard to-reach rural areas" and "oral health education" which TOOTH Plus will provide through the following oral health education services:

- County-wide public education campaign through the use of print, advertisements, social media and public service announcements in English and Spanish
- Dental disease prevention trainings for daycare providers
- Bilingual oral health workshops for expectant women and parents
- School-based education for children in daycare settings and kindergarten classrooms

The American Academy of Pediatric Dentistry (AAPD) advocates interaction with early intervention programs, schools, early childhood education and child care programs, members of the medical and dental communities, and other public and private community agencies to ensure awareness of age-specific oral health issues.

School-Based Model: This model "helps to reduce missed school time for children and can reach children in families that may not seek dental care due to a lack of resources", which TOOTH Plus provided through the following preventative oral health services:

- Two annual oral health screenings by a registered dental professional for Humboldt County's low-income students attending Early Head Start, Head Start and State preschools.
- Two annual fluoride varnish by a registered dental professional for Humboldt County's low-income students attending Early Head Start, Head Start and State preschools.

The AAPD supports fluoride applications applied by "auxiliary dental personnel, or other trained allied health professionals, by prescription or order of a qualified dentist", which aligns with California's Health and Safety code which allows fluoride varnish to be administered by anyone "within a public health setting or a public health program that is created or administered by a federal, state, or local governmental entity."

Dental Home Model: This model is a "comprehensive approach to improving oral health access for vulnerable populations by providing a regular source of care", "increased collaboration among providers" and, "promotion of oral health education". The AAPD defines "dental home" as the "ongoing relationship between the dentist and the patient, inclusive of all aspects of oral health

care delivered in a comprehensive, continuously accessible, coordinated, and family-centered way.” TOOTH Plus implemented this model through case worker staff at North Coast Children’s Services who assisted families with finding a dental home and overcoming the barriers that kept them from establishing one.

B. Description of Activities

Goal I: Increase oral health literacy and proper hygiene practices of parents, caregivers, and children ages 0-6 in Humboldt County.

Activities: County-wide public education campaign through the use of print, social media, advertisements, and public service announcements; trainings for daycare providers, workshops for expectant women and parents; and classroom-based education for children in daycare settings and kindergarteners.

Goal II: Improve the oral health and wellness of children ages 3-6 in Humboldt County.

Activities: School-based oral health screenings and fluoride varnish treatments by a registered dental professional for low-income students attending Early Head Start, Head Start and State preschools.

Goal III: Increase the number of low-income preschool children with an established dental home in Humboldt County.

Activities: Dental home case management provided to State preschool students without an established dentist.

C. Role of Consortium Partners

The enhanced oral health services provided by the project were coordinated through a consortium of health care providers that included nonprofits focused on children’s health, the county office of education and community health consultants. Through the collaboration of the TOOTH Plus Project consortium members North Coast Children’s Services, Changing Tides Family Services and the Humboldt County Office of Education, enhanced oral health services were provided to low-income preschoolers. These preventive services included two annual dental screenings and fluoride varnish treatments delivered in-class by registered dental staff. Additionally, community health consultant Bayview Consulting assisted in creating a public campaign to increase the oral health literacy of Humboldt County’s caregivers and general community. The California Center for Rural Policy (CCRP) assisted in creating the five-year strategic plan and assessment plan required by the RHCSOP grant. CCRP also assisted the program in articulating linkages between TOOTH Plus and the county-wide strategic oral health efforts.

Part V: Outcomes

A. Outcomes and Evaluation Findings (do not submit your Evaluation Report in lieu of completing this section)

Goal 1 Findings: 602 students completed both pre and post Student Knowledge Assessment tests. These students’ assessment average score increased from 61.40 to 84.12. This average score increase in post-test scores was statistically significant: $t(601) = -19.31, p < .0001$. Student Knowledge Assessment results by classrooms showed an increase in all 50 classrooms’ average post-test scores. In terms of parent/caregiver knowledge, in Year 1 of the grant 178 parents or caregivers completed a knowledge assessment. The average score for the instrument was 64.42. In Year 2 of the grant 303 parents or caregivers completed a knowledge assessment. The average score for the instrument was 78.66.

Goal 2 Findings: At the end of Year 2, 399 children aged 0-6 received an oral health screening and 399 also received at least one application of fluoride varnish.

Goal 3 Findings: The total number of students receiving case management services and their outcomes will not be available until the end of Year 3 (4/30/18).

Note: Final outcome and evaluation findings will be determined at the end of Year 3 (4/30/18) and can be included in any final reports.

B. Recognition

In addition, RCAA has secured funding through the Dental Transformation Initiative (DTI) grant from the California Department of Health Care Services to continue providing classroom-based education and oral health screenings and varnishes to children in Humboldt County. RCAA will also conduct a “train the trainers” with preschool and early head start staff at Changing Tides Family Services on early childhood oral health interventions. It is expected that this training will reach up to 150 staff members, childcare

providers, and early head start teachers.

Finally, RCAA's preliminary planning work with the AmeriCorps Healthy Futures planning grant did result in Prevent Child Abuse California's decision to integrate oral health as one of their core focus areas. They will be piloting an oral health education program with the intent of taking it statewide throughout California.

Part VI: Challenges & Innovative Solutions

The consortium and the county-wide Dental Advisory Group realized that newspaper ads, radio ads, bus ads, and posters were not the most effective method to reach parents of children aged 0-6 or the community-at-large. While the oral health messages were well designed and consistently used by partner agencies, the reach of those messages was sometimes limited by using traditional outreach methods such as radio and bus ads. The consortium determined that outreach methods needed to expand to include more social media. Additionally, in a geographically large area, many residents may be connected only through social media. For example, a banner in Eureka may not be seen by residents in outlying communities in Humboldt County. TOOTH Plus staff utilized that input to develop a more interactive website and web presence. They developed videos and began creating social media posts to reach more people with oral health messages. TOOTH Plus staff also ensured that all messages were translated and available in Spanish for Humboldt County's Spanish-speaking population.

Another barrier that we faced was the limited number of providers in our county that will accept children on Medi-Cal. It is difficult to ensure that all children have a dental home when we have only four providers in the county who accept children on Medi-Cal. In Humboldt County we have 10,785 children between 0-10 years of age who are enrolled in Medi-Cal, and 51,185 people overall in the county are enrolled in Medi-Cal. Only four providers offer oral health care to this population. This shortage of oral health providers willing to accept Medi-Cal is a significant barrier in establishing a dental home for all children in Humboldt County.

Part VII: Sustainability

A. Structure

RCAA, Humboldt County Office of Education, North Coast Children's Services, Changing Tides Family Services, Precision Intermedia, and the California Center for Rural Policy will all continue to be a part of the consortium. In addition, these organizations will also all remain active members of the Humboldt County Dental Advisory Group and the Humboldt County Oral Health Leadership Team. Precision Intermedia will not be directly involved with those two groups as their role is specific to the outreach component of the work. RCAA and the DAG outreach subcommittee will continue to work with Precision Intermedia to communicate outreach messages and approve all outreach materials created by Precision Intermedia.

In terms of new partners, the City of Eureka and Eureka City Schools is a new partner and will be providing access to children during vision and hearing screenings. There will be an oral health screening conducted in conjunction with the vision and hearing screening that 2nd and 5th graders receive. Additionally, RCAA will be working with the Humboldt County Network of Family Resource Centers (FRCs). The FRCs will provide space for RCAA to conduct oral health education, screenings, and fluoride varnish.

B. On-going Projects and Activities/Services To Be Provided

i) Will all, some or none of the elements of the program be sustainable once Outreach grant funding has ended? Please check the appropriate selection.

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained (i.e. the program will completely end after the grant period)

ii) Identify the projects and activities that will be sustained beyond Outreach grant period.

The media campaign has been a work in progress and one that has the potential to significantly impact the way that families take responsibility for their oral health and wellness and how children see themselves and their health. We have worked together as a group to identify 5 impactful slogans, a dynamic logo, an engaging website, an appealing brochure and materials that will all be used by everyone serving children and families. These items will continue to be used and funded beyond this grant proposal by our newly acquired Dental Transformation Initiative Grant and Prop 56 funds. We have already distributed our new brochures paid for by HRSA, and found a local dentist who paid for an additional 500.

We created the media campaign to help families remove barriers to accessing oral health providers who will be able to accept children as patients regardless of their socio-economic status. Incorporated into parent and day care provider workshops are tactics for caring for the child's teeth, gums and overall oral hygiene. Learning is a process and because parents and families are dealing with so much stress in their daily lives, learning and making serious behavioral changes does not come easy especially if these lessons are new and not ones that they grew up with. An added layer to this learning is the difference in how each culture treats oral health. The myths from generations of misinformation are hard to dispel.

Our commitment to a comprehensive, long term oral health care awareness campaign *is* our priority if we as a collaborative are going to see a change in culture. We have woven this philosophy and education into all aspects of our programming which will continue on far beyond the end of this grant. The Humboldt County Department of Public Health has received Proposition 56 funding that could provide additional funds to sustain our countywide media campaign.

RCAA has applied for the next round of funding from HRSA to expand education and screening efforts to include K-5 and to expand outreach efforts to include a county-wide social media campaign. RCAA recently received funding through the Dental Transformation Initiative to provide classroom education, oral health screenings, and referrals to a care coordination hub to link children with a dental home. RCAA is one of several funded partners in this effort, which is being spearheaded by the Humboldt County Department of Health & Human Services- Public Health Branch.

The Humboldt County Office of Education has been asked to continue their support of TOOTH by providing a portion of the cost for oral health kits to students served in elementary schools throughout the county. The consortium will continue to support the efforts of Prevent Child Abuse California to pilot an oral health-focused cadre of educators to serve rural areas in California.

North Coast Children's Services also hopes to continue providing screening services to children and will apply for funding to foundations for dental treatment services. In addition, new Early Head Start performance standards now mandate care managers support families in establishing a dental home for infants and toddlers. Incorporating this activity into the job description for case managers prioritizes the need for children to have a dental home and job performance will be evaluated based on the inclusion of this activity.

The consortium intends to seek funding to support outreach and education activities from the following potential local funders: Humboldt Health Foundation, North Coast Grantmaking Partnership, First 5 Humboldt, CalFresh, Proposition 56, Humboldt County Office of Education.

The consortium's next steps are as follows:

- Identify and apply for funding from local funders mentioned in the above section to secure funds to continue oral health screenings in child care settings, early head and head start classrooms. These efforts will be led by RCAA with support from North Coast Children's Services and Changing Tides Family Services.
- RCAA will take the lead on working with Eureka City Schools to identify and secure future funding to provide oral health screenings and fluoride varnish to students during their regular vision and hearing screenings.
- RCAA is already a funded partner through Humboldt County's Dental Transformation Initiative.
- RCAA has already applied for additional HRSA funding to expand the work of the consortium and outreach education.

RCAA will request inclusion in the Department of Public Health's Proposition 56 Initiative, should any funding opportunities arise that fit TOOTH program goals.

C. Sustained Impact

One of the most significant impacts of the grant was the design and integration of a consistent oral health bi-lingual messaging throughout the social service agencies and health clinics in Humboldt County. These messages were designed by a subcommittee consisting of consortium partners, representatives from other agencies affiliated with the Humboldt County Dental Advisory Group, and parent focus groups. These messages will be woven into all future outreach efforts.

The grant provided an opportunity and space for RCAA, North Coast Children's Services, and Changing Tides Family Services to work together and take their collaborative efforts to the next level. Both North Coast Children's Services and Changing Tides Family Services serve a large percentage of children ages 0-6 in Humboldt County who come from low-income families. The early head start, head start, and childcare facilities are natural settings where children and their families spend time. Providing oral

health screenings and varnish in these settings made it easy for parents to get their children assessed. Many low-income families in Humboldt County struggle with access to oral health care, and bringing assessment and preventive services directly to them in a place where they already were made a huge difference. Providing oral health education to children, parents, caregivers and care providers has helped to create a culture where oral health is integrated into natural settings where families are. The training of care providers was critical to ensure that oral health knowledge expands beyond the dentist office and into community-based settings.

The grant also was very integrated with the ongoing county-wide efforts to improve the oral health of children from low-income families in Humboldt County. The grant allowed RCAA to provide complimentary strategies and activities that met county-wide strategic goals and aligned with the county-wide strategic plan. Between the grant consortium and the close link with the county-wide Dental Advisory Group and Children's Oral Health Leadership Team, grant-related activities did not occur in a vacuum but rather were part of an overarching strategy and approach that has a broad base of community support.

Part VIII: Implications for Other Communities

For other communities that are interested in implementing a similar program, we would recommend the following:

- Be strategic about the consortium partners that you bring to the table. Make sure they are the right partners for the work you want to do and make sure that there is something of value that you are providing to them through their participation in the grant work.
- Choose a variety of consortium partners and try to include both agencies as well as local non-profits that serve your target population.
- Align your grant efforts with larger community-based health improvement efforts. This may include your local public health department and/or your local health care district/providers. Participate in county-wide collaborative groups that are focused on the health topic you are working on.
- Reach out to local funders to let them know about the work you are doing; ongoing community support from local funders is critical to sustainability of grant-related efforts.

In terms of qualitative measures, we found it very helpful to meet one-on-one with consortium partners to understand their successes, barriers, and overall impressions of the impact of grant activities. These meetings were typically informal but they were very valuable in understanding the perspective of each consortium member and how their values aligned with grant goals.

Whenever you are able, including focus groups or key informant interviews with your target population will give the lead agency and consortium partners a broader perspective on the values and needs of the people you are trying to serve.

Part IX: Success, Increased Capacity, and Contributions to Change

A. Defining Success

- i) How do you define "success" for your grant program? Please check the appropriate selection(s). You may choose more than one option. If other, please describe.
- Access to a new or expanded health service
 - Increased number of people receiving direct services
 - Improved quality of health services
 - Operational efficiencies or reduced costs
 - Integration of process improvement into daily workflow
 - Continuation of program activities after grant funding
 - Continuation of network or consortium after grant funding
 - Health improvement of an individual
 - Health improvement among your program participants
 - Health improvement among your community
 - Enhanced staff capacity, new skills, or education received
 - Improved capacity to adapt to changes in healthcare
- i) Do you believe that your program has achieved success? If so, how?

Yes, we do believe that our program achieved success. By providing oral health assessments and fluoride varnish to children 0-6 from low-income families, we were able to intervene early with children who are likely at high risk for caries. By assessing children at a young age and providing a preventive service like fluoride varnish, we are providing early identification and protection for a population of children that have difficulty accessing oral health care.

By providing oral health education to children 0-6 and their parents, we were giving them the information they need to take care of their teeth at home. We assisted parents in understanding their role in ensuring their children's oral health by providing education about early cavities detection and how to assist their child in brushing at home twice a day.

B. Organizational Capacity

How has the federal funding of your grant program increased local capacity at your organization, within your network, and/or in your community? Please check the appropriate selection. If other, please describe.

- Formalized networks or coalition
- Developed new partnerships or relationships
- Enhanced skills, education, or training of workforce
- Enhanced data collection and analysis

C. Contributions to Change

Change in individuals' lives, your organization, consortium, or community:

Our HRSA TOOTH Plus grant came on the heels of our countywide strategic plan which helped focus on the high number of children effected by caries, implementing an impactful media and outreach campaign, and increasing access to oral health providers. As a result, RCAA's TOOTH Plus Program took on the challenge by pursuing early childhood interventions focusing on oral health and wellness education for children 0-6 years old and their parents. TOOTH Plus was successful in collaborating with local service providers who worked with: pregnant women, new parents, parents of children under 6, children in child care/daycare settings, children attending Early Head Start and Head Start, and kindergarteners. HRSA brought our partner programs together for the first time, promising to direct energy and dollars toward meeting the goals set forth by our strategic plan.

TOOTH Plus staff led the way along with our partner programs to form a committee of the Dental Advisory Group (DAG) dedicated specifically to community outreach. The committee immediately designed a logo that would be used for our media campaign and all other outreach activities organized by any agency within the DAG. The agreement by all the organizations and programs to use a common logo added on another layer of commitment to the greater vision by us all and had a powerfully bonding effect on the larger working groups and their ability to work together.

In an effort to educate and better inform pregnant mom's and new parents, a direction our county programs had never gone before in terms of oral health and wellness, TOOTH Plus staff created a comprehensive outreach plan with partner programs to identify any and all access points. TOOTH Plus staff worked diligently at making contact with each of those access points and providing educational materials and oral health kits or at the very least, dental health kits that included: adult toothbrushes and toothpaste, infant gum cloths and toothbrushes, floss and informational materials about the importance of brushing your teeth while pregnant, cleaning and brushing your baby's gums during feedings, helping them brush their teeth as toddlers' and an individual survey on oral health habits of those receiving these kits. These were distributed throughout the county to everyone providing support services to pregnant mothers and new parents. Hospitals, clinics, OB/GYN offices, social workers, nurses, La Leche League groups, etc. that work with this population all received kits for their families.

This was a very targeted and comprehensive approach to meeting and educating new parents that had not been done before. In continuing to reach parents where they were at, TOOTH Plus educators then coordinated presentations for parents who participated in 'playgroups' with their children and in their respective community's. Those parents, many of them new or parenting several young children, then received new oral health kits which included additional information about how they can best care for their children's teeth and myths about dental decay. This was also an opportunity for parents to discuss the challenges of having children brush their teeth and ways they could be successful!

Change in policies, systems, and environment:

Integrating oral health education, screenings, and varnishing into early head start, head start, preschool and child care settings is a significant system change. By ensuring that all children receive oral health education, and that children at high risk receive oral health screenings and preventive services, we are integrating oral health into the school environment, a natural setting where you find children and parents. School environments do not by default provide oral health education, screening and varnishing. Additionally, by training providers who work with and teach children every day, we were able to increase the capacity of school

professionals to provide oral health education to their students on an ongoing basis. Building school environments that incorporate oral health education, screening, and varnish has the potential to reduce decay rates and improve the oral health of children across Humboldt County.

Colorado

Part I: Organizational Information

Grant Number	D04RH28393
Grantee Organization	All American Families dba Families Plus
Organization Type	Non-profit Corporation
Address	115 Grand Avenue, Suite 2; Delta, CO 81416
Grantee organization website	www.Familiespluscolorado.org
Outreach grant project title	
Project Director	Name: Brenda K. Holland, Ph.D. Title: Executive Director Phone number: 970-874-0875 Fax number: 970-874-5443 Email address: Brenda.k.holland@gmail.com
Project Period	2015 – 2018
Funding level for each budget period	May 2015 to April 2016: \$200,000 May 2016 to April 2017: \$200,000 May 2017 to April 2018: \$200,000

Part II: Consortium Partners

* Indicates consortium partners who signed a Memorandum of Understanding/Agreement

Partner Organization	Location (town/county/state)	Organizational Type
Delta County Memorial Hospital	Delta/Delta/ Colorado	Hospital, nonprofit
Stoney Mesa Family Practice	Delta/Delta/Colorado	Medical clinic, private
Delta Health and Wellness Center	Delta/Delta/Colorado	Medical clinic, nonprofit
Families Plus	Delta/Delta/Colorado	Mental Health Specialty Clinic, nonprofit

Part III: Community Characteristics

A. Area

Delta	Delta County, Colorado
Hotchkiss	Delta County, Colorado
Paonia	Delta County, Colorado
Crawford	Delta County, Colorado
Cedaredge	Delta County, Colorado

B. Community description:

Delta County Colorado consistently ranks 40 out of 59 counties in Colorado for overall health access and quality, according to County Health Rankings. Of particular concern is the high rate of children living in poverty. Delta County is as big as Rhode Island but has public transportation only for some senior and disabled citizens. The social determinants of good health are weak in Delta County. There is a one-year wait for subsidized housing. Cell phone signals are intermittent. Access to the Internet is limited to some public places or expensive private systems. There are no community colleges or four-year colleges. The following table illustrates Delta County's unique needs:

Status	Families Plus children	Delta County	Colorado	United States
Adult smoking		24%	17% ⁱ	18.1 ⁱⁱ
Children living in poverty ⁱⁱⁱ	84%	23.5%	18.1%	23%
Children without insurance	0%	13.7%	9.0%	7.0%

Children with Medicaid/CHP+	92%	54.5%	42.4%	21.5 ^{iv}
Teen pregnancy	<1	45/1000	30/1000	n/a
Suicide	0	20.718	19.519	13/100,000
Parent on SSI under 65 2011–2015	38%	12.2%	7.2%	8.6% ²⁰

B. Need

The purpose of this project was to address the fragmentation and scarcity of health care in this rural county with improved systems of delivery so that they integrate behavioral and physical health care. Three populations were targeted. One target population consisted of children with complex needs growing up in families typically led by adults with co-occurring behavioral health and other disorders. Both the caregivers who are raising children and the children often demonstrate serious and complex health problems. It is estimated that at least five percent of Delta County residents under 18 years of age falls into this category. These children and youth typically were getting no health care services or sporadically receiving service.

The second target population were the children being serviced by seven medical clinics administered by Delta County Memorial Hospital, a private clinic (Stoney Mesa Family Practice), and by a safety net clinic (Delta Health and Wellness Center). This group encompass approximately 75% of Delta County children. It is likely that 20% of these children struggle with a behavioral health disorder. Their clinics did not provide psychotherapy or behavioral consultation for behavioral health problems. Finding outside behavioral health professionals was difficult and often not possible. There were only a few child-trained behavioral health professionals in the county.

The third population targeted was individuals with depression being service by Delta Consortium’s seven medical clinics and two partner clinics. At the onset of the project, these clinics provided medication for depression, but could not offer behavioral health consultation or psychotherapy on site. Finding outside behavioral health professionals was difficult and often is not possible.

Part IV: Program Services

A. Evidence-based and/or promising practice model(s)

The Wraparound promising-practice model was selected because evidence shows that it improves outcomes through increasing investment and participation of the persons asking for services. The NREPP (National Registry of Evidence-based Programs and Practices) rates Wraparound as a promising practice, and the process is strongly supported by the State of Colorado and is reimbursable through Medicaid. It was Delta Consortium’s goal to use the health care services already available here more effectively. The Wraparound Model applied skillfully to both children with complex problems and to patients in integrated care settings was likely to drive improved health care outcomes and valuable improvements in the overall health of the target populations.

The steps of the Wraparound Model are effective in rural America because the steps, although complemented by the presence of behavioral and health professionals, can be carried out with volunteer supporters or by case manager level staff. We envisioned family prioritization of crucial medical and behavioral health needs but also expected, based on the Wraparound experience of Families Plus, families would also prioritize areas such as employment and housing needs. Wraparound is referred to as a process of integration because it brings all key players to the table to develop one overall plan rather than fragmented, single system planning. The model builds person-centered and family-centered care practices.

The behavioral professionals working in our project also use evidence-based treatment models: Trauma focused Cognitive Behavioral Therapy; Kool Kids; and Cognitive Behavioral Treatment for Depression.

B. Description of Activities

The activities of Delta Consortium revolved around three main objectives: 1) Created access to comprehensive health care for underserved children employing the Families Plus Mental Health-Mentoring Model; 2) Integrated behavioral health professionals in to medical clinics; and 3) Developed collaboration among agencies to promote access to behavioral health care throughout Delta County.

1. **UNDERSERVED CHILDREN:** Many in Delta County had already been working for more than a decade to find ways to provide for families of underserved children. The Families Plus Mental Health-Mentoring model was developing to bring to these children community supports and assistance with sustaining regular preventative health care. The strategy of this

model is to start early, work across all systems, stay alongside of these family for the long term to assist in raising healthy skilled children. The model is a radical and comprehensive prevention strategy designed to prevent a whole range of occurrences that could launch children and youth into a life time of poor health: dropping out of school; early substance abuse; early untreated trauma; lack of preventative health care; and lack of skill building activities during childhood.

Families decide what would help them with their children. Many activities are offered by Families Plus. These supports come from either of two sets of services:

Health Care Component Includes:

- A licensed mental health care professional assigned to each child and his/her family to coordinate services and consult with parents, teachers and volunteers
- Therapy for behavioral problems or emotional distress by a mental health professional
- A complete, annual mental health evaluation
- Assistance, if needed, to access dental checkups twice a year and follow up dental care
- Assistance, if needed, to get a well child checkup and followup medical care
- Help for the family to prevent the child from engaging in substance use and abuse

Community Component (if selected) Includes:

- Whole volunteer families (the mentoring family) to be permanent mentors to a child
- Tutors to help improve grades that are below a C
- Grade monitoring with help for parents to see that their child's homework is completed
- Assistant parents with working out problems at school
- Mini-mentors to work with children on skill building
- Enrollment fees for sports programs
- Enrollment fees for youth clubs and for lessons
- Enrollment fees for summer camps
- Help to find transportation to doctors' appointments, sports practices, etc.
- Respite care for the child during crisis
- Assistance to parents in advocating for their child's needs
- Goods and services that the family needs (e.g., rides, washers, dryers, beds)
- Mother's Day and Father's Day gifts for the children to give and to learn appreciation
- Assistance to the family when in crisis

2. **INTEGRATED CARE IN MEDICAL CLINICS:**

The Delta Consortium hired and trained two full time behavioral professionals (BH Professionals) to divide their time between under-served children and work in medical clinics. Initially they retrained themselves and set up protocols to test in one medical clinic toward integrating behavioral and primary care. The clinic selected was the largest medical clinic in the county, offering eight full time medical providers. Months of effort was needed to get BH Professionals into the electronic health records and also to find a creative way to bill their work.

Slowly, medical providers became comfortable with these two BH Professionals. They began using them as in-the-room consultants in regular patient visits. They also worked with BH Professionals to engage their patients in brief treatments with these therapists right in the clinic. The BH Professionals quickly became invaluable to the medical providers to handle mental health crises and urgent needs that are frequently present during doctor visits.

Depression screening using the PHQ-9 was introduced. Very slowly this assessment entered the regular work flow in this clinic until it is now universally used and charted with all patients to identify depression care needs.

Once integrated care in this one large clinic was underway, integrated care was introduced under the Rural Health Services Outreach grant into a smaller private clinic, Stoney Mesa Family Practice and then also into a safety net clinic, Delta Health and Wellness Center. Implementation was slightly different in each clinic, but has become an established way to meet the behavioral health needs of their patients within the clinic walls.

3. **COLLABORATION AMONG AGENCIES:**

The unmet behavioral health needs of Delta County were determined through a Strategic Decision-Making Process facilitated by Dr. John VanDenBerg that began in January 2017. Engaging consumers to attend and be interviewed was emphasized.

Families Plus initiated the process in conjunction with Delta Consortium Partner DCM Hospital. The process can be summarized as follows:

Date	Meeting/Survey	# Present	Involvement/Outcomes
1-3-2017	Meeting: Hospital CEO, Families Plus Ex Dir, and Assist. Dir	3	Decision to plan
1-23-2017	Meeting: Hospital CEO, Families Plus Ex Dir, and Assist. Dir; Depart. of Health, Dir; School Dist. Superintendent and Assist.; Center for Mental Health, CEO	7	Decision to organize community input
3-3-2017	Behavioral Health Summit	45	Agency and consumers by open invitations. Unmet needs identified.
4-2017	Intensive interviews by Dr. VanDenBerg	47	Interviewed agency personnel and consumers identified at the Summit; unmet needs identified
7-25-2017	Decision-making summit	20	Selected priority unmet needs to address
9-28-2017	Selection of strategies	20	Identified four specific target populations
11-2017	Engagement of key agency partners and consumer representative	10	Gathering formal commitment to serve on the Delta County Behavioral Health Committee including a consumer representative

The successful collaboration effort culminated when nine agencies in Delta County committed to work on increasing access to behavioral health care by signing a Memorandum of Understanding to jointly find funding and implement five projects to dramatically increase access.

C. Role of Consortium Partners

Families Plus was the lead agency. The project director, Dr. Brenda K. Holland, directs this mental health specialty clinic. Staff in this small agency led the way in the hiring, learning to manage the electronic handbook, preparing the reports for Delta Consortium and coordinating efforts across the agencies.

Families Plus expanded and retooled their program for hard-to-reach children so children could be efficiently engaged and more supports developed around them.

The CEO of our hospital, Jason Cleckler, selected the medical clinic, among their nine clinics, to serve as the pilot site. Then the manager of that clinic, Diane Dockter, set about to work with the newly hired behavioral health professionals to set up protocols for integrating the BH professionals into the health record and work flow of the clinic. Diane Dockter became a strong advocate for integrating behavioral health into medical care throughout the hospital system. After about one year, Ms. Dockter began work screening for depression with the PHQ-9 into their care practices. Her strong working relationships throughout the large hospital system allowed the establishment of a starting point for an integrated system throughout the large hospital medical complex. After 28 months of grant implementation and through the strong investment of the CEO and the first Clinic Manager, two more BH Professionals were hired by the hospital to extend services to more clinics. The driving force behind this was demand from medical providers in all the clinic for their own BH Professional.

Delta Health and Wellness Center was the second medical clinic to begin integrated practice. This small safety net clinic, led by Alice Marie Slaven-Emond, FNP-C was eager to work with the part-time BH Professional placed in their clinic. She has been a Robert Wood Johnson fellow eager to enhance quality of care. She established inclusion for this new staff member in their electronic health record and adapted their work-flow to emphasis contact with the BH Provider. This practice began screening for depression using the Beck Depression Inventory.

Stoney Mesa Family Practice welcomed a part-time BH Professional in year two of the Rural Health Services Outreach grant. Dr. Michele Purvis and her assistant Love Sandoval found creative ways to include behavioral health in this practice. Together with a BH Professional, these clinic leaders worked on inclusion into the electronic record and changed the work flow to include behavioral health in services that were offered to patients. This clinic began screening for depression with the PHQ-9. Together they continue to refine processes to get the most use out of the small amount of BH Professional time available in their clinic.

During the third year of the Rural Health Services Outreach Grant, the CEO of the hospital and Executive Director of Families Plus together initiated a community-wide behavioral health assessment and planning process. The efforts were supported by the expertise of Dr. John VanDenBerg, founder of High Fidelity Wraparound. This effort drew in leaders of most Delta County agencies and many consumers. Families Plus and the DCM Hospital staff jointly guided this effort along until it culminated in a formal agreement and strong commitment to further expand access to behavioral health care in Delta County.

Part V: Outcomes

A. Outcomes and Evaluation Findings

Delta Consortium advanced access to behavioral health care in major ways over the course of three years. The hard work of changing systems, little pieces at a time, was undertaken by a cadre of very strong leaders among the partner agencies. There has been substantial change that will persist. Even though it is difficult to describe change in large systems, the following data points confirm that systems operate differently here now:

- Families Plus started the grant with one full-time employee, eight part-time staff and evolved into six full-time employees and three part-time staff providing ongoing services to an additional 60 children.
- No familiarity about integrated behavioral health care existed in the hospital medical community at the start. Now nine hospital clinics, one safety net clinic and one private clinic are in various stages toward behavioral health integration.
- Due to extensive use of social media, the public had 74,548 exposures to grant activities in grant year two.
- Families Plus established a direct working relationship with the Colorado Office of Behavioral Health Director of Child, Adolescent, and Family Services, Claudia Zundel.
- Four presentations about the Families Plus Mental Health-Mentoring model to assist children with complex needs to achieve health care access were accomplished at national conferences by Dr. John VanDenBerg, founder of Wraparound
- 152 meeting contacts or interviews occurred over the spring and summer of 2017 following a strategic decision-making process to expand access to behavioral health care in Delta County. The establishment of a permanent steering committee of agency leaders has resulted.
- 93 times individuals from the community participated in a strategic, decision-making process to increase access to behavioral health care in Delta County, Colorado
- Nine key agencies signed a memorandum of understanding to initiate or extend five behavioral health access projects
- In grant year two, 80% of therapists' costs were covered with income for the full-time clinic and work with complex children, leaving all administrative costs unpaid.
- Demand for behavioral health services caused the hospital to start their own program to place behavioral professional in medical clinics two years into the grant.
- In grant year two, 2,724 individuals were screened to have depression and offered follow-up care.

FAMILIES PLUS FACTS in the spring of 2017:

- 82 percent of Families Plus children showed improved behavioral scores, adequate scores, or the same scores on the Teacher Achenbach Child Behavior Checklist when compared to their entrance scores. 92 percent of Families Plus children showed improved behavioral scores, adequate scores or the same scores on the Parent Achenbach Child Behavior Checklist when compared to their entrance scores.
- 88 percent of the mentored children have seen their mentor at least four hours a month over a one-year period.
- 93 percent of Families Plus children have had a documented medical visit in the last year.
- 85 percent of Families Plus children have had a dental checkup.
- 88 percent of Families Plus children who are old enough, have enrolled in an activity outside of school. In addition, 39 percent completed two or more activities.

B. Recognition

HRSA Recognizes Champions of Rural Health: 2018 RURAL HEALTH CHAMPIONS

"Innovation Award: Developed or introduced an influential, innovative approach to health care financing and/or health care delivery to improve access or coordination of care." Award goes to: All American Families dba Families Plus (Delta, CO) CBD Program: Rural Health Care Services Outreach Program:

"Families Plus was created by therapists who were frustrated working with children in child protection cases and over time developed an emerging wraparound system of care for children growing up in challenging circumstances. Families Plus now uses

Wraparound as an evidence-base promising practice model to deliver healthcare in a person-centered way. The Wraparound process is strongly supported by the State of Colorado and is reimbursable through Medicaid.”

Part VI: Challenges & Innovative Solutions

Starting from scratch– Most in Delta County were unfamiliar with integrated medical care. This challenge became much less of a barrier when the CEO of the hospital selected a pilot clinic with a strong manager. This manager, once engaged, was fully able to steer her clinic in a new direction. A whole array of flexible and strong agency leaders has made the whole difference in bringing change to Delta County. The leaders of Stoney Mesa Family Practice and Delta Health and Wellness Center quickly understood the potential of health care integration and all put in the extra time and endure the extra problems of expecting new things of everyone on their staff.

Different electronic health records– The four Delta consortium partners use three different health records. Gaining access for BH Professionals in some of the systems was not complicated. In another system, six months of trial and error was needed to find a way for BH Professionals to document and communicate through the health record. For rural areas the problem revolves around putting part-time BH Professional into the record where the income they can generate does not cover the cost of paying for whole provider to access the record.

Billing for billable services at four different sites was also challenging. Finally, a private billing agency was retained to bill all of the work across all of the sites. These challenges were met with creativity. Using staff members who thoroughly understand the capabilities of the electronic health records and know the processes of billing was the only way that Delta Consortium figured out a way to document and bill across systems.

Language and culture differences between behavioral health care and physical health care - These two health care systems use different coding and different terms. The solution to these challenges was led by the two BH Professions employed by Delta Consortium. They used their communication skills to establish common vocabulary and common strategies, patient by patient, as they and medical providers worked alongside each other. Susan Simianer, Licensed Professional Counselor, and Betsy Nordstrom, License Professional Counselor, were persistent and hard-working in establishing numerous productive working relationships with medical providers.

Generating community buy-in for new systems - Dr. John VanDenBerg contributed his experience and skill with strategic decision-making. This process started when the hospital and Families Plus drew key agency leaders into staging a Behavioral Health Summit for agency workers and consumers. Intense frustration at the lack of access to behavioral health care was felt by all attending this meeting. As interviews and meetings occurred over the next six months using the strategic decision-making process, a consensus emerged among agencies about investing in projects to increase access for specific critical populations over the next three years.

Failing to engage all agencies and systems in change – One major system in Delta County has been unwilling to join with other agencies or invest in new ways of working jointly. A solution has not been found for this challenge. An awareness has however developed that a county, even a large rural county, can move forward effectively without the participation of all key agencies.

Agencies learning to collaborate and be secure in making joint decisions - Agencies had little experience working together and blending staff toward one goal. Maintaining steady communication between systems takes ongoing effort. When nine agencies signed one Memorandum of Understanding to work together, the signatures were produced after struggle within many agencies to feel protected in a joint project. The beginning steps have been taken toward effect and ongoing collaboration. Work over the coming years will be critical to make this a standard rather than a first hesitant step.

Part VII: Sustainability

A. Structure

The Delta Consortium will continue, and five new agency partners have been added - School District 50J (public schools); Center for Mental Health (community mental health); Delta County Department of Health; Delta County Sheriff's Department; and City of Delta Police Department. The leaders of the nine key agencies are committed to meeting regularly to advance the joint goals agreed upon in a MOU in December of 2017. This group of leaders will have decision-making power in finding resources to advance the goals and implementing new programs. This group is the new Delta Consortium for Behavioral Health Access.

A. On-going Projects and Activities/Services To Be Provided

- i) Will all, some or none of the elements of the program be sustainable once Outreach grant funding has ended? Please check the appropriate selection.

- All elements of the program will be sustained
- Some parts of the program will be sustained
- None of the elements of the program will be sustained (i.e. the program will completely end after the grant period)

ii) Identify the projects and activities that will be sustained beyond Outreach grant period.

Delta Consortium has five projects planned for 2018-2021. Each has its own potential sources of funding.

- (1) Secure access to comprehensive, quality health care services, especially mental health and substance use services, for those individuals frequently needing crisis intervention. Outreach Workers (OW) will meet **frequent crisis intervention users (FCI-users)** in the field if they fail to follow-up with care after an emergency. The goal will be a 50 percent engagement rate with FCI-users and a measurable decrease in health care through crisis calls and interventions.

Sustainability: If this project can be developed into a service with good outcomes, it is highly likely that insurance systems can pay both the costs of the OW and also their administrative costs in time. OWs, in the long run, could very well be absorbed by agencies that are benefitting from better support for FCI-users.

- (2) Improve healthy development, safety and well-being of **youth with complex needs** by starting early in their lives, using OW on wraparound parent-led teams. OW will sustain contact with these families in their homes in order to foster an effective, on-going relationship with Families Plus Mental Health Specialty Clinic. Delta Consortium is bringing 60 more children into this care system and will achieve an 80 percent success rate on outcome measures.

Sustainability: The clinical team that leads these efforts has proven to be able to pay about 80% of their own costs through earned income from insurance. Strategies to pay for the administrative costs and the remainder of clinical worker costs rely on foundations at this point. Other possibilities are funding through federal or local government programs that support families in poverty. The most secure funding development would be increases in insurance rates for behavioral health professionals so that they can support their own costs as well as their administrative costs. The Families Plus model of wrapping services around children has been active in Delta County for 19 years creating an important ancillary service benefitting both families and other agencies.

- (3) Reduce substance abuse to protect the health, safety, and quality of life for all participants, especially for Delta County adolescents interfacing with professional counselors. By the end of three years, 80 percent of youth counselors will be trained in **SBIRT** (Screening, Brief Intervention, and Referral to Treatment) in order to counsel youth with substance use before it alters their developmental trajectory.

Sustainability: The costs of SBIRT are small once initiated and coming into common practice. The challenge for Delta Consortium will be to get most local therapists working with youth not only trained, but also committed to ask the substance use questions and follow the process through to benefit. If this new counseling practice takes widespread hold in Delta County, there will be immense benefit and small financial cost.

- (4) Improve the mental health of affected residents in Delta County through universal depression screening in medical clinics and provide access to appropriate follow-up depression care. Ten medical clinics will conduct **universal depression screenings** and will implement evidence-based follow-up care.

Sustainability: Many of the integrated clinics in Delta County have at least started to administer depression screenings. The challenge is to retool workflow and documenting practices so that effective follow-up occurs when depression is detected. Because each clinic has different capacities it will take some time to work through to practices that can be widely applied. This project does not pose so much of a challenge of supporting financial costs, as a challenge of working in diverse environments to develop processes that are valued and will therefore sustain going forward.

- (5) The nine member agencies of Delta Consortium will create innovative models that work in the four target populations discussed above and will sustain services as the grant funding concludes.

Sustainability: A new solid beginning of collaboration has been developed among key agencies in this county. Without persistent leadership to maintain a flow of information and a structure of some face-to-face meetings, this progress is likely to fade back over time. Funding a leader with the strength to hold this is critical. Eventually, natural leadership will emerge from among the key agencies as long as active collaboration contributes to all organizations.

B. Sustained Impact

The Delta Consortium was surprised at the sustained impacts of implementing this multi-layer grant. The health care culture clearly changed. In the beginning months, medical providers were struggling to envision a behavioral health professional working in a medical clinic. Only two clinics offered integrated behavioral health care totaling six days combined each week for the entire 30,000 residents of Delta County. The introduction of two BH Professionals in one hospital clinic created over time a strong demand from medical providers in other offices to also have behavioral professionals on their teams. By the end of the grant, twelve clinics, offered at least some days of integrated behavioral health care. Counting across the entire county in a given week, there are 300 hours of behavioral professional time in clinics available to residents. Integrated clinic care was initially only available in one town which was Delta. Now Cedaredge, Hotchkiss and Paonia have some days of integrated care as well.

In 2015, some sectors of Delta County were aware of the work of Families Plus with under-served children, especially professionals that work with children. By 2018, through a well-planned social media campaign, Families Plus has become a widely recognized nonprofit locally. In year two of the grant, 74,548 media contacts with the public are estimated. Wide-spread public awareness of Families Plus model services for under-served children has developed. This is a sustained impact that works to generate volunteers and donations from the community to help build strong social determinants of health in these children.

Depression screening was slow to take off in medical clinics. The clinics are fast-paced with providers always scrambling to stay on schedule and serve large numbers. Gradually all consortium clinics have begun to work toward universal depression screening of patients. The largest clinic has recently initiated mental health screening for new patients including depression screening with an initial plan to address any mental health problems that surface.

The biggest and most unexpected impact has been the collaboration between key agencies. In the beginning of the HRSA Grant, one clinic withdrew from the grant when they realized they would be making decisions across agencies rather than alone for their clinic. Fast forward to 2018. Nine key agencies including the Public School System, the community mental health system, public health and law enforcement have all signed a MOU to develop more behavioral health services for local residents together with joint decision-making. This impact can sustain as long as there is leadership in place to continue to bring all nine agencies together to raise money and implement strategies that all have identified as important to them.

Part VIII: Implications for Other Communities

Delta Consortium hopes to inspire other rural communities with our advances. Integrating behavioral health professionals into medical clinics can be accomplished in rural health clinics. There are many resources available to accomplish this goal. Delivering sustained services to the most underserved 5% of children everywhere is a complicated project, but one well worth the community investment. We have learned that rural communities care deeply about all of their children. Creating a long-term program to organize the community to supplement what parents can provide makes perfect sense. Not only are young lives saved and made healthy, the cost savings to the health care system in the long run are stunning. Communities care about all their children and can change lives by investing in the most at risk. The Families Plus Mental Health/Mentoring Model is now encoded in a training manual and possible to replicate in other rural communities. Collaboration among agencies is a rural game-changer. Years of territorial operation, in fact, can be reversed with a Strategic Decision-Making process if there is a common problem to be solved that motivate agencies to join together.

Part IX: Success, Increased Capacity, and Contributions to Change

A. Defining Success

- i) How do you define "success" for your grant program? Please check the appropriate selection(s). You may choose more than one option. If other, please describe.
- Access to a new or expanded health service
 - Increased number of people receiving direct services
 - Improved quality of health services
 - Operational efficiencies or reduced costs
 - Integration of process improvement into daily workflow
 - Continuation of program activities after grant funding
 - Continuation of network or consortium after grant funding
 - Health improvement of an individual
 - Health improvement among your program participants

- Health improvement among your community
- Enhanced staff capacity, new skills, or education received
- Improved capacity to adapt to changes in healthcare

ii) Do you believe that your program has achieved success? If so, how?

Delta Consortium members are astonished by our successes. We were ready to change. We now have integrated behavioral health care in most medical clinics creating more access to behavioral health care, better overall quality of health care, and many program participants' health gains. BH Professional now can work alongside of medical providers skillfully and also address the complex needs of underserved children. Most of the expansions to behavioral health care will sustain. Delta County is ripe for more expansion of access to behavioral health care.

B. Organizational Capacity

How has the federal funding of your grant program increased local capacity at your organization, within your network, and/or in your community? Please check the appropriate selection. If other, please describe.

- Formalized networks or coalition
- Developed new partnerships or relationships
- Enhanced skills, education, or training of workforce
- Enhanced data collection and analysis

C. Contributions to Change

- Recently a Families Plus mental health worker responded to a new family's call for assistance when their five-year-old granddaughter appeared to have strep throat. Since these caregivers were not mobile and did not drive, the mental health worker drove the family 50 miles roundtrip to Urgent Care, obtained essential medication and then guided them through the process to enroll in a nearby medical clinic where they can walk to care.
- This last fall (2017) an under-served child left for college after eight years of participation the Families Plus Mental Health-Mentoring program. Despite suffering through deaths of all three of her functioning parents, she was not raised in the foster care system but support by a community of volunteers organized by Families Plus. She is succeeding as a legally clean, sober, educated, childless young adult.
- In the spring of 2016, a local 10 year-old-child was being treated in mental health facility 300 miles from his family after being suspended from school and acting out in an illegal way. When he came home, mental health care services were provided in his home and wrapped around him at school. Today he is a successful student with friends and living with his family and excelling in school. He is still supported to work at his overall health.
- In the medical clinic, a physician asked that the BH Professional see a woman in crisis as she was so distressed that he could not assess her needs. The BH Professional determined she had experience a traumatic event and was experiencing PTSD symptoms. The BH Professional worked with her to help her minimize her anxiety. After she was calm, the physician was able to treat her. She was provided with counseling and is regaining her pre-trauma functioning.
- A 13-year-old female with imminent threat of suicide with plan, intent, and experiencing command hallucinations presented in the medical clinic. Through facilitation with nurse practitioner, the hospital, and BH Professional, the child was held in the emergency room overnight and transported to children's hospital in Denver the next morning.
- In a medical clinic a 35-year-old female was referred by the medical provider to therapy. The patient was resistant to therapy and would not take medication. This patient was extremely suicidal with a range of other symptoms. Rapport was established with provider and BH Professional. Through these relationships, trust was built, and the patient is now thriving, working, on the correct medication and is in the maintenance phase of therapy.
- Families Plus believes that our successful effort to provide long term wraparound service to youth is giving momentum to the efforts of the State of Colorado to shift all counties toward integrated services for children with critical needs. This will replace fragmented ways of serving them with disjointed effort from many agencies. In Delta County an expectation that BH Professional will be on-site to assist patients and medical provider has become the norm. Delta County agencies have a beginning sense of working together.

Colorado

Part I: Organizational Information

Grant Number	D04RH28378
Grantee Organization	Tri-County Health Network
Organization Type	Network
Address	P.O. Box 4178, Telluride, CO 81435
Grantee organization website	www.tchnetwork.org
Outreach grant project title	Community Health Worker Outreach Program
Project Director	Name: Lynn Borup
	Title: Executive Director
	Phone number: 719-480-3822
	Fax number: 888-595-3242
	Email address: lynn@telluridefoundation.org
Project Period	2015 – 2018
Funding level for each budget period	May 2015 to April 2016: \$200,000
	May 2016 to April 2017: \$200,000
	May 2017 to April 2018: \$200,000

Part II: Consortium Partners

* Indicates consortium partners who signed a Memorandum of Understanding/Agreement

Partner Organization	Location (town/county/state)	Organizational Type
Basin Clinic*	Naturita, Montrose County, CO	Rural Health Clinic
River Valley Family Health Center*	Olathe, Montrose, County, CO Delta/Delta/CO	Federally Qualified Health Center
Telluride Medical Center*	Telluride, San Miguel County, CO	Community Clinic
Uncompahgre Medical Center*	Norwood, San Miguel County, CO	Federally Qualified Health Center
Telluride Foundation*	Telluride, San Miguel County, CO	Community Foundation
Montrose Memorial Hospital*	Montrose, Montrose County, CO	Non-Profit Hospital
Mountain Medical Center	Ridgway, Ouray County, CO	Primary Care Clinic
Pediatric Associates*	Montrose, Montrose County, CO and Delta, Delta County, CO	Pediatric Clinic
Center for Mental Health*	Multiple counties that include: Montrose, Ouray, Delta & San Miguel/CO	Mental Health Center

Part III: Community Characteristics

A. Area

The Community Health Worker (CHW) Outreach program served the following four rural counties located in southwest Colorado:

- San Miguel County – towns of Telluride, Norwood, Placerville
- Ouray County – towns of Ridgway, Ouray, Colonia
- Montrose County – towns of Nucla, Naturita, Paradox, Montrose, Olathe, Redvale
- Delta County – towns of Delta, Paonia, Cedaredge, Crawford

B. Community description

Tri-County Health Network's (TCHNetwork) 4-county region is designated as a Health Professional Shortage Area (HPSA), Medically Underserved Area, and serves Medically Underserved Populations. Health inequity is an unfortunate part of everyday life in our rural area of southwestern Colorado. Key regional issues include:

- **Poverty:** Delta and Montrose counties have poverty rates of 16.3% and 19.0%, respectively, compared to the state average of 11.5%. The average hourly wages are \$15.90 in Delta and \$17.10 in Montrose, well below the state average of \$26.78
- **High cost of living:** The Colorado Center on Law & Policy calculated that residents in our 4 counties must earn more than 2-3 times the federal poverty level to make ends meet, with housing being one of the largest expenses on our community members. All of our counties have high percentages of families that are cost-burdened by housing (i.e., spending 30% or more of income on rent or mortgage). 57% of owners and 35% of renters in Ouray; 53% of owners and 46% of renters in San Miguel; 38% of owners and 42% of renters in Delta; and 43% of owners and 53% of renters in Montrose are burdened by housing costs
- **Food insecurity:** Over 12% of families in each of our counties report food insecurity, and in Montrose, 8% of the population has limited access to healthy food. The percentages of students eligible for free or reduced-cost lunches in our six school districts include: 56% in Delta, 45% in Montrose, 27% in Ouray, 28% in San Miguel, 63% in the West End, and 54% in Olathe (the state average is 42%)
- **Cultural and linguistic diversity:** The Latinx population in our region makes up a significant portion of our residents, and a lack of Spanish-speaking healthcare professionals and culturally-competent resources disrupts their ability to access appropriate care. The documented proportion of Latinx residents is 20% in Montrose, 10% in San Miguel, 15% in Delta, and 5% in Ouray. The inequities that affect our Latinx neighbors are significant. These include but are not limited to a lack of bilingual providers, difficulties navigating disparate systems, and discrimination
- **Healthcare coverage:** The uninsured rates for our counties range from 11% to 13%, higher than Colorado's uninsured rate of 9%. For public benefit health programs (Medicaid, CHP+, APTC), the rate of our residents that are eligible but not enrolled in the programs (18% of Delta, 17% of Montrose, 20% of Ouray, and 21% of San Miguel residents) exceed the state's rate of 16%
- **Educational attainment.** Portions of our population have low rates of educational attainment, particularly in Delta and Montrose counties. Both counties have high school graduation rates lower than the state average and far fewer college graduates than Colorado (38% of Coloradans, 20% of Delta County residents, and 24% of Montrose County residents have a bachelor's degree or higher.

Structural impediments, geographic isolation, the social and cultural challenges of health literacy, small-town/rural social and cultural challenges, lack of specialty services, transportation barriers, and an aging population all further influence life and health in our community.

C. Need

TCHNetwork's Outreach Program targets the underserved residents of the 83,431 people living across our four rural counties including those who do not have a medical home and those experiencing barriers to receiving care in local clinics.

Heart disease and cancer remain the leading causes of death in all four of our counties. Obesity, a major risk factor for cardiovascular disease (CVD), is experienced at high rates among our population: 61% of adults in Delta, 55% in Montrose, 39% in Ouray, and 35% of adults in San Miguel County are overweight or obese. The prevalence of hypertension across TCHNetwork's counties in 2014 was 6% in Delta, 7% in Montrose, 5% in Ouray, and 6% in San Miguel, as compared with 6.0% across the state. The per person annual healthcare expenses for those with chronic conditions is higher in our region than across the state. The average per person per year healthcare cost in our region for those with hypertension is \$10,127, 7.2% higher than the cost across the state. Compounding these issues, Network Members are faced with limited human and financial resources and independently have limited capacity for addressing the needs and gaps in services for their diabetic and CVD patients. Chronic diseases are taking a major toll on our healthcare system and our rural community members.

Due to the high percentages of people with CVD and diabetes in the region, and the identified needs and gaps in the service area, a primary aim of TCHNetwork's CHW program was to reduce the prevalence of these diseases in the adult population through control and management of risk factors and the implementation of a comprehensive diabetic intervention. The program focused on modifiable risk factors for diabetes (such as smoking, poor nutrition, lack of exercise, obesity). Reducing these risks can prevent the onset and complications from diabetes, such as diabetic retinopathy, as well as other chronic diseases, such as cancer and CVD, which have many of the same risk factors.

The CHW model responds to the needs of our communities by improving access and removing barriers to care through a low cost, sustainable option that simultaneously addresses the workforce shortage issue.

A. Evidence-based and/or promising practice model(s)

Our Program implemented the following evidenced-based models:

- Community Health Workers (CHWs) – CHWs are culturally competent and trusted members of the communities they serve. They work to improve healthcare outcomes by facilitating access through education, referrals, peer support, and basic health screenings that identify clients at-risk for CVD and diabetes. To break down barriers to care for our residents, CHWs act as “boots on the ground,” finding and meeting clients where they were most comfortable. By offering free screenings, education, and continued peer-support to promote lifestyle changes, for area residents, CHW program services also benefited clinics across the region. The program helped advance patient self-management and increased compliance with testing. CHWs coordinate with local providers to ensure services are not duplicated but are complementary of their efforts to improve the health of their patients with CVD and/or diabetes. Bidirectional referrals and communication between CHWs and clinics ensure a comprehensive team approach in caring for the most the most underserved members of the community.
- Colorado Heart Healthy Solutions (CHHS) – Is an evidence-based, peer-reviewed statewide cardiovascular risk reduction program in Colorado created by the Colorado Prevention Center (CPC) that focuses on underserved populations. CHHS aims to reduce the burden of cardiovascular disease and diabetes. CHHS involves a network of CHWs who outreach to underserved community members and provide health assessments, biometric testing, health education, coaching, referrals to local medical and healthy living resources, and ongoing support to at-risk individuals at no cost. TCHNetwork augmented this model with the addition of a stronger diabetic care management component.
- Diabetic Retinopathy Telescreening (DRT) – Due to the lack of specialists in our rural communities including ophthalmologists, diabetic patients must travel up to 4 hours round trip in order to receive their annual diabetic retinopathy screen. Given this challenge, diabetes patients often do not receive their annual screening. Diabetic retinopathy affects nearly half the diabetic population and is a leading cause of vision loss. Early detection is crucial to preventing blindness and timely intervention can reduce severe vision loss by 90%. Using telemedicine to bring DRT into our communities and onsite at partner clinics eliminates identified barriers to care. CHWs become certified photographers by Eye Picture Archive Communication System (EyePACS), a telemedicine DRT provider, to take retinal images and transmit them to certified reviewers for detection of eye disease. Results were transferred to the local clinics for follow-up and referral, if needed.
- Chronic Disease Self-Management Program (CDSMP) – This evidenced-based Stanford School of Medicine program occurs once a week for six weeks in community settings. Classes provide individuals with peer support and assistance in navigating barriers to care. Attendees leave empowered with the necessary tools, peer support, and coping skills to continue with their own action plans to lead a healthier life.
- Cooking Matters (CM) – Is an evidence-based, 6-week program that empowers adults and families of lower socioeconomic status to prepare and shop for healthy meals on a limited budget. Graduates demonstrate improvement in their eating habits, food budgeting skills, and cooking practices. These behaviors are proven to reduce food insecurity, reduce risk for CVD and diabetes, and improve overall health.
- Rural Restaurant Healthy Options Program – This cost-effective and low maintenance program for owner-operated restaurants has shown to be effective in increasing consumers’ knowledge about nutrition. The program focuses on increasing awareness of already-existing healthy menu options and substitutions. CHWs work with local restaurants to identify and better advertise the healthy options that they already offer by placing table signs promote these healthy choices. The program is low cost, simple to implement, and encourages communities to choose healthier menu options.

B. Description of Activities

TCHNetwork hired and trained CHWs to lead program activities in 4 rural counties. CHWs live in the communities where they provide outreach services and are hired, in part, for their relationships and respect in the community. Community members see CHWs at the post office, hardware and grocery stores and recognize them as “trusting hands” within their communities.

Program activities included:

- Provided the Colorado Heart Health Solutions (CHHS) model to promote self- management of cardiovascular disease (CVD) & diabetes (DM) to underserved residents
- Created action plans with clients and provided referrals to help improve health

- Developed and maintained a medical & healthy living resources directory to help patients engage in healthy behaviors throughout our region
- Implemented the Rural Restaurant Healthy Options with 2 restaurants in 2 rural communities to promote healthy menu choices and healthy eating
- CHWs became certified as CDSMP trainers to conduct CDSMP classes in both English & Spanish across our rural region
- CHWs became certified to take retinal images to be used for DRT screening of patients with DM in partnership with 5 clinics
- CHWs trained on Cooking Matters curriculum to teach CM classes in English & Spanish across the rural region
- Engaged lead clinicians from each partner via the Clinical Subcommittee that met on a quarterly basis to review outcome reports, assess outcome data, analyze trends, and identify strategies for program improvement
- Developed and administering a survey to assess client experience and satisfaction with the program
- Created a public awareness campaign to promote the value of the program through the submission of press releases, interest stories, and letters to the editors, as well as use of social media including websites, twitter, Facebook, and blogs to support program sustainability
- Developed a monthly newsletter for clients, partners, and stakeholders that discusses CVD and DM health risks, prevention, management, and wellness promotion
- Updated our five-year strategic plan
- Created a sustainability plan

C. Role of Consortium Partners

All members of the consortium participated in planning, development, and continuous improvement of the program. Partners played a key role in ensuring the success of the program by engaging in bi-directional referrals between clinicians and the CHWs in the field. CHWs referred high-risk clients to clinics, and patients with significant barriers to care were referred to CHWs to receive community-based screenings, education, and on-going support for adherence to health improvement goals.

As active partners in the program, all members:

- Served as champions in their local area
- Engaged in regular discussions and meetings regarding the Program
- Ensure a clinical representative, as applicable, attended quarterly Clinical Subcommittee meetings and participated in conference calls, as needed
- Brought their individual expertise, experience, and perspectives to TCHNetwork initiatives, including information on patient perspective and experience
- Shared resources, participate in meetings, and communicate openly
- Provided space for in-clinic DRT, as applicable, and utilized a Chronic Disease Registry to identify and outreach to patients that were non-compliant with testing to refer for DRT
- Promoted the program to patients, their respective Board of Directors, and within their communities
- Referred patients who were at risk for CVD and/or diabetes to the CHWs for biometric testing and DRTs
- Referred chronic disease patients to Cooking Matters & CDSMP classes
- Assisted in the recruitment of volunteers to support program activities
- Participated in program evaluation and feedback efforts
- Assisted in the development and maintenance of the resource directory
- Supported the sustainability of the program through in-kind or direct financial contributions and supported TCHNetwork in identifying and securing additional funding for services

Part V: Outcomes

A. Outcomes and Evaluation Findings

Due to programs efforts, there have been improvements in individual behaviors, healthy lifestyle changes, and the overall health of community members. Evaluation findings and outcomes from the program include:

- Conducted 1,591 heart health screenings/rescreenings to 941 unique clients. 708 clients were considered at-risk of having a heart attack or stroke within the next 10 years
- Created action plans with 94% of those at-risk and provided referrals to 99% of those at-risk
- Conducted over 4,200 follow-ups with clients to check-in on their action plan progress, representing an average of 4.7 contacts per screening
- Health outcomes for those that were re-tested by CHWs include:

- Delta: 7.3% decrease in LDL, 5.5% decrease in blood pressure
- Montrose: 0.5% decrease in LDL, 3.8% decrease blood pressure
- Telluride/Ouray: 2.7% increase in LDL, 3.0% decrease in blood pressure
- West End: 8.8% decrease in LDL, 0.2% decrease in blood pressure
- Healthy behavioral changes for those that received a screening and re-screening include: 18% reporting reduced fat intake, 12% reporting increased fiber intake, and 23% reporting increases in exercise. Of those that smoked at their first screening, nearly one-quarter had quit by their second screening
- 15 Cooking Matters courses completed, with 1 additional course currently in session
- 190 DRTs performed
- 11 CDSMP courses taught
- 2 restaurants participating in the Rural Healthy Restaurant Options program

B. Recognition

Though the Outreach grant program was recognized at both the state and national level (e.g., it was highlighted on the National Rural Health Resource Center's website in their "Network Spotlight), most formal recognition has been at the local level. Throughout the past three years, CHWs have been highlighted in each of the local papers and interviewed on two different radio stations each year. The press has also featured each of the program's evidenced-based components, providing earned advertising which has helped to increase program participation. This past year TCHNetwork achieved a long term 'goal' of being interviewed by a local publisher that prints a glossy magazine featuring Community Leaders/Organizations 3 times a year. This popular publication is provided free to the public and remains on the "newsstands" for four months. The opportunity to be included in this magazine alongside the "rich & famous" was the ultimate testament that the community recognizes the importance of the work we provide.

TCHNetwork was presented the Rural Health Champion of Information Dissemination Award from the HRSA in February 2018. TCHNetwork was 1 of 7 rural organizations recognized nationwide, and the only champion of Information Dissemination. TCHNetwork's main dissemination strategy is to make health and health insurance topics easy-to-understand and fun. We then distribute information using Facebook and Twitter posts, live stream events, video series, e-newsletters, local events, public service announcements, and articles in newspapers. To ensure that the messaging is appropriate for all residents in our region, we produce our materials in both English and Spanish and regularly offer simultaneous interpretation services at events.

Part VI: Challenges & Innovative Solutions

The following is a summary of some of the key challenges as well as solutions from the implementation of this Outreach grant initiative.

- *Identifying appropriate work-space to perform screenings* – It is challenging, especially in new areas, to locate a free/low cost work space to perform screenings that is accessible and welcoming, yet has some privacy to perform screenings. The CHWs, as a result of knowing their communities, were able to address this barrier through creativity in partnering with non-traditional organizations to provide private space. Current screening sites include local libraries (most popular), county offices, police department, local restaurants, a food bank, and shared space with other non-profit organizations.
- *Staff turnover* – CHW turnover has plagued our program. It seems that within the year of getting CHWs trained and making an impact in the community that they leave, often due to the incredible skills they have honed during their tenure with TCHNetwork. The good news (per both our employee satisfaction surveys & exit interviews) is that it is not the job or the company, but rather due to opportunities for other full time employment. This has been a challenge given our vast geography, and TCHNetwork has had to traditionally hire part-time CHWs to mitigate time and expense because of the nearly two hour travel time between service areas. To solve this problem, TCHNetwork has braided both grant funding and job responsibilities to combine two part-time jobs into the CHW role. This has allowed us for the hiring of full-time CHWs with benefits.
- *Loss of Certified Trainers* – Given the CHW turnover, TCHNetwork has also lost a few CHWs who were certified to conduct evidenced-based program components. Having to train new CHWs takes time and is costly. Additionally, most courses for these evidence-based programs components require two trainers in order to maintain fidelity to the model. To address this problem, TCHNetwork worked with trained individuals from nearby communities to help partner to teach courses. TCHNetwork also asks that new CHWs sign an agreement to continue teaching for two years once certified regardless if they are still a TCHNetwork employee or reimburse us for the cost of the certification.

- *Fear of “Big Brother”* – The more rural you get the less trusting people are of the government. Our CHWs find themselves frequently reassuring clients that their personal information is not shared with “the government.” With the new administration there is a heightened sense of concern that information will be shared and somehow used against them. CHWs reassure clients and the community that the program does not share any identifiable information with the government and informs people what data is used for and where it is stored. Additionally, marketing and outreach highlight that screenings are confidential.
- *Competing Priorities* – Coordinating schedules of clinical providers to hold quarterly Clinical Sub-committee meetings often proved to be difficult. Establishing a set meeting time did not work due to urgent patient priorities and overlooking scheduled appointments. To address this issue, TCHNetwork implemented the use of Zoom, secure videoconferencing, so providers did not need to travel to meetings; each provider designated a “back-up” clinicians to step in when needed (with commitment to have reviewed previous minutes and be debriefed by lead clinician); and implemented a mini-stipend for attendance. TCHNetwork worked directly with the Practice Manager to both schedule and keep the provider’s calendar reserved for the meeting.
- *Cultivating New Champions* – Turnover at the clinics was also a problem that greatly affected the program. Clients were much more apt to participate in one of the courses if encouraged and referred by their provider. When a new provider or executive joined the clinic (often as a replacement) our program was not high on the priority list to learn/understand so the ability to engage the provider as a champion took time. To facilitate this process, TCHNetwork worked with the Executive Director and Clinic Manager to be included in their new employee orientation to share information about the program. Additionally, the CHW scheduled time to meet with the provider, often bringing in lunch, to introduce her/his self and share information about the program and its successes. Lastly, TCHNetwork encourages new providers to ‘attend’ a Clinical Subcommittee meeting to hear firsthand from their peers about the value of programming.

Part VII: Sustainability

A. Structure

The consortium will continue. TCHNetwork is a formal 501c3, offering 20 Community Programs across the region. The network is united around the common goal of providing quality health care to patients and improving the health of the community through innovation and collaboration. All members of the consortium are also members of the Network; many of whom were founding members and helped create the Network. Current members, all of which will continue to be members, include: Basin Clinic, a Rural Health Clinic; River Valley Family Health Center, a Federally Qualified Health Center (FQHC); Telluride Medical Center, a multispecialty/primary care clinic and a 24/7 Emergency Center; Uncompahgre Medical Center, a FQHC and dental clinic; Pediatric Associates, the only pediatric clinic in the region; Mountain Medical Center, the only clinic in an entire county; Telluride Foundation, a 501c3) nonprofit community foundation; Montrose Memorial Hospital, a not-for-profit, community-based hospital; and The Center for Mental Health, a regional community mental health center.

B. On-going Projects and Activities/Services To Be Provided

i) Will all, some or none of the elements of the program be sustainable once Outreach grant funding has ended? Please check the appropriate selection.

- All elements of the program will be sustained
- Some parts of the program will be sustained
- None of the elements of the program will be sustained (i.e. the program will completely end after the grant period)

ii) Identify the projects and activities that will be sustained beyond Outreach grant period.

We anticipate that the following grant funded activities will be sustained beyond our Outreach grant:

- CHWs/Heart Healthy Screenings - These screenings have been effective at empowering clients to take control of their health and breaking down barriers to care. CHWs are viewed as a trusted resource in their communities as they live in the communities they serve and have similar lifestyles as their clients. This is critically important in our rural region, where residents can often be distrustful of outsiders. Clients’ express high levels of satisfaction and research indicates that CHWs contribute to significant improvements in clients’ access to care, continuity of care, and adherence to treatment for health issues such as hypertension. The services have had a positive impact on the health of our clients.

- Diabetic Retinopathy Telescreening (DRT) - TCHNetwork will continue offering DRT due to the limited vision care services available in our region, clients' inability to pay for screenings, and transportation barriers. DRT streamlines access to recommended annual retinal exams for diabetics living in our rural region by reducing many barriers to obtaining an annual exam. DRT is also widely supported by our Network/Consortium partners and informal partners regionally.
- Cooking Matters - Residents in our area regularly say that cost, limited grocery store options, and transportation are the primary barriers to eating healthy. Grocery shopping in our rural region is challenging—some communities have only one grocery store and these smaller stores often have limited hours. Fresh produce options are also constrained and more expensive than what can be found in chain stores located in larger communities. Residents benefit from information on how to stretch their food dollars and learn concrete strategies to increase daily consumption of whole grains, fruits, and vegetables. Cooking Matters is a fun, interactive, evidence-based program that addresses our residents' barriers to eating healthy on a budget. Our clients enjoy the course and give it high ratings.
- Bilingual/Bicultural Health Literacy Support - Health literacy support is an ongoing need for our clients. Despite a growing Latinx population regionally, many of our smaller clinics do not offer Spanish-language services to clients. Even beyond the Spanish speaking population, our rural population is comprised of many individuals with low levels of educational attainment and limited knowledge of health issues. Providers at our small clinics are stretched thin and do not have the capacity to offer intensive one-on-one support to patients. CHWs are available to provide peer support and act as a translator/liaison between clients and their providers. This critical service helps clients interpret, understand, and use medical information.

Additionally, the following activities are currently under consideration by our Consortium members:

- Screening all CHW clients for social determinants of health (SDH) needs - Residents in our region face numerous barriers to wellness. Screening for SDH will help our CHWs proactively and systematically identify patient barriers to wellness. The CHWs will provide targeted, local referrals to clients that screen positive for these needs.
- Partnering with local employers to screen their employees - Many large employers in our region do not offer employer-sponsored healthcare coverage. We will partner with these employers to offer screenings on-site for their workforce.

To sustain our programming, funding will be secured from a variety of sources including:

- Network/Consortium member contributions (cash and in-kind)
- Financial support from local and larger businesses.
- Potential fee-for-service initiatives offered by TCHNetwork to meet identified needs.
- Payor contracts for pay for performance incentives based on documented outcomes of improvement in health status at reduced costs
- Increased Volunteer workforce.
- Grants from local, state, and federal agencies and from private foundations.
- Local government funding—town and county
- Consulting fees for successful program components.
- Donations from individuals

Plans to achieve sustainability also include effectively leveraging partnerships through the thorough and ongoing engagement of and increased coordination with local stakeholders and enhancing our marketing/promotion campaign to allow us to serve a greater number of clients, more effectively communicate our successes, and generate donations. This regular communication and outreach will help TCHNetwork acquire the ongoing funds and commitment necessary to meet long-term operational and capital expenses.

By utilizing a diverse strategy, we are confident in our ability to sustain and continue expanding the services from our CHW Outreach Program.

C. Sustained Impact

Sustained impacts include longer-term improvements in the health status of community members as CHWs empower residents to understand their health indicators and how different behaviors impact their health status. Clients become familiar with and

connected to local tools and resources to support healthy lifestyle changes—including Cooking Matters, CDSMP, healthcare coverage, and ongoing peer support from CHWs—which can further contribute to sustained, positive healthy changes. Further, by offering DRT, we are providing screenings to individuals that may have never had and may never get this critical retinopathy screening. This may lead to a decrease in blindness caused by diabetic retinopathy in our region. These changes will be sustained at both the individual level and at the community level as more people are educated through our outreach efforts at community events, workshops, and classes.

CHWs have also become integrated into our local system of care thanks to TCHNetwork's efforts over the last 3 years. Clinics regularly refer patients to CHWs when the patient has barriers getting to the clinic during regular hours due to transportation, geography, and/or scheduling conflict or cannot afford to pay for health screenings. Conversely, CHWs refer to the local clinic when a client's screening results require a medical intervention. The wraparound services provided through the CHW program, including DRT, Cooking Matters, and health literacy support, are also regularly utilized by our Network/Consortium members. The clinics regularly invite TCHNetwork to offer services on-site at their clinics and recruit/refer appropriate patients to services.

Part VIII: Implications for Other Communities

TCHNetwork's success, as reported in the Outcomes and Evaluation Findings section, illustrates the program's effectiveness and value. The evidenced-based tools and solutions that TCHNetwork has chosen are all effective rural solutions that will help address barriers in accessing care, promote behavior change, and improve compliance and self-management, which will result in improved diabetic and CVD health outcomes. Issues of transportation, poverty, culture, ethnicity/race, and economic stress are major barriers not only in our rural communities but most other rural communities as well. In addition, given the workforce shortage and limited resources in our region, our selected programs are affordable and sustainable. All of our evidenced based programs proven to be successful in rural communities and are easily replicable.

Experiences and outcomes that will benefit other communities that are interested in implementing a similar program include:

- Ensure clinic buy-in – do not underestimate the time it will take for clinicians to be comfortable with the Program. Though studies substantiate the successful use of CHWs in promoting life-style changes outside of a clinical setting; clinicians are typically reluctant to refer their patients to non-clinical people (CHWs). It is important to have a clinical champion who can discuss the program and review evidence-based guidelines with clinical staff. Additionally, be prepared to review how CHWs will be trained, what type of education will be offered to clients, and establish a referral protocol that enacts how information will be shared between the physician and the CHW regarding not only the referral but also the outcome of the patient engagement.
- Hire locally – it is essential to hire CHWs who are culturally appropriate, seen as a trusted member of their community, show passion for community outreach, can travel great distances even in inclement weather, and can use technology for reporting purposes. Be willing to invest in teaching and training someone who may not have the exact knowledge, skills, and abilities you are looking for.
- Create a comprehensive marketing/outreach plan early – Start early with self-promotion. Though you may not have the local outcome data there is plenty of data you can use to promote the importance of your programming. Be sure to tie traditional media with social media to generate as much interest, leading to participation, in your program. In a rural area, any new program is worth a story and interview!

Part IX: Success, Increased Capacity, and Contributions to Change

A. Defining Success

- i) How do you define "success" for your grant program? Please check the appropriate selection(s). You may choose more than one option. If other, please describe.
- Access to a new or expanded health service
 - Increased number of people receiving direct services
 - Improved quality of health services
 - Operational efficiencies or reduced costs
 - Integration of process improvement into daily workflow
 - Continuation of program activities after grant funding
 - Continuation of network or consortium after grant funding

- Health improvement of an individual
- Health improvement among your program participants
- Health improvement among your community
- Enhanced staff capacity, new skills, or education received
- Improved capacity to adapt to changes in healthcare

ii) Do you believe that your program has achieved success? If so, how?

This program has been extremely successful. It has increased access to critical services to help educate and prevent life styles and factors that affect a person's risk in developing and managing diabetes and heart disease. CHWs have been integrated into the way care is delivered in our communities, which will lead to many long-lasting impacts. Our efforts have improved the health of our most underserved community members by providing screenings in easy-to-access locations, to identify risk for diabetes and/or heart disease and provide education on the effects lifestyle choices can have on overall health. Additionally, the program has increased the community's health literacy, not just for the clients we've seen but for our community partners as well. The program established an extensive list of community resources that will continue to be maintained and made available to community members who are seeking a path to better health. The collaborations we have developed with local libraries, other non-profits, and businesses have flowed into other areas of support for one another, making our community stronger. Through participation on the Clinical Subcommittee, provides have developed peer relationships, silos have been removed, and clinics no longer see each other are competitors. This program has provided potential solutions to our regional workforce shortage through the use of CHWs and DRT. Lastly, based on our outcomes, we have achieved our goals of: increasing patient self-efficacy for personal management of diabetes and CVD; improving population health for those at risk for CVD and/or diabetes; increasing resources for underserved individuals to help improve their overall health; and improving overall community health due to the collaboration of engaged community stakeholders.

B. Organizational Capacity

How has the federal funding of your grant program increased local capacity at your organization, within your network, and/or in your community? Please bold/highlight all that apply. If other, please describe.

- Formalized networks or coalition
- Developed new partnerships or relationships
- Enhanced skills, education, or training of workforce
- Enhanced data collection and analysis

C. Contributions to Change

Change in individuals' lives, your organization, consortium, or community:

COOKING MATTERS: I taught the 6-week Cooking Matters course in Norwood, Colorado. For those who aren't familiar with the area, it is extremely rural, and the closest chain grocery store is about an hour away. Norwood is a farming community, and most of the participants in my class really enjoy their meat and potatoes.

At the beginning of my class, several of the participants revealed they were diabetic, and it quickly became apparent to me that many others frequented the food bank that is at one of the local churches. I was really excited to start helping the participants learn how to cook healthy meals, understand what they were eating, and navigate tricky nutrition labels.

During one of the classes, I took the group on a tour of the local grocery store in Norwood. We worked on assessing price per serving as well as the nutritional value of three different items: canned green beans, frozen green beans and fresh green beans. Though the canned green beans were, by far, the cheapest, they did have salt added, which we talked about not being great for your health, especially if you have high blood pressure. I showed my group how you could purchase frozen green beans for just a few cents more, and reminded them it was worth it for them to spend a little extra money for a healthier product. I believe it was really helpful for my group to see this done in action at the grocery store, and I sent them home with a few tools to help them execute this process on their own.

Completing this class and having participants acknowledge how much they have learned has been a great experience. Some people came in with a ton of knowledge around food and nutrition, and others came in with none. I can confidently say that everyone in my class learned something new, and hopefully they will be able to take these experiences and apply them in their day-to-day life.

DRT: We did the Diabetic Retinopathy Screening here at Basin Clinic last fall, and we screened 24 people over 2 days. None of the patients had ever been screened before, and most of them told me "I know I need to get that done, but I don't have the money for the exam-and even if I did-I can't get to Montrose or GJ." They were very thankful that we offered the screening right here at the clinic – at no cost to them!

3 of the patients had results that required a referral to an eye specialist. 5 of the patients had possible eye conditions that will require a re-scan in 6 months. So- the DRT uncovered possible eye problems in 1/3 of the patients that were screened, and these patients probably would not have received the Diabetic Eye Exam if not for the screening we provided for them here at the clinic. Diabetes has so many complications that usually get worse over time and can really affect a patient's quality of life. A patient's eyesight is invaluable, and I cannot put a price on the value of this exam as part of a Patient's Diabetic Care Plan, that can detect early eye problems and hopefully save their eyesight. The value of being able to offer this important screening in such a remote area is unmeasurable.

Change in policies, systems, and environment:

The biggest policy as a result of the CHW work has been the adoption by our partner clinics to accept non-fasting LDLs. In reviewing the lab data on our partner clinics' patients with DM and CAD, over 80% did not have a current (i.e. within the year) LDL test done. Upon review at the Clinical Subcommittee meeting it was determined that the LDL was often not done because patients must be fasting to get an accurate result. Patients were told they need to come back to the clinic to get this test, which of course many did not. However, as part of the evidenced based CHHS program, CHWs were trained to perform non-fasting LDLs. So, Dr. Mori Krantz, the co-investigator for Colorado Heart Healthy Solutions (CHHS) and a practicing cardiologist, was invited to present with all his supporting literature at the Clinical Subcommittee meeting to explain why LDLs should be taken even if the patient is not fasting and how the results should be read and compared with fasting LDL results. After numerous committee meetings and offline research our 5 partner clinics agreed to adopt non-fasting LDL as an evidenced-based practice in their clinics. As a result, 67% of DM/CAD patients have a current LDL result documented in their medical record.

Georgia

Part I: Organizational Information

Grant Number	D04RH28416
Grantee Organization	Tanner Medical Center, Inc.
Organization Type	Non-profit healthcare organization
Address	705 Dixie Street, Carrollton, GA 30117
Grantee organization website	www.tanner.org
Outreach grant project title	West Georgia Regional School-Based Behavioral Health Consortium
Project Director	Name: Debra Price
	Title: Program Manager of Community Services, Willowbrooke at Tanner
	Phone number: 770-812-3275
	Fax number: 770-812-6948
	Email address: dprice@tanner.org
Project Period	2015 – 2018
Funding level for each budget period	May 2015 to April 2016: \$198,783
	May 2016 to April 2017: \$194,283
	May 2017 to April 2018: \$194,283

Part II: Consortium Partners

* Indicates those consortium partners who have signed a Memorandum of Understanding/Agreement

Partner Organization	Location (town/county/state)	Organizational Type
Willowbrooke at Tanner (Behavioral Health Division of Tanner Medical Center, Inc.)*	Carrollton/Villa Rica/Carroll/ Georgia	Hospital; Behavioral Health
Carroll County School System*	Carroll County/Georgia	School
Haralson County School System*	Haralson County/Georgia	School
Heard County School System*	Heard County/Georgia	School
Departments of Juvenile Justice*	Carroll, Haralson and Heard Counties/Georgia	Government; Social Services
Departments of Family and* Children's Services (DFACS)	Carroll, Haralson and Heard Counties/Georgia	Government; Social Services
Departments of Labor	Carroll, Haralson and Heard Counties/Georgia	Government
Haralson Behavioral Health*	Haralson County/Georgia	Behavioral Health
Georgia Department of Behavioral Health and Developmental	Georgia	Government; Behavioral Health
Phoenix Resource Center*	Carroll County/Georgia	Behavioral Health
Carroll County Child Advocacy Center*	Carroll County/Georgia	Behavioral Health, Social Services

Part III: Community Characteristics

A. Area

B. Community description

The target population includes children and adolescents, ages 5-17, in rural areas in the three contiguous west Georgia counties of Carroll, Haralson and Heard counties. Carroll, Haralson and Heard counties cover 1,077 square miles of predominately rural area (53 percent rural) with a population density of about 141 people per square mile and total population of 153,994, according to the American Community Survey 2012-2016 five-year estimate and US Census Bureau 2010. According to US Census Bureau and 2017 County Health Rankings data, residents of Carroll, Haralson and Heard counties suffer from elevated rates of poverty, low rates of educational attainment, high unemployment rates, lack of public transportation, geographic isolation, lack of access to exercise opportunities and lack of access to healthy, affordable food (food insecurity) compared to state and national figures. The intervention population is also subjected to disproportionate levels of premature deaths, obesity and related risk factors (physical inactivity, poor diet) than state and national figures (2017 County Health Rankings; Georgia Department of Public Health OASIS, 2018). Research indicates that individuals who live in rural areas experience disproportionate levels of many behavioral problems than their urban counterparts due a variety of barriers related to disparities in access, availability and perceived acceptability of mental health services, suffering higher rates of depression, substance abuse and domestic violence. Carroll, Haralson and Heard counties are all (HRSA) designated Mental Health Professional Shortage Areas (MHPSAs).

C. Need

The seriousness of behavioral health problems for children and adolescents has been well documented in west Georgia, confirming significant prevalence rates, persistence of these problems over time and difficulties experienced across many spheres of life. Schools (K-12) in rural west Georgia communities are often placed in the position of identifying and handling students with behavioral health problems; however, many of them lack the resources, knowledge and personnel to address several of the behavioral health concerns seen in the classroom in an effective, systematic manner. Limited access to effective behavioral health care services and supports increases the likelihood that untreated behavioral concerns will emerge in schools. Recognizing that interdisciplinary collaboration between behavioral health providers and schools is a key component of structuring both the framework and coordination of services for effective, integrated school-based behavioral health services, Tanner established the West Georgia Regional School-Based Behavioral Health Consortium to expand the continuum of effective interconnected behavioral services and supports in rural communities in Carroll, Haralson and Heard counties that encompass: 1) a system for promoting healthy development and preventing problems; 2) a system for responding to behavioral health problems as soon after onset as possible, and 3) a system for providing intensive care.

Part IV: Program Services

A. Evidence-based and/or promising practice model(s)

Tanner's Outreach Program employed the nationally-recognized and research-driven promising practice model of the Interconnected Systems Framework (ISF) to blend education and behavioral health systems and resources toward depth and quality in prevention and intervention within a multi-tiered framework, allowing for greater efficiency and effectiveness by focusing on: shared leadership; a layered continuum of supports; universal screening and progress monitoring; evidence-based instruction, intervention and assessment practices; data-based problem solving and decision-making; and family, school and community partnerships. Targeted and individualized interventions in Tiers 2 (early intervention) and 3 (treatment) provided by the school-based behavioral health provider include a variety of individual, group and family counseling techniques, including cognitive behavioral therapy (CBT), trauma-focused CBT, multi-systems therapy, motivational interviewing, reality therapy and other treatment modalities and therapies such as those identified in the Substance Abuse and Mental Health Services Administration's (SAMHSA) National Registry of Evidence-based Programs and Practices (NREPP).

B. Description of Activities

Tanner's Outreach Program supports the efforts of the West Georgia Regional School-Based Behavioral Health Consortium, a partnership between Willowbrooke at Tanner (the behavioral health division of Tanner Medical Center, Inc.) and the Carroll, Haralson and Heard County School Systems, as they work collaboratively to expand the continuum of school-based behavioral health care services and supports, from prevention to intensive intervention, for students in rural communities in Carroll, Haralson and Heard counties. These multi-tiered behavioral health interventions are directed at enhancing environments, broadly training and promoting social and emotional learning and life skills, preventing emotional and behavioral problems, identifying and intervening in these problems early on and providing intervention for established problems. Tanner has embedded three behavioral health therapists in ten rural schools within the Carroll, Haralson and Heard County School Systems to provide a variety of school-based behavioral health services to students, including classroom consultation/observation; support groups; parent education; in-service trainings; assessment and diagnostic evaluations; individual, group and family therapy; treatment planning and coordination

and referrals to appropriate behavioral health/community services. School staff/personnel collaborate with the school-based behavioral health providers by: informing and implementing universal prevention interventions that include school-wide programs that foster safe and caring learning environments and engage students, promote social, emotional and behavioral learning, and develop connections between school, home and community; actively participating in behavioral health consultation and teacher/staff education; and referring students in need of behavioral health services. By engaging school and behavioral health system partners in planning, implementing, evaluating, sustaining and continuously monitoring and improving school-based behavioral health services and supports, based on locally determined needs, Tanner's Outreach Program project enhanced the local capacity to improve the quality of practice and achieve positive behavioral health (and academic) outcomes for area children and adolescents.

C. Role of Consortium Partners

Mission: The West Georgia Regional School-Based Behavioral Health Consortium is dedicated to advancing child and adolescent behavioral health in rural west Georgia communities in Carroll, Haralson and Heard counties by expanding the continuum of multi-level school-based behavioral health services and supports that encompass: 1) a system for promoting healthy development and preventing problems; 2) a system for responding to behavioral health problems as soon after onset as possible; and 3) a system for providing intensive care.

Vision: The West Georgia Regional School-Based Behavioral Health Consortium is a community network, built through collaboration and partnership, working to establish, advance and maintain effective evidence-based strategies within the school and community to meet students' social, emotional and behavioral health needs in west Georgia.

With a goal of creating cross-system shared ownership for the behavioral health and social and emotional development of school-aged children in rural west Georgia, the West Georgia Regional School-Based Behavioral Health Consortium seeks to create a sustainable structure wherein all members actively share in the design, implementation, and evaluation of efforts undertaken collectively to assure the academic success and behavioral health of school-aged children and youth in west Georgia.

As a leading behavioral healthcare provider in west Georgia, Willowbrooke at Tanner has provided school-based behavioral health therapists that are embedded in 10 participating schools within the Carroll, Haralson and Heard County School Systems. These providers offer services as requested by the school systems or its designee in the areas of prevention, education and early intervention, including: 1) Classroom consultation/observation, 2) Support Groups for Students, 3) Parent Education, 4) Staff Meetings, and 5) In-Service Trainings. Treatment and intervention services include: 1) Assessment and diagnostic evaluations, 2) Individual therapy, 3) Group therapy, 4) Family therapy, 5) Treatment planning, 6) Treatment coordination, and 7) referrals to appropriate mental health/community services. Students have access to Willowbrooke at Tanner's full continuum of services and licensed, experienced staff, including inpatient hospitalization, partial hospitalization, intensive family interventions (intensive in-home therapy), outpatient medication management and nursing services, and intensive case management/skill building (in-home or community).

Schools in the rural communities of Carroll, Haralson and Heard counties offer unparalleled access to children and adolescents as a point of engagement for addressing their educational, emotional and behavioral needs. Given the growing number of students in local public schools with significant emotional and behavioral issues and the impact of behavioral health on school success, schools are in a critical position to serve as key collaborators with community-based behavioral health systems (Willowbrooke at Tanner) through the Interconnected Systems Framework to enhance behavioral health promotion and utilization of evidence-based practices in schools and promote increased school success for every student. Assisting Tanner in the implementation of Outreach Program activities, schools provide adequate office space for Willowbrooke at Tanner's behavioral health providers to deliver services. Activities including informing and implementing Tier 1 interventions, actively participating in behavioral health consultation and teacher/staff education, and referring students in need of services, require commitment on the part of school staff and personnel. School administrators, staff and school counselors help promote the school-based behavioral health services and supports throughout participating schools, working with Willowbrooke at Tanner behavioral health providers to ensure that the unmet behavioral health needs of students are promptly and effectively addressed.

Part V: Outcomes

A. Outcomes and Evaluation Findings

Since its formalized establishment in May 2015, the West Georgia Regional School-Based Behavioral Health Consortium has expanded from its original membership of four organizations (Willowbrooke at Tanner and the Carroll, Haralson and Heard County

School Systems) to include the following six additional partner organizations in Carroll, Haralson and Heard counties: Departments of Juvenile Justice; Departments of Family and Children's Services; Departments of Labor; Phoenix Resource Center; the Carroll County Child Advocacy Center; Haralson Behavioral Health and the Department of Behavioral Health and Development Disabilities. Consortium meetings continue to be held quarterly with Carroll, Haralson and Heard County consortium member representatives present. A comprehensive community health needs assessment (CHNA) was completed in June 2015, gathering input from over 1,000 area residents and partners through surveys, community focus groups and community listening sessions. Through this input, mental health was identified as a key community health priority in Carroll, Haralson and Heard counties.

Throughout the Outreach Program period, three highly qualified behavioral health therapists have provided a full continuum of behavioral health services and supports in ten rural schools in Carroll, Haralson and Heard counties. With the implementation of school-based behavioral health services within these schools, approximately 6,000 students (combined enrollment) have access to high-quality behavioral health services and supports through the Outreach Program. These school-based therapists are working on an ongoing basis in conjunction with a variety of school representatives, consisting of school administration, teachers and school counselors to identify students who are struggling through referrals; deliberate strengths, challenges and supports needed for each student; monitor progress and identify the broader learning support resource needs of the school. Tanner has worked in partnership with a third party evaluator to develop and refine a comprehensive assessment/evaluation plan, guided by a logic model, to measure the impacts of the West Georgia Regional School-Based Behavioral Health Consortium's efforts. Tanner is utilizing ORHP Outreach program-specific measures (PIMS) and non-PIMS measures to further assess the impact that its Outreach program has on rural communities, inform evaluation activities and enhance ongoing quality improvement.

B. Recognition

Successful recognition or acknowledgement received, either local, state or national as a result of the RHO grant funding includes:

- Ga Association PBIS participation: GA Board of Education requested participation as part of the dialogue taking place for Positive Behavior Intervention Systems.
- NW Regional Suicide Prevention Meeting- presented as model program for school based services
- Douglas Co TV- recorded 60 minute discussion on mental health and suicide reduction
- Carroll Co TV- recorded 20 minute mental health presentation for parents to know where to refer STAGE presentation: approved to present school-based therapy services as model program for all GA school systems
- GA Regional Partnerships: School Districts, Institutions, and RESAs
- Kennesaw State University: presented Youth Mental Health First Aid program to university advisors working with all college students
- Federal Office of Rural Health Policy "Exemplary Program" mention/profile/highlight/promising models

Part VI: Challenges & Innovative Solutions

Difficulty finding fully licensed clinicians to provide care within the model. Without having multiple insurance paneling eligibility, the students with commercial insurance end up needing referrals to other providers, negating the convenience of the school-based program. Recruitment in different areas and within various professional organizations is necessary to locate and interview high quality candidates. Staff turnover has occurred for various reasons, but replacing positions can often times take a long time, and leaves gaps in services for the students with a permanent provider. Willowbrooke supplements with interim coverage, but mental health is much more effective with long-term relationships. It is important to consider a signing incentive or contract-like agreement to have any hired therapist remain throughout the school year for minimal disruption to the student's treatment success. A barrier with resolution has been the full understanding of what the RHO grant program provides. Schools, at times, expect all students to be eligible for care, and need ongoing education and dialogue regarding limitations, and general support the school-based therapist can and will provide. Regularly scheduled meetings and monthly touch points with champions and gatekeepers have helped remedy these issues. An additional barrier identified as the project progressed is the lack of parental compliance toward children that were referred to or admitted to Willowbrooke at Tanner outpatient behavioral health services, whether in the school or outpatient community setting. To address these barriers, Willowbrooke at Tanner providers offer a variety of stigma reducing education (including Youth Mental Health First Aid (YMHFA) and Breaking the Silence) to a variety of stakeholders, including parents, to ensure individuals who need behavioral health support services and/or treatment receive the care they need in order to help them function better at home, in school, in the community and throughout life.

Part VII: Sustainability

A. Structure

The activities of the West Georgia Regional School-Based Behavioral Health Consortium will be maintained past the RHO project period. An operational team at Willowbrooke at Tanner will continue to manage day-to-day implementation activities of school-based behavioral health services, provide technical assistance to consortium partners and monitor and evaluate program progress. The project director for Tanner's Outreach Program, is a seasoned behavioral health professional with over 15 years of experience in the development, implementation and administration of behavioral health programs and services for children, adolescents and adults, and a history of management experience involving multiple organizational arrangements, including school-based behavioral health services. The director will continue to provide oversight of Willowbrooke's school-based behavioral health services in west Georgia.

B. On-going Projects and Activities/Services To Be Provided

i) Will all, some or none of the elements of the program be sustainable once Outreach grant funding has ended? Please check the appropriate selection.

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained (i.e. the program will completely end after the grant period)

ii) Identify the projects and activities that will be sustained beyond Outreach grant period.

The project activities to be sustained include Tanner's efforts to harness the momentum to maintain the school-based behavioral health strategies past the RHO project period by maximizing and leveraging community assets and resources (human, in-kind and financial). Fee-for service mechanisms for Tanner's school-based behavioral health services relevant to Tier 3 interventions will help sustain program efforts. The West Georgia Regional School-Based Behavioral Health Consortium will be maintained past Outreach Program funding, continuing to nurture partnerships and relationships with multi-sector agencies and organizations, and build efforts on existing health and school-based reform projects funded by federal, state or local governments, foundations or private sector partners in order to expand reach and sustainability school-based behavioral health interventions. Additional funding for program sustainability will be sought from public and private foundations with both local and national scope.

The current operational planning and sustainability plan for the school-based therapy program entails the use of associate-licensed and/or fully-licensed therapists to allow for billing privileges within the Tanner Medical Center credentialed platforms with Medicaid and commercial providers that permit the variable licensure statuses to bill for reimbursement. With Tanner Medical Center, Willowbrooke at Tanner and agreements with the various school districts, the sustainability potential of this project is not only viable, but being put into play currently, with fidelity, reliability, and ongoing effectiveness. The communication and overall impact of the program has decreased the need for higher levels of care in some instances, and or kept at bay the need for crisis intervention when previous stressors would have warranted acute hospitalization and/or expulsion from school.

Georgia State Board of Education policymakers and administrators are asking for changes to how they approach self-harming behaviors on campus, substance use within athletic random testing situations, use of 'weapons' to harm self and adjustments to the zero tolerance protocols, employee assistance programming for faculty, and suicide prevention approaches, which are all under consideration as Tanner continues to partner with those at the county and state level. Key stakeholders in the community continue to endorse, discuss, share, refer and utilize the therapeutic services of Tanner's school-based programming, along with the full continuum of services throughout the Willowbrooke at Tanner.

C. Sustained Impact

Research supports that childhood is a key time to promote optimal social and emotional development and to mitigate the impact of behavioral health issues. Increasing access to high-quality, school-based behavioral health services and supports for children and adolescents can have a significant long-term impact on individuals, families, the healthcare system and society as a whole. If left untreated, childhood mental and behavioral disorders persist into adulthood and often worsen, thereby increasing the length and associated direct cost of treatment. Such delays can also encumber the individual with indirect costs that come with increased risk of school dropout, underemployment, incarceration, substance abuse and co-morbid illness. The indirect costs of failing to appropriately address behavioral health issues early affect society as well. The heavy toll placed on systems of health care, welfare, education, business, justice and public safety by unmet behavioral health needs cause society to absorb significant costs.

Within the past two decades, significant national attention has focused on the reciprocal relationship between positive behavioral

health and school success. Research has shown that effective academic performance promotes positive behavioral health and, in turn, positive behavioral health promotes student academic performance. High quality, effective school-based behavioral health services and supports has been linked to increases in academic achievement and competence; decreases in incidence of problem behaviors; improvements in the relationships that surround each child; and substantive, positive changes in school and classroom climates. Prevention and early intervention efforts can improve school readiness, health status, academic achievement, and reduce the need for grade retention, special education services and welfare dependence. In fact, strong social skills, problem solving abilities, and conflict resolution skills are essential for all students if they are to maximize their academic and life potential.

Part VIII: Implications for Other Communities

Tanner's experience within the communities in which it partners has been successful in all territories. The school systems have utilized the program to empower the faculty and staff with greater decision making abilities to refer students for mental health treatment, to understand mental health in their classroom, and how to support someone receiving services despite my personal beliefs. With parents/guardians struggling to take off work, to transport to appointments, to understand the value of mental health treatment, the school-based program has offered an alternative solution to a growing problem. School counselors are asked to carry 500+ students on their caseloads and simply don't have the bandwidth to meet the needs of that volume of students. With the support of such a school-based therapy program, the students can now have the extended attention they require to make impactful change. Families are strengthening because this component of care invites their participation and ownership of their children's future. Risky behaviors and symptoms are often times averted because the symptoms are addressed earlier and swifter with the school-based therapy programming. Through utilizing the Child and Adolescent Needs Strengths Assessment with all participants within the school based therapy program, there is a 95% success rate in improved symptoms from time of admission through the 6 month re- assessment. Despite the presenting issue that warranted the referral to the school-based therapy program, 95% of the participants are improving in the areas of their needs or increasing their strengths based on the therapy services rendered through the school based program.

Part IX: Success, Increased Capacity, and Contributions to Change

A. Defining Success

- i) How do you define "success" for your grant program? Please check the appropriate selection(s). You may choose more than one option. If other, please describe.
- Access to a new or expanded health service
 - Increased number of people receiving direct services
 - Improved quality of health services
 - Operational efficiencies or reduced costs
 - Integration of process improvement into daily workflow
 - Continuation of program activities after grant funding
 - Continuation of network or consortium after grant funding
 - Health improvement of an individual
 - Health improvement among your program participants
 - Health improvement among your community
 - Enhanced staff capacity, new skills, or education received
 - Improved capacity to adapt to changes in healthcare
- ii) Do you believe that your program has achieved success? If so, how?
- This program has achieved substantial success by engaging school and behavioral health system partners in planning, implementing, evaluating, sustaining and continuously monitoring and improving school-based behavioral health services and supports, based on locally determined needs, Tanner's Outreach Program project has built and enhanced the local capacity to improve the quality of practice and achieve positive behavioral health (and academic) outcomes for area children and adolescents. Tanner's Outreach Program project has addressed a critical health gap in rural communities in west Georgia regarding high-quality access to child and adolescent behavioral health services and supports. Through the Outreach program, the delivery of school-based behavioral health services in rural west Georgia communities has expanded to include the following schools: Carroll County (Central High School, Bowdon Elementary, Mt. Zion Elementary); Haralson County (Haralson County High School, Haralson County Middle School, Tallapoosa Primary; Heard County (Heard County High

School, Heard Elementary, Centralhatchee Elementary, and Ephesus Elementary), increasing access to high-quality school-based behavioral health services and supports for over 6,000 children and adolescents (ages 5-17). Providing enhanced behavioral health services and supports in schools has represented a fundamental solution to improving service access and health outcomes for children and adolescents in rural west Georgia communities.

B. Organizational Capacity

How has the federal funding of your grant program increased local capacity at your organization, within your network, and/or in your community? Please check the appropriate selection. If other, please describe.

- Formalized networks or coalition
- Developed new partnerships or relationships
- Enhanced skills, education, or training of workforce
- Enhanced data collection and analysis

C. Contributions to Change

- i) Scenario #1: Due to a significant life event and dealing with parental divorce, a historically high academically performing student began to decline in her grades, and was demonstrating depressive symptoms. The student was found in the school bathroom with a small razor actively self-harming to release her emotions. Previously to our partnership, this student would have immediately been suspended, and brought before the tribunal panel for expulsion consideration. Due to mental health education with the full school administration, the tribunal determined expulsion would not address the needs of the student, and permitted ongoing school access with required mental health treatment in its place.

Scenario #2: Due to the ongoing mental health stigma around the country, a high profile community service person had avoided seeking counseling services for his middle school son for fear of judgement and ridicule by those in his community. For years he watched his son decompensate and tried to help him however he could from the privacy of their home. Once the school-based therapy program began in his son's school, he found "the way he'd been praying for" to provide his son the needed counseling and medication management support to address his son's anxiety and depressive symptoms. The school-based team is now addressing the much needed education to the family and the community, giving the permission to accept services wherever one can find them, and to avoid the delay of seeking professional help.

- ii) This grant program has directly or indirectly contributed to policy changes, systems changes, or environmental changes? An example of this follows:

Carroll County Schools has reviewed their policy regarding weapons and contraband as it relates to self-harming tools. When reviewing situations where students have utilized items that historically would have been considered threatening to others (i.e. razors, knives, sharp objects used for harm, etc...), school leaders and administrators are now incorporating considerations for mental health symptoms, and effective treatment solutions rather than the blanket/traditional suspension or ultimately expulsion in many cases. The Administration is now taking into consideration the source of such actions by students, and responding with relevant treatment solutions.

Carrollton City School System and Paulding County School System, a neighboring county, asked this team to assist in formulating their suicide prevention protocol to include an evidenced-based tool to assist their school personnel in assessing and determining levels of risk for the students. Through utilizing the Columbia Suicide Severity Risk Scale these school systems will now have a standard method of determining whether a student is at risk to return home, or requires professional disposition for inpatient placement. Prior to this protocol, schools were implementing various approaches to students presenting with self-harm/suicidal tendencies, and having minimal documentation and evidenced based intervention to justify their clinical decisions.

Haralson County School System reported in FY2016 a reduction in school climate scores related to the area of "have you had thoughts of suicide in the last 6 months" and an increase in the overall school climate area of overall perception of school campus emotional safety.

Partnerships with the current Program Manager, Safe and Drug-Free Schools, and the Georgia Department of Education is bringing mental health and substance abuse education to the Carroll/Haralson/Heard/Douglas/Paulding County communities.

Idaho

Part I: Organizational Information

Grant Number	D04RH28434
Grantee Organization	St. Luke's McCall, LTD
Organization Type	Regional Medical Center (Primary Care, Critical Access, & Hospital)
Address	1000 State Street McCall, ID 83638
Grantee organization website	https://www.stlukesonline.org/communities-and-locations/facilities/hospitals-and-medical-centers/st-lukes-mccall-medical-center
Outreach grant project title	Rural Outreach Care Coordination Collaborative
Project Director	Name: Jennifer Yturriondobeitia
	Title: Project Director
	Phone number: 208-899-9012
	Fax number:
Email address: yturrioj@slhs.org	
Project Period	2015 – 2018
The funding level for each budget period	May 2015 to April 2016: \$200,000
	May 2016 to April 2017: \$200,000
	May 2017 to April 2018: \$200,000

Part II: Consortium Partners

* Indicates consortium partners who have signed a Memorandum of Understanding/Agreement

Partner Organization	Location (town/county/state)	Organizational Type
St. Luke's McCall Medical Center*	McCall, ID / Valley County	Primary Care, Critical Access, & Hospital
St. Luke's McCall Foundation*	McCall, ID / Valley County	Charity Care and Foundation
McCall Fire & EMS*	McCall, ID / Valley County	Fire / EMS
Donnelly Fire Department*	Donnelly, ID / Valley County	Fire / EMS
Adams County Health Clinic*	Council, ID / Adams County	FQHC
Community Care Clinic*	McCall, ID / Valley County	Free Clinic
Central Health District*	Cascade, Council, McCall, ID / Valley County	Public Health

Part III: Community Characteristics

A. Area

McCall, ID, Cascade, ID, New Meadows, ID, Council, ID, & Riggins, ID

B. Community description

Valley and Adams counties' primary factors that influence life in our communities are access and availability of services, gaps in services, and the economic and social conditions that impact healthcare for rural patients contending with medical and behavioral health conditions. We value a collaborative team-based approach to improve the health of our communities. The health neighborhood services should have accessible and immediate behavioral health services, care coordination, and support in a convenient and familiar setting.

C. Need

The St. Luke's 2013 McCall Community Health Needs Assessment and the Valley County Health Improvement Plan 2013-2015 identified chronic disease prevalence and the information provided insights into the underlying reasons for poor mental and physical health. Many of these diseases are preventable or can be treated more effectively if detected early and the proper

behavioral health supports and care coordination are in place to assist patients. Despite the fact that a quarter of the U.S. population lives in rural communities, only 9-11 percent of the nation's physicians practice in rural areas, and the greater their specialization, the less likely their presence in a rural setting. The behavioral health field suffers similar discrepancies, as psychiatry positions are disproportionately vacant in federally funded rural community health centers, and chronic low salaries and poor reimbursement rates make it difficult for rural agencies to attract and retain behavioral health professionals. With limited resources for personal transportation, travel to an urban health care clinic or hospital can be a daunting logistical and financial challenge. Access to specialists is equally challenging.

The shortages for mental health and substance use services were barriers this project needed to overcome and the team researched options to develop behavioral/mental health services that could bridge the needs to co-manage the varying severity of medical and mental health disorders. However, adoption of integration of medical care and behavioral health care requires reimbursement to support the work in the rural areas. It is easy to speak of "one-stop shopping" or "no wrong door" policies, but ultimately, the payment and reimbursement mechanisms must incentivize those activities and services that actually assist the patients in care coordination and linking to the right services at the right time and in the right amounts/dosages.

St. Luke's is increasingly aware that traditional models of primary care are not sustainable. Seventy-eight percent of primary care providers state that they feel little control over their work, and 30% express the likelihood that they will leave practice within 2 years. In addition, estimates project that it would take 21.7 hours a day in a traditional practice to provide all recommended preventive, acute, and chronic care for a typical panel of 2500 patients. With the Affordable Care Act, Idaho is projected to add more than 126 patients per primary care provider. Our goal was to develop a proactive health system that "re-imagines the physician from a superhuman solo provider to the leader of a cohesive, high-functioning team that includes Advanced Practitioners, pharmacists, care coordinators, nutritionists, and behavioral health specialists. The team's combined efforts expand capacity and access, improve outcomes, and provide a more satisfying experience for both patients and the care team."

Part IV: Program Services

A. Evidence-based and/or promising practice model(s)

We proposed to construct a "Health Neighborhood" based on the Patient-Centered Medical Home (PCMH) and Patient-Centered Medical Home Neighborhood (PCMH-N) models. This is the first Idaho PCMH project implemented with St. Luke's in a rural/frontier, geographically isolated, medically underserved, and low resource area to ensure integration of services for behavioral health and chronic health conditions. The "Health Neighborhood" is a community based lifelong continuum of care built upon wrapping services around patients and families while enhancing natural supports that are clinically beneficial and more cost effective. Services are based in primary care clinics so that patients have accessible and immediate behavioral health services, care coordination, and support in a convenient and familiar setting.

Rural Outreach Care Coordination Collaborative (ROCCC) aligns with the philosophy of the evidence-based practice of the Chronic Care Model (CCM). CCM to help practices to improve patient health outcomes by changing the routine delivery of ambulatory care. CCM transforms daily care for patients with chronic illnesses from acute and reactive to proactive, planned, and population-based. It employs a combination of effective team care and planned interactions; self-management support bolstered by the more effective use of community resources; integrated decision support; and patient registries and other supportive information technology (IT). These elements work together to strengthen the provider-patient relationship and improve health.

The American College of Physicians (ACP) definition for PCMH is used because it provides practice guidance for both PCMH and PCMH-N. ACP defines PCMH as the central hub of patient information, primary care provision, and care coordination. As opposed to the traditional model, a high priority is placed on patient involvement and recognition of each individual's needs and preferences—it is truly patient-centered. Population management processes are incorporated into the practice workflow that facilitates the delivery of evidence-based disease management and patient self-management services. The PCMH care model is interdependent on the cooperation of the many subspecialists, specialists, and other community healthcare entities (e.g., hospitals, nursing homes) involved in patient care. While PCMH is the foundation for delivery transformation, a PCMH cannot provide all the care patients need all the time. A PCMH's resources are limited and PCMH-N model provides additional support for patients and paves the way for data sharing and better coordination. ROCCC will not meet full fidelity for PCMH-N but will incorporate the spirit of the model to formalize an infrastructure and construct a Health Neighborhood that is culturally appropriate and.

Team-Based Care

St. Luke's Health System is moving toward the team-based care model because it incorporates clinic protocols to start implementing the team-based care model would include; Pre-visit, Visit, Post-Visit, and Between Visit activities. The primary care

provider leads the team that is accountable for meeting the patient's needs, from access to outcomes. ROCCC has balanced access and continuity, by maximizing the scope of practice for all members of the team. The expectation that each team member proactively takes care of the patient to the maximum of their scope at each encounter becomes a mindset.

ROCCC utilized the principles of the PCMH to pilot enhanced care coordination, including connectivity between local health providers. Medical (Nurse Care Managers or Nurse Care Coordinators) and community workers (Community Health Workers or Community Care Coordinators) to help patients focus on preventative interventions, understand medications and provide navigation services tailored for each patient.

The Community Health Workers (CHW) program follow evidence-based practice of the Pathways Model for CHWs but will be modified due to funding limits and the primary care setting. CHW are frontline health workers who are trusted members of and/or have an unusually close understanding of the community they serve. CHWs have deep roots in the community and share life experiences with patients and they serve as a bridge between the patient and the healthcare entities, government, and social service systems.

The Nurse Care Coordinator (NCC) is vital to team-based care. The project hired RN(s) as NCC's, modeled after the NCC model from the Intensive Outpatient Care Program (IOCP) evidence-based practice. These NCC led services helps patients manage the uncertainty of disease, aids in the navigation of the healthcare system and empowers patients to fully participate in their healthcare goal setting, decision making, and treatments. On a day-to-day basis, NCC's reduce barriers to care, educate patients, promote health and self-care management and advocate with providers and service agencies. The NCC ensures the primary care physician (PCP) and practice team maintains a central role in coordinating and managing the care of these vulnerable patients and that the patients receive optimal care including acute illness management, chronic disease management, and preventive care across multiple health settings and multiple physicians/providers.

The Behavioral Health Consultant (BHC) is supported in several evidence-based practices such as Guiding Principles Care Model, the Pathways Model, and the Primary Care Behavioral Health Consultant (PCBH) Model, which is based on "Behavioral Health Optimization Program" through the Air Force Medical Operations Agency. The Model supports patients in isolated, rural, medically underserved areas by providing vital behavioral health resources. The Agency for Healthcare Research and Quality's (AHRQ) 2008 study, *Integration of Mental Health /Substance Abuse and Primary Care*, noted that in general, integrated care achieves positive outcomes and noted that most of the studied models involve behavioral health co-located into primary care settings. The BHC's role is to identify, target treatment, perform triage, and manage primary care patients with medical and/or behavioral health problems to focus specific behavior change plans. Embedded BHC in primary care clinics, patients have easy and consistent access to providers at one central location and care coordinated between providers.

B. Description of Activities

- The ROCCC project activities transformed a traditional primary care to a fully integrated team-based care model. In the expanded care team, we successfully embedded a full time; 1) Behavioral Health Consultant (BHC) using the Primary Care Behavioral Health Model, 2) nurse care coordinator (NCC) using the Chronic Care Model, and 3) community health worker (CHW) using the Pathways Model to provide an integrated and comprehensive co-management treatment model.
- The ROCCC project expanded the health home model to create a "Health Neighborhood" network to create a comprehensive care coordination and community health partnership collaboration to co-manage and provide outreach services to the target population.
 - We created through our collaborative routine meetings were schedule with emergency medical services and emergency room staff to ensure patient follow up.
 - We developed and continue to support a patient ran community Multiple Sclerosis support group. The MS support group continues to grow and has 12-15 members and the group regularly has community organizations present on various health topics.
 - We developed and continue to support Taking Off Pounds Sensibly (TOPS) for primary care staff and community members. The primary care TOPS program has roughly 8-12 members and has been highly successful, but the community TOPs program membership is lower around 5-8.
- The ROCCC project facilitated several regional and statewide trainings to upskill health neighborhood organizations and partners in:
 - Suicide Prevention
 - Compassion Fatigue
 - Living Well with Chronic Disease – Stanford Model
 - Primary Care Behavioral Health

- Critical Incident Stress Management
- Community Health Worker Trainings
- Motivational Interviewing
- Psychological First Aid
- Substance Use screenings
- Mental Health First Aid
- The ROCCC project completed staff satisfaction surveys determine if the team-based care transformation improved staff satisfaction.
- The ROCCC project utilized the CHW program to implement an in-home check in with patients who had transportation barriers.
- The ROCCC project utilized the NCC program to implement care management and transitions of care.
- The ROCCC project utilized the BHC program to implement mental health services in primary care.
- The ROCCC project completed application for Patient-Centered Medical Home for NCQA but had to request non-compete extension due to the timeframe and requirements of the NCQA process. However, the work towards NCQA allowed us to meet tier 4 Idaho Health Home which allowed an increased per member per month for Medicaid.

C. Role of Consortium Partners

Consortium participation was designed to be strategic and focus on long-term health improvement solutions, not short-term imperatives. The consortium is focused in scope and members represent a manageable geographic area. ROCCC effectively leverages each member's unique services. For example, the EMS teams have experience with home wellness visits that is not common to the other healthcare organizations. The SLM Foundation has experience with financial resource development and community organization. SLM offers a broader range of inpatient and outpatient services that are distinct from the Community Care Clinic or Adams County Health Clinic. These two clinics provide safety net care and ACHC provides the only sliding fee scale dental care in the region. All patients are shared between organizations. Patients move between sites and services as their needs escalate or their financial circumstances flex. Each member of the consortium understands that patients and our patients are shared and all patients would benefit greatly from additional care coordination and behavioral health support.

The consortium has met quarterly and as needed to get feedback and input on the project implementation and progress.

Decisions were made based on group consensus, requiring that a majority approve a given course of action, but that the minority agrees to go along with the course of action. The group established a monitoring and evaluation framework to ensure that data is gathered and reported in a standardized way. The purpose of communication is to establish a mutual understanding of what consortium members are doing, which in turn increases the likelihood of interaction and collaborative teamwork. Ensuring that communication is open, regular, timely, two-way and clear will give the consortium the best chance for success. Based on proactive communication and input, the consortium work plan has been reviewed and refined annually.

Part V: Outcomes

A. Outcomes and Evaluation Findings

The Rural Outpatient Care Coordination Collaborative (ROCCC) project was designed to test a very different model of care for our community and providers. The impact and success of this project have generated interest and questions from clinics throughout the region.

ROCCC has contributed to the understanding of how rural health care can function using the team-based model of care including embedded mental and behavioral health, care coordination, community health workers and most recently the addition of clinical pharmacy. The project developed a true snowball effect. Each new addition to the care team delivered better outcomes, improved patient satisfaction and helped each provider work more efficiently at the top of their license. This created an atmosphere that supported and even welcomed, the next change and innovation so that additional elements of the team based model could be added with minimal disruption. The optimism that grew through these tangible experiences had made additional innovation more likely.

Additional findings:

- Improved identification behavioral health patients and improved access to behavioral health services
- Improved pathways to care coordination and care management services to reduce emergency department admissions and readmissions
- Increased access to community-based resources and services
- Improved community, provider, and staff satisfaction of ROCCC's PCMH and team-based services
- Increased capacity for more patients to access BHC, NCC, & CHW services

Leadership from ROCCC has participated in the Idaho State Healthcare Innovation Project and shared learnings as the project has evolved. ROCCC has demonstrated the potential to build a financially sustainable model that truly delivers better and more patient-centered care. The potential of this approach has contributed to changes in Insurance reimbursement practices. It has promoted alternative payment potentials that are currently helping ensure the financial viability and long-term sustainability of the team-based care model at St. Luke's McCall. Insurers, academics, and administrators are very interested in seeing curiosity of how this model will alter utilization, cost, and outcomes.

Through ROCCC project, developed and expanded several training opportunities to up-skill community partners, members and health care providers in Valley and Adams counties to improve patient care which included: Motivational Interviewing, Suicide Prevention, Compassion Fatigue, Diabetes Management-Living Well with Chronic Disease and Community Health Worker Training.

B. Recognition

The ROCCC project intentionally demonstrated lessons learned to the target population, to other clinics and health systems, and colleagues by employing a variety of methods and by using a range of media outlets both local and national in scope. Local media, such as the weekly regional newspaper The Star News, featured stories about the award and patient care being impacted through the activities supported by ROCCC over the course of the grant period. Periodic posts on social media highlighted the evolving model of care and the impact on patients and providers. Impact stories were shared on internal St. Luke's Health System blogs and websites. Hospital publications and annual foundation impact reports featured educational outreach and patient stories to humanize the outcomes of rural care coordination and collaboration. A project report was also featured in Rural Health Information Hub.

Additionally, presentations were made to provider networks through St. Luke's Health Partners and at the National Conference on Collaborative Family Healthcare Association (CFHA) on Behavioral Health Integration. Outcomes were shared in a presentation to the State Healthcare Improvement Plan workgroup and payer groups with Optum, SelectHealth, BlueCross, and PacificSource. Several key staff members presented the model and the improvements to patient health and provider satisfaction at the St. Luke's Health System Quarterly Leadership Conference. In addition to these proactive outreach opportunities, staff began receiving requests for information and questions from other clinics and health systems to learn more about the design of the model and how implementation worked. The ROCCC project outcomes created a reputation for McCall and we have hosted tours and interviews with the ROCCC staff from different primary care clinics and with state officials to understand the success of the program. We found this encouraging and supportive of our assumption that, if well-constructed and implemented, the model could have the potential to be replicated in other settings.

On March 6, 2018, McCall's ROCCC project was recognized on St. Luke's Blog by the President and CEO of St. Luke's Health System as a leader in Patient-Centered Medical Home (PCMH) within the St. Luke's Health System. Prior to the HRSA grant and the work of the ROCCC project, the idea of team-based care or PCMH was unwelcomed in our health system. The HRSA funds for Rural Health Initiatives and the vision of the ROCCC project in McCall is a great example of a ripple effect of a "tiny pebble" that made a global systems transformation in the St. Luke's healthcare system. This could not have been done without the teamwork, dedication, and persistence of the McCall ROCCC staff because they believed in the vision and the goals of the project were the right thing to do for our patients.

- 9/25/2015 - Clinics in McCall Integrate Behavioral Health in the Primary Care Setting, St. Luke's News Blog, The Star-News, St. Luke's McCall Update, Facebook
- 11/25/2016 – Care Team Inspires McCall Man's Journey to Better Health, St. Luke's News Blog, The Star-News, St. Luke's McCall Update (internal newsletter)
- 7/27/2016 - Clinical Pharmacy Now Offered at St. Luke's McCall, St. Luke's News Blog, The Star-News, & Facebook
- 7/1/17 – State Integrated Health Care meeting, presented to the statewide policymakers on St. Luke's McCall's ROCCC project and patient success stories.
- 10/15/17 St. Luke's Source (internal newsletter) on St. Luke's McCall Primary Care Behavioral Health presentation at CFHA
- 10/27/2017 - St. Luke's Clinical Pharmacy Initiative Improves Local Family's Health, St. Luke's McCall Update (internal newsletter)
- 3/6/18 – President and CEO of St. Luke's recognized McCall ROCCC project in the St. Luke's Blog "Thinking Globally, Executing Locally: St. Luke's Plans the Patient-Centered Medical Neighborhood"

- The most prominent challenge has been the lack of cultural understanding and legitimacy of the ROCCC project by the urban health system corporation of rural healthcare environment has been challenging. To overcome this barrier, we used quantitative data using quality metrics but also used qualitative data of provider satisfaction, and patient experience stories to constantly communicate and disseminate the success of the ROCCC project to local stakeholders and SLHS administration.
- The second challenge has been physically meeting with the consortium members due to time constraints and travel. We had to create communication opportunities through community trainings, doubling up on standing meetings, and using emails, video conferencing and telephone communication to connect with the consortium members.
- The third challenge is recruitment and retention of PCMH staff in the rural areas. We created a workforce development plan to develop a training and orientation for current staff and new hires to acclimate them to the team-based care model.
- 3rd SLHS hiring process is very difficult to change or add if you are trying to add an innovative team member to the project. We decided to leverage SLHS department for Government Grants Administration to hire all grant staff. They can remove barriers to HR job description and hiring process, payroll, and budget.

Part VII: Sustainability

A. Structure

The consortium has committed to stay together not only for the continuation of the ROCCC project programs but also look to support other opportunities to improve Valley and Adams Counties health outcomes. However, the community partners will be slightly changed because we will most likely not have Community Care Clinic because the physicians running the free clinic are planning on retiring. Most of their patients have been transiting to St. Luke's McCall's primary care physicians over the last couple of years. Our care coordination team have been working diligently to transition patient care seamlessly to reduce any delays or disruptions. We are hoping to strengthen our consortium in the future by adding Cascade Rural Health Center, New Meadows EMS, and Riggins Syringa clinic.

B. On-going Projects and Activities/Services To Be Provided

i) Will all, some or none of the elements of the program be sustainable once Outreach grant funding has ended? Please check the appropriate selection.

- All elements of the program will be sustained
- Some parts of the program will be sustained
- None of the elements of the program will be sustained (i.e. the program will completely end after the grant period)

ii) Identify the projects and activities that will be sustained beyond Outreach grant period.

The activities and projects that will continue after the grant ends will be:

- Primary Care Behavioral Health Integration at Payette Lakes Medical Clinic and the future populations we will focus more intensely will be the Substance Use Disorder (SUD) population. The behavioral health provider's position has proven a sustainable financial model through billable hours.
- Community Health Worker program will be sustained through per member per month (PMPM) Medicaid funds for Medicaid patients because the ROCCC project assisted St. Luke's McCall in meeting a tier 4 Idaho Health Home.
- Nurse Care Coordination (NCC) program will be sustained through per member per month (PMPM) Medicaid funds for Medicaid patients because the ROCCC project assisted St. Luke's McCall in meeting a tier 4 Idaho Health Home. Also, the care management activities to manage the high-risk populations, from the emergency department and inpatient hospitalizations, admissions and readmissions will provide financial incentives for St. Luke's alternative payment models for the Medicare Advantage population. Additionally, the NCCs have improved the transitions of care process which has increased billable services for the primary care providers to support the NCC positions.
- Patient-Centered Medical Home (PCMH) NCQA recognition will be continued because the designation monitors standards and quality of care. Additionally, it allows for continued funding with the Idaho Health Home at the highest funding tier.
- PCMH-Neighborhood will be expanded to Cascade, Donnelly, Council, New Meadows, & Riggins. The consortium is committed to supporting the PCMH-N because they view it as an imperative structure to manage the health of our population and to ensure care is closely located where the patient resides.

C. Sustained Impact

After the grant there will be several sustainable programs and systems change in clinic, community, regional, and statewide. We had leveraged the ROCCC project to demonstrate outcomes that improved access, patient satisfaction, and provider satisfaction. Our strategy was based on sharing knowledge and trainings across our health system, Valley and Adams counties and to other statewide rural areas. Leveraging these needed trainings, and providing them for free, assisted in the transformation of St. Luke's Health System (SLHS) to support team-based care and Patient Centered Medical Home (PCMH) initiatives. SLHS has historically did not support PCMH because they believed there was no return on investment. However, due to the ROCCC project, SLHS witnessed McCall out performing most of their clinics and noticed McCall being recognized statewide as a flagship clinic for PCMH. SLHS clinics, state officials, and other independent clinics were requesting tours at McCall because they all wanted to know how McCall created their team-based care model. Due to the success of McCall, SLHS finally acknowledged the competency of the McCall team and now is leveraging McCall to increase the number of PCMH clinics within the healthcare system. Additionally, SLHS will provide additional project management resources with McCall to assist other clinics to become PCMH.

The ROCCC project trained over 200 people and 25%-30% are train the trainers to spread trainings across the state. We increased capacity across the state for Primary Care Behavioral Health, Compassion Fatigue, Psychological First Aid, Suicide Prevention, and Critical Incident Stress Management.

The ROCCC project was designed to provide pilot phase funding that could demonstrate both the impact of the project and the financial sustainability as we move toward a value-based payment environment.

The design of ROCCC took advantage of the early phase of value-based payment to hire staff, structure workflows, develop relationships and build the capacity to fully adopt new payment models as they became available and develop the confidence that the model provided better outcomes for patients and improved provider satisfaction. Several potential and new revenue sources including transition of care visits and per member per month incentive payments were identified before the submission of the ROCCC proposal. During the ROCCC period, we have been able to leverage these opportunities and be best prepared to take advantage of upcoming enhanced payment model opportunities.

To ensure the on-going sustainability of the services seeded through ROCCC funds we have explored and successfully submitted grant proposals to private funders including the Cambia Health Foundation and to the McCall Memorial Taxing District, which uses property tax revenue to support access to care in the region. Additional funding was secured from a Planning Grant to expand the team-based care model to include a clinical pharmacist. Most importantly, the ROCCC project allowed us to leverage the team-based care model to meet Medicaid Idaho Health Home payment incentives. Together, these funding sources have secured the future of ROCCC by demonstrating impact and providing the necessary runway to leverage changing payment models.

Part VIII: Implications for Other Communities

The McCall ROCCC project and our organizational structure is not a unique story and probably more common across the rural environment. This experience showed us that a rural clinic can make substantial changes in a health system but there were key elements that made the project a success. They are:

- Unified vision and mission of the project are extremely important. There were potential saboteurs within the community and in our health system that could have completely derailed or stopped our efforts but our team was single-minded in moving forward because we knew what we wanted and how we were going to get there.
- Teamwork between the clinical providers (PCP, Nurse Lead, BHC, NCC, CHW, & other medical staff) and clinic operational managers (clinic manager, grants manager, and project director) was essential. The unified vision is extremely important but team members who executed the project had to understand and be accountable for the ecosystem between clinical practice and clinic workflow. Utilizing a practice transformation framework like the "10 Building Blocks" is crucial to transforming not only a clinic practice but a community and a health system.
- Utilizing quantitative data through the electronic health record was important to illustrate outcomes like reducing total cost of care, reducing emergency and inpatient admissions and readmissions, increased access to services, and increased number of patients served. This data helps support return on investment with SLHS administration to sustain the ROCCC programming.
- Provider and staff satisfaction surveys have been the most impactful to communicate to SLHS health system that demonstrated improvement in staff and PCP program and job satisfaction. Ultimately, our whole system is concerned about recruitment and retention of staff. We have been able to gather and compare the surveys pre and annual ROCCC implementation and the outcome of data has been the most meaningful for our community and administrators.

Part IX: Success, Increased Capacity, and Contributions to Change

A. Defining Success

- i) How do you define "success" for your grant program? Please check the appropriate selection(s). You may choose more than one option. If other, please describe.
- Access to a new or expanded health service
 - Increased number of people receiving direct services
 - Improved quality of health services
 - Operational efficiencies or reduced costs
 - Integration of process improvement into daily workflow
 - Continuation of program activities after grant funding
 - Continuation of network or consortium after grant funding
 - Health improvement of an individual
 - Health improvement among your program participants
 - Health improvement among your community
 - Enhanced staff capacity, new skills, or education received
 - Improved capacity to adapt to changes in healthcare
- ii) Do you believe that your program has achieved success? If so, how?
- Yes, because we met the goals to provide better care for patients and to pilot a "Health Neighborhood" model built on a regional consortium for the coordination and integration of outpatient behavioral and physical health care to improve chronic disease management in a rural/frontier, low resource, the medically underserved community in McCall, Idaho
- **The year 2015 Planning Goal:** We created and implemented a team-based care model that embeds Behavioral Health Consultant (BHC), nurse care coordinator (NCC), and community health worker (CHW) in primary care settings to provide an integrated and comprehensive treatment model. Pursue a tier three NCQA Patient-Centered Medical Home (PCMH) certification.
 - **The year 2016 Planning Goal:** We developed a community and regional framework of a "Health Neighborhood" network to create a comprehensive care coordination and community health partnership collaboration to co-manage and provide outreach services to the target population.
 - **Year 2017 Planning Goal:** We are in the process of completing the application for Tier 3 designation for Patient-Centered Medical Home for NCQA and state of Idaho to expand our clinical impact and increase the likelihood of achieving the *"better health for the population, better care for individuals, and lower cost through improvement"* in our targeted rural communities.

B. Organizational Capacity

How has the federal funding of your grant program increased local capacity at your organization, within your network, and/or in your community? Please check the appropriate selection. If other, please describe.

- Formalized networks or coalition
- Developed new partnerships or relationships
- Enhanced skills, education, or training of workforce
- Enhanced data collection and analysis

C. Contributions to Change

Change in individuals' lives, your organization, consortium, or community:

A 51-year-old male, of McCall, celebrated one year of sobriety in October, and he credits his success to the care team at St. Luke's McCall. That team, which includes PCP, registered nurse care coordinators, and patient navigator, to motivate patient to begin a life-changing transformation. "I spent most of my life running from my past and in fear," and he was suffering from an undiagnosed post-traumatic stress disorder. "I was drinking a lot, which led to getting in fights, two DUIs, trouble with the police and a strained relationship with my kids." The patient was in the St. Luke's McCall emergency room many times. At one of those visits, his PCP told him his blood pressure was too high. She didn't hold back as she explained how his drinking was impacting his health and life. "She told me, 'If you keep doing this, you will die'". After that conversation, he took a walk and thought about his friends and family. "I just got tired," he said. "It took me years to realize I just can't keep drinking." Once the patient decided to address his alcohol abuse, he had a healthcare team ready to partner with him to improve his health. Through St. Luke's Clinics in McCall, he worked with a team of providers to identify next steps based on his personal health goals.

"It's the first time anyone treated me like a person without judging me," and for the patient, it started with having a frank conversation with his PCP and his decision to do something about his health. Patient navigator was able to assist him in signing up for healthcare coverage, while nurse care coordinators (NCC) helped coordinate the necessary appointments and resources. "My role is part nursing, part social work and part detective work," said NCC. "You have to be persistent and treat patients with respect and now that we have more resources we have been able to assist more people," said NCC. Referrals are received mostly from doctors in the clinics and emergency department, in addition to social workers, counselors, McCall emergency medical services, drug store pharmacists, and St. Luke's Home Care. A lot has happened this past year for the patient. He quit drinking, had knee replacement surgery, and had major dental work. The care team helped him find a dentist who would do some much-needed dental work at a reduced cost. He credits the entire team with his transformation. "They gave me the encouragement and compassion I needed." The patient is a landscaper and an artist – he builds custom furniture out of recycled furniture and household items. His improved health has given him more energy to do his work and his art. He is also rebuilding his relationships with his adult children. Patient offers this advice to others: "Don't be scared to ask for help, it's out there, and there's a lot of it."

Patient (60-year-old male) presents as a complicated patient with multiple comorbidities including multiple sclerosis and a wound necessitating frequent appointment at the wound clinic. The patient was considered "non-compliant, difficult" patients who are missing appointments and not following through with treatment recommendations. When he did show up to appointments, he was labeled as inappropriate with the staff at wound clinic, making them uncomfortable taking care of him. He had been referred to Patient Access Navigator (PAN) multiple times by several different people. He was unable to engage with PAN as he did not trust or have a rapport with her. However, she was able to do a review of the patient's resources to share with the care coordination team to enable them to fully carry out their care plan. Next, PCP made a referral to NCC's asking for help with patient and his health care and the patient was referred to the behavioral health provider. The plan developed, was to have the BHC meet with the patient directly before his wound appointment to discuss coping strategies as well as the NCC to accompany him to wound clinic appointments to support to the patient during appointments.

BHC and NCC added the Community Health Worker (CHW) to the team to provide support for the patient during his appointments as well as to work with the patient to accomplish his goals. The patient identified that he didn't have much to live for or hope for. Discussed with CHW and BHC trying to find something to live for which was positive in his life. Patient with BHC & CHW came up with the idea of developing an MS support group for an outlet for the patient. Worked with CHW, BHC and the regional office in Utah to set this up. Started a monthly support group at the local library. Started out with 2 people in the group. Now has grown to 15 and the patient leads the group! The team has brought in community members to share information during these support groups. EMS came and talked with members about safety at home when to call EMS for assistance etc. Pharmacy came to talk about current medication treatments, side effects and other questions related to medication management. The BHC intern worked with local pools to find out accessibility for people with MS including the temperature of pools, access with lift, etc. for exercise for those with MS. Each month has a different guest speaker. The leader of this group is the original "difficult patient" who did not have hope or a purpose in life.

Patient has had a few very expensive medication needs. The patient was able to work with PAN and CHW to find coverage for an infusion which would have cost over \$18,000. If they had been unable to get this then either then the patient would not get the med or the hospital would have to write off the cost. His wounds are now healed and mental health outlook is hopeful. His relationship with the providers here at the clinic has improved to be more appropriate and positive. This would not have been possible without the involvement of the entire team giving him the support and encouragement that he needed to become more independent and involved in a positive way in his healthcare. Not only is he healthier, but he is contributing to others in the community as well to provide them with information and support. PCP stated, "The work the care management team is doing is amazing and has benefited many of my patients." Additionally, patient decreased the use of the ED due to the appropriate use of PCP care team.

Change in policies, systems, and environment:

McCall's ROCCC project has globally transformed the St. Luke's Health System to move toward Patient-Centered Medical Home (PCMH) within the St. Luke's Health System (SLHS). Prior to the HRSA grant and the work of the ROCCC project, the idea of team-based care, PCMH, or Health Neighborhood was unwelcomed in our health system. This project was a couple of years ahead of the state and SLHS but it laid the foundation to demonstrate the benefits of team-based care and PCMH to persuade SLHS to transform their healthcare delivery. SLHS was resistant to apply for the Idaho Health Homes but through the ROCCC project, we were able to demonstrate a new payment model for Medicaid patients to support PCMH. After McCall established the Idaho Health Home and started to receive Medicaid funds, SLHS realized that several of their clinics could meet this designation with the additional funds. Currently, McCall is the only Tier 4 Idaho Health Home but 80% of SLHS primary care clinics have a Tier 1 or 2 designation for Idaho Health Home. McCall will be the first NCQA PCMH recognized in the SLHS system.

Additionally, the community support of the ROCCC project has been overwhelmingly positive. St. Luke's McCall (SLM) has experienced increased patient referrals in the primary care clinic and increased the satisfaction of patient and community experience of their care at SLM. This is exemplified by the support of the community hospital taxing district to financially support the PCMH and Health Neighborhood by dedicating a percentage of the hospital tax to ensure sustainability of PCMH and Health Neighborhood efforts. This was stated above but we cannot emphasize enough that the HRSA funds for Rural Health Initiatives and the vision of the ROCCC project in McCall is a great example of a ripple effect of a "tiny pebble" that made a global systems transformation in the St. Luke's healthcare system.

Idaho

Part I: Organizational Information

Grant Number	D04RH28412
Grantee Organization	St. Mary's Hospital
Organization Type	Critical Access Hospital
Address	701 Lewiston St., Cottonwood, ID 83522
Grantee organization website	www.smh-cvhc.org
Outreach grant project title	Health-Able Communities
Project Director	Name: Pam McBride
	Title: Chief Grants Officer
	Phone number: 208-816-0794
	Fax number: 208-476-5385
	Email address: pam.mcbride@smh-cvhc.org
Project Period	2015 – 2018
Funding level for each budget period	May 2015 to April 2016: \$200,000
	May 2016 to April 2017: \$200,000
	May 2017 to April 2018: \$200,000

Part II: Consortium Partners

* Indicates consortium partners who signed a Memorandum of Understanding/Agreement

Partner Organization	Location (town/county/state)	Organizational Type
*St. Mary's Hospital	Cottonwood, Idaho County, ID	Critical Access Hospital
*Clearwater Valley Hospital	Orofino, Clearwater County, ID	Critical Access Hospital
*Syringa Hospital	Grangeville, Idaho County, ID	Critical Access Hospital
*Idaho North Central Health District	Lewiston, Nez Perce County, ID	Public Health District
*Nimiipuu Health	Lapwai, Nez Perce County, ID	Indian Health Services
Grangeville Human Needs Council	Grangeville, Idaho County, ID	Social Service and Health agency
*Snake River Community Clinic	Lewiston, Nez Perce County, ID	Urban Free clinic
Clearwater Human Needs Council	Orofino, Clearwater County, ID	Social Service and Health agency
St. Alphonsus Regional Medical Center	Boise, Ada County, ID	Tertiary Care center

Part III: Community Characteristics

A. Area

The Health-Able Communities project served Clearwater, Idaho, and Lewis Counties in frontier north-central Idaho. This includes the cities of Orofino, Cottonwood, Grangeville, Kooskia, Kamiah, Nezperce, Craigmont, White Bird, Riggins, Pierce and all surrounding areas.

B. Community description

St. Mary's Hospital, and its sister health systems serve three Frontier counties in North Central Idaho that are home to among the most geographically and medically isolated residents of the Pacific Northwest. Geographically, Clearwater, Lewis, and Idaho Counties are larger than Maryland and Delaware combined, but share a single stoplight, and no more than 30 medical personnel, among them. Demographically, these three counties are 93.5% Caucasian, and have shown a 32% growth in residents ages 65 and older in the last 10 years, and this age group currently makes up 24% of the total population. The region's 28,000 residents lack access to preventive primary care, resources to eat well and exercise, and health literacy to adopt prevention measures. There are limited outlets for nutrition, physical activity, and health education in the region compared with larger urban centers. Residents are more likely to develop chronic or life-limiting disease, less likely to receive timely diagnoses, and less likely to

manage their health conditions. Not surprisingly, these Idahoans are more likely to experience poor health outcomes compared with their peers across the state and the nation.

C. Need

North Central Idaho is one of the most remote and rugged regions in one of the nation's most rural states. Residents of these frontier counties experience profound medical isolation resulting from a variety of factors including primary care provider shortages, great distances to primary care and extended travel to specialty care. Idaho ranks 49th in the nation for spending on community based mental health services, and 2 of the 3 counties in this project have suicide rates greater than 25%. The 3 counties have a poverty rate of 16% and uninsured rates pushing 25%; these factors, along with numerous other contributing factors lead to increased medical isolation. As a result, they experience poor health indicators and outcomes related to chronic disease states, including a diabetes prevalence of 10%, obesity rates greater than 28%, a regional hypertension prevalence of 34% and colon cancer is the number 2 cause of cancer-related deaths in Idaho. These conditions serve as the project focus.

Part IV: Program Services

A. Evidence-based and/or promising practice model(s)

The primary evidence-based feature of the Health-Able Communities initiative was the deployment of Community Health Workers (CHWs). The utilization of CHWs to augment traditional healthcare services has been endorsed by the HRSA Office of Rural Health Policy, the CDC National Center for Chronic Disease Prevention and Health Promotion, the American Public Health Association, the Institute of Medicine, and the Patient Protection and Affordable Care Act of 2010.¹ In this model, CHWs deliver prevention and screening services; facilitate linkages to primary care; connect residents to wellness resources; and support efforts to mobilize new community-based outlets for healthy eating, active living, and health education. CHWs are embedded in local medical homes, receive oversight from physicians and nurses, and serve as lay members of healthcare teams alongside clinicians, in order to extend primary care reach into frontier communities. CHWs are recruited from among the local population, ensuring a culturally appropriate response. The evidence base supports all elements of this approach.

The CHW role for this project was not designed after a single existing model, but represents a hybrid of diverse functions where CHWs have been shown to be effective. The Consortium identified numerous successful CHW programs across the U.S. that contained functions similar to the Health-Able Communities initiative (including projects funded by the HRSA 330A Outreach Authority), but which varied from the proposed model in terms of targeting specific ethnic groups or engaging CHWs in later phases of the healthcare continuum. The Consortium identified a hybrid role for its CHWs to best meet the "pre-primary care" needs of medically isolated Idaho residents, and respond to unique barriers associated with frontier cultural norms. The practice of borrowing from various models is supported in the HRSA *Rural Information Hub: Tools for success*, which states that "CHW programs typically incorporate characteristics from more than one of the models to develop a program that effectively meets the needs of the target population."²

The Health-Able Communities project was built on guidance supplied by the HRSA *Toolbox*, the CDC *Addressing Chronic Disease through Community Health Workers* brief, and the Sinai Health System *Best Practice Guidelines for Implementing and Evaluating Community Health Worker Programs in Health Care Settings*. These guides cite hundreds of studies that were analyzed to build the evidence base on which specific HRSA, CDC, and Sinai guidance was founded. The *Best Practice Guidelines* are based on Sinai's Pre-Primary Care[®] Model, which is fully consistent with the project's use of CHWs as "early detection agents in the field" and "a warm front door to primary care."

B. Description of Activities

A team of Community Health Workers (CHW's) held screening events, and, as part of the events, they performed HgbA1c testing; administered FIT tests screening for colon cancer; and conducted depression, body mass index (BMI), and blood pressure screenings. They were trained to lead CDSMP classes (Stanford Chronic Disease Self-Management Program), and referred patients to DSME (Diabetes Self-Management Education) and DPP (Diabetes Prevention Program) classes which were conducted by our partners. They created walking events and assisted in developing trails, gardens, and community education centers. In the last year they began receiving referrals from the free clinic, Registered Nurse Case Managers, and physicians at St. Mary's Hospital (SMH) and Clearwater Valley Hospital (CVH), and community members to engage with high-risk patients in a more individualized setting.

¹ *Addressing Chronic Disease through Community Health Workers* at www.cdc.gov/dhdsp/docs/chw_brief.pdf.

² Found at www.ruralhealthinfo.org/toolkits/community-health-workers

C. Role of Consortium Partners

St. Mary's Hospital served as the lead agency and fiscal agent; Clearwater Valley Hospital and Clinics joined with St. Mary's to create the Community Health Worker program and between the 2 facilities, housed 8 community health workers. Syringa Hospital, a 3rd critical access hospital in the region along with Nimiipuu Health (Indian Health Services), both housed community health workers as well. St. Alphonsus Regional Medical Center is a tertiary care center providing mental health education and resources for the consortium. The Grangeville and Clearwater Human Needs Councils are each a consortium of health and social service agencies and their contribution was to share those resources with the community health workers and case management nurses. Public Health – Idaho North Central District represented the regions public health, and their responsibilities included sharing community health resources and helping train the community health workers. All partners worked together to develop a 5-year strategic plan.

Part V: Outcomes

A. Outcomes and Evaluation Findings

The consortium has created a corps of 11 community health workers to serve 3 counties. These CHW's screened nearly 3,000 people at over 100 events from April 2015 to January 2018, reaching approximately 10% of the population in the tri-county area. After June 2017, when a new screening question was added, it was discovered that 85 of those screened had not seen a doctor in the previous 3 years.

Seven hundred fifty-three FIT tests were administered to screen for colon cancer, one of the top risk factors for this service area. Outreach activities have permitted screening of 7% of the eligible population. As a result of this FIT testing, at least 49 people had positive test results which indicate the possibility of colon cancer. They have been assisted with obtaining a colonoscopy, if desired. We know that catching colon cancer early can add years of quality life to an individual. While we don't have an estimated years of life gained, we know that impact has the highest importance to our families, friends, and neighbors we serve.

In year 3, community health workers began providing more intensive individual support to high-risk community members. The initiative started with referrals from Snake River Community Clinic to the CHW's. The CHW's then made home visits to clinic patients and reported back on the progress and concerns to clinic staff. These visits allowed patients with chronic diseases to receive prescriptions for maintenance medication instead of traveling as much as 126 miles one-way to the clinic and also freed up clinic visits that were then made available to others.

Community health workers now receive referrals from the free clinic, from nurse case managers and providers at Clearwater Valley and St. Mary's Hospitals and Clinics, and even directly from community members. One person received help from more than 6 different social service agencies thanks to navigation from a community health worker.

The importance of having various methods of outreach is explained by one of the community health workers. "I'm most proud of reaching someone who had been in denial of his diabetes. He had been through the Diabetes Prevention Program, attended our first community event, continued to attend screenings, but was on and off his medicine. He came to the recent kick-off event for our new grant, had a lot of questions, and he agreed to a referral to the diabetes educator. I did a follow up call with him, he saw the educator, had all his questions answered, and he said, 'I just have diabetes!' He thanked us for our help and will continue to support our program. He and his wife now help host one of our community walks."

According to the free clinic director, this consortium and initiative "has truly been instrumental in providing more care for more patients, including ours. You have helped make it more accessible and more comprehensive."

B. Recognition

The St. Mary's Clinic Practice Manager was invited to sit on the State Healthcare Innovation Plan Committee's steering committee for CHW's. The lead CHW was asked to be a founding member in the CHW state association. Consortium members were asked to present at the Collaborating for Health (C4H) conference in Boise, Idaho. The St. Mary's and Clearwater Valley Clinic Practice Managers along with the lead CHW also presented at the Association of Community Health Improvement (ACHI) conference in Atlanta, Georgia. This same team also presented a mentoring webinar "Using Community Health Workers (CHW) in the Patient Centered Medical Home Model" to the Idaho State Healthcare Innovation Plan (SHIP) cohort 2 members.

Part VI: Challenges & Innovative Solutions

The greatest challenge was hiring the CHW's. We did not anticipate this to be an issue; however, trying to find qualified people in each community presented a challenge from early on. There was also turnover that was not anticipated. In two of the service areas where

staffing was a challenge throughout the grant, the two part-time CHW positions were successfully turned into one full time position. Active recruitment is ongoing to ensure CHW positions are filled.

A second major challenge over the grant cycle was related to budget issues. Some significant costs associated with conducting large community screening events were unforeseen related to screening for diabetes. One was the cost of reagents and testing kits for the portable A1c screening machines. New machines were purchased to serve multiple communities; however, the reagents for these machines cost significantly more than those for the stationary machines in the hospital labs. In addition, they require extensive testing, with special kits, to retain accurate calibration. None of those costs were factored into the initial estimate of per-test cost.

Another factor with these machines was the time involved to run the tests. The A1c screen took several minutes to complete, which required 1 CHW to solely run the tests. This required additional staff to keep participants engaged during group screening events. Due to the frontier nature of our service area, using multiple staff involved significant mileage expenses which were not originally anticipated.

The process of monitoring project outputs and expenses uncovered a third major challenge, one involving leadership. The importance of hiring and training the right people for the job, along with standardization of processes was very important. However, we learned that problem-solving skills and creative thinking, especially towards ideas for sustainability, were very important to the success of the project as well. A lead community health worker position was created to coordinate day-to-day program logistics.

As we continued to do screening events throughout the region, we ran out of unduplicated screening venues. At the same time, one of the consortium members was having difficulty servicing their entire client population. This created an avenue to start having our CHW's do 1:1 visits with clients. We created a work plan for referral, client visit by the CHW, and report back to the partner. This was met with great success and has been shared between all clinics in the region, and has further moved into allowing community members to make referrals to the CHW.

Part VII: Sustainability

A. Structure

The Consortium partners have a long history of working together and plan to continue this relationship to better the health of our region. We will focus our efforts on sustaining and expanding the impact of this project. We will share lessons learned within our consortium, and with our state and national colleagues. Continuing partners include Clearwater Valley and St. Mary's Hospitals and Clinics, Snake River Community Clinic, Public Health – North Central Idaho District, Nimiipuu Health, Grangeville Human Needs Council, and Syringa Hospital.

B. On-going Projects and Activities/Services To Be Provided

i) Will all, some or none of the elements of the program be sustainable once Outreach grant funding has ended? Please check the appropriate selection.

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained (i.e. the program will completely end after the grant period)

ii) Identify the projects and activities that will be sustained beyond Outreach grant period.

The Community Health Worker program will continue to aim to improve health outcomes for patients with type 2 diabetes by creating standardized, evidence-based pathways for risk-stratified care in our resource-poor frontier area. Risk stratification, care recommendations, and outcomes will include both medical and social determinants of health. The pathways will include action steps for multiple partners in healthcare and other sectors.

Community health workers will be integrated into the clinical care team to serve as personal guides to community resources. Community partners will share referrals and progress information for patients with diabetes, build an infrastructure for shared communication and data analysis, and work together to sustain and expand existing wellness resources.

C. Sustained Impact

As a result of this project, the community health workers have validated the need for such a role in 3 major areas. They have helped increase the community awareness of the importance of prevention/wellness activities, helped increase available patient access to the healthcare system, and offered a new service for those living with a chronic disease.

The CHW's will be integrated into the clinical care team to help maximize the delivery of care. They will also continue to provide the Chronic Disease Self-Management Program and the Chronic Pain Self-Management Program trainings throughout the tri-county area. The trainings will help provide proactive steps to help people maintain or improve their health.

The impact to the community should be felt in the long-term as we are seeing more people educated and participating in health screening activities, such as mammogram and colon cancer screening. With the walks and classes they hosted, we have seen an increase in awareness of healthy lifestyles, which will result in long-term benefit to the patient and community as well. The success of this initiative has also been recognized outside of our communities. The Idaho Department of Health and Welfare used data from our program evaluation to help promote the establishment of other community health worker programs across the state. Our lead community health worker has been asked to help form the state's first peer association for community health workers. We have also shared our story at state and national conferences. This spring, we were asked to present our efforts at the National Association for Community Health Improvement conference. Co-presenters included staff from Harvard and Brigham and Women's Hospital.

Part VIII: Implications for Other Communities

Experiences with the CHW program have been very rewarding from a patient, community, and health system perspective. We have anecdotal successes from patients who have improved their own health; community members who have witnessed those same improvements, or have engaged with the CHW to make referrals into the program; and health systems that have seen an increase in access to care, along with better utilization of provider and case manager time. Social service agencies have seen an increase in utilization of the services they provide as well.

In trying to find a sustainable model, we were forced to look outside the box to see what we could find. One solution we found was to look at the indirect way CHW's bring revenue to the system. One way this happens is by the CHW seeing patients that need CHW care and not physician care. If the CHW can see the patient, and keep him/her out of the clinic, it creates an additional access point for a second patient to enter the system. This patient will generate revenue based on labs and radiology studies needed as well. None of this income is directed to the CHW, but by having them do what they do, it income is generated to support services. The same principle can be used when looking at case management. Those patients needing more time and care, are able to have interactions with the CHW, thereby freeing up the RN to see more patients, again increasing access and revenue.

Tracking data for our CHW's was a challenge due to providing services to clients outside of our health system. One of the tools we discovered was REDCap. REDCap is a secure, evidence-based web application for building and managing online surveys and data bases. It provides a seamless data download to common statistical packages. This system allowed us to create a database that was friendly for the CHWs, while also providing the tracking of the data we needed.

Part IX: Success, Increased Capacity, and Contributions to Change

A. Defining Success

- i) How do you define "success" for your grant program? Please check the appropriate selection(s). You may choose more than one option. If other, please describe.
- Access to a new or expanded health service
 - Increased number of people receiving direct services
 - Improved quality of health services
 - Operational efficiencies or reduced costs
 - Integration of process improvement into daily workflow
 - Continuation of program activities after grant funding
 - Continuation of network or consortium after grant funding
 - Health improvement of an individual
 - Health improvement among your program participants
 - Health improvement among your community
 - Enhanced staff capacity, new skills, or education received
 - Improved capacity to adapt to changes in healthcare

ii) Do you believe that your program has achieved success? If so, how?

We believe our program achieved success in a number of ways. One success was the ability to begin offering CDSMP classes to the public, which had not been available before in the community

We were able to provide health screenings to a large number of people who otherwise would not have been tested. As a result, we discovered several pre-cancerous lesions in people who would not have been screened had it not been for the FIT tests we offered. These people would have gone on to develop colon cancer, and been a large financial burden to the insurance company, the health system, and their families.

The program secured additional grant funding to continue to forge new territory with the CHW's, and have been working on a sustainability plan even without the securement of additional grant funds. The plan has always been to continue and grow the CHW program.

The consortium of partners has been collaborating for more than 6 years, and enjoys working together to solve the regions health disparities. We plan to continue our partnership and look for ways to improve services and create healthier communities.

We have seen health improvements in many individuals, participants in our classes, and the overall awareness of health in our communities has been impacted by this grant work. This has been one of the most rewarding results of the project.

B. Organizational Capacity

How has the federal funding of your grant program increased local capacity at your organization, within your network, and/or in your community? Please check the appropriate selection. If other, please describe.

- Formalized networks or coalition
- Developed new partnerships or relationships
- Enhanced skills, education, or training of workforce
- Enhanced data collection and analysis

The federal funding of this grant helped increase local capacity in a variety of ways. One of the most significant ways is with the training of the CHW's. The employment criteria was that the CHW had to have lived in the area they would serve for at least 2 years prior to being hired and have a high-school diploma and be able to work independently. A medical background was not required. Once hired, our CHW's have been trained to do screenings, to interact with patients about medical illness, health and wellness, and accessing the health care system. Our Lead CHW has developed leadership skills and is doing a great job leading the team.

Our program directors have enhanced their project management and budgeting skills. The consortium members, specifically the health care systems have learned new, creative ways to deliver healthcare in our ever- changing world.

C. Contributions to Change

Change in individuals' lives, your organization, consortium, or community:

At the very first screening event a patient was screened and she learned she was in the pre-diabetic range for her blood sugars. This caused great alarm for her so she started participating in every walking event, along with the CDSMP class. 1 year later, she returned to a screening event and was tested again. Her HgbA1c was in the normal range, and she was no longer considered pre-diabetic. She started crying and gave the CHW a huge hug and said it was because of them, and their programs that she started down the path of healthy living. She transformed her whole family's meal plans and activities as part of her journey.

In one of the first 1:1 interaction sessions, the patient was an older man, who lived 120 miles from his primary care physician. He was oxygen dependent and embarrassed by this. He did not leave his home except to go to the doctor and to make a rare trip to the grocery store. He lived above a gas station, which had safety issues with him being on oxygen. After the CHW made her first visit, the man said to her how thankful he was to know and feel like someone cared about him.

This grant has directly contributed to change in the community with the creation of the "Community Walk". This is a 5k walking event hosted in 8 locations. A "passport" was created for participants to get a stamp for each of the walks they participated in, and at the end of the series, completed passports were entered into a drawing for a Fitbit. The walks were coordinated in conjunction with community members helping with the planning. For example, one walk was held at the Monastery of St. Gertrude, with the

sisters planning the route to include a walk on their grounds. Another one was held down on the banks of the Salmon River and the walking route was planned by a local fisherman.

Lastly, we actually had a community member come up to one of our CHW's and ask if they could make a referral. They knew of a community member that really needed some help, but was too proud to ask. We feel like this was a huge success in that community... Our CHW was now recognized as someone who could help bring solutions to those in need.

Change in policies, systems, and environment:

Changes in policies, systems and environments can be very slow to occur here in rural Idaho. We have been successful in getting policies in our own health system changed to include the CHW model of care, and in turn have been ask to present our CHW concept to both state and national audiences. Several health systems have expressed interest in this model and in fact, an administrator from a large health system in another state was convinced by our presentation of the value of this model of care delivery. She was excited to go back and implement CHW's into their team.

As this grant cycle came to a close, talks were being initiated between health systems and payors, including Idaho Medicaid to consider CHW work as a billable service.

Illinois

Part I: Organizational Information	
Grant Number	D04RH28432-01-00
Grantee Organization	Sinnissippi Centers, Inc.
Organization Type	Private, not for profit
Address	325 Illinois Route 2, Dixon, IL 61021
Grantee organization website	www.sinnissippi.com
Outreach grant project title	Family Care Coordination Project
Project Director	Name: Gloria Martin
	Title: Director, Child and Adolescent Services
	Phone number: 815-284-6611 ext. 254
	Fax number: 815-284- 2846599
	Email address: gloriamartin@sinnissippi.com
Project Period	2015 – 2018
Funding level for each budget period	May 2015 to April 2016: \$200,000
	May 2016 to April 2017: \$200,000
	May 2017 to April 2018: \$200,000

Part II: Consortium Partners		
* Indicates consortium partners who have signed a Memorandum of Understanding/Agreement		
Partner Organization	Location (town/county/state)	Organizational Type
Sinnissippi Centers, Inc.	325 Illinois Route 2 Dixon, IL 61021	Private, not for profit Behavioral Healthcare
Kreider Services, Inc.	500 Anchor Rd. Dixon, IL 61021	Private, not for profit Intellectual Disabilities, Autism, and Early Intervention
KSB Hospital	403 E. 1 st Street Dixon, IL 61021	Hospital Healthcare

Part III: Community Characteristics

A. Area

Four counties located in rural northwestern Illinois have been served by this grant: Carroll, Lee, Ogle and Whiteside. Each of these counties is designated as a federal Health Professional Shortage Area (HPSA) for mental health and primary care professional shortages. Additionally, Carroll and Whiteside counties have designated HPSA areas for Dental care, while Carroll County is Medically Underserved county. The overall four-county population for this region is 156,599, spread over 2,613 miles, with approximately 34,756 children under age 18. The area's largest population concentration is the cities of Sterling-Rock Falls located on opposite sides of the Rock River with a combined population of 23,901. There are 85 schools, 60 primary practice providers, 4 hospitals, 3 Health Departments, and 1 Health Department/FQHC.

B. Community description

One of the primary factors that influence life in these communities is the rural nature of the area and the limitation of resources. Resources such as medical care, dental care, and specialty healthcare services are limited or absent in areas. Transportation and financial resources also limit access to care. Although there are rural transportation systems, schedules and routes are limited, and especially challenging for traveling with families. Three of the four counties are below the national mean income of \$53,889: Whiteside County mean income of \$47,401.00, Carroll County of \$48,631.00, and Lee County at \$52, 379.00. Ogle County mean family income was slightly above the national average at \$54,849.00. Poverty level for this area hovers around 12%. Lee County is the highest at 13.3%, followed by Carroll County at 12.7%, and Whiteside County at 11.9%. Ogle County has the lowest poverty rate of 10.9%. Primary industry in this area is farming, agribusiness, and small industry. The attitudes and beliefs about the need

for and the value of social, emotional, and behavioral services for children are relatively conservative in parts or substrata of this area community. Families may prefer to deal with problems themselves, or wait for long periods of time as symptoms worsen before seeking services, often years after the appearance of early indicators.

C. Need

The need identified by this outreach grant was to provide support and access to families with children in need of diagnostic, assessment and treatment services for behavioral, developmental, social and/or emotional concerns who are experiencing challenges or barriers which limit their ability or willingness to connect with recommended services. The Family Care Coordination Project was designed to enable families to engage in and benefit from services being provided through the Pediatric Development Center and other child and family services providers. Experience, supported by research, indicates that children in need of outpatient mental health services have a no-show rate between 48% and 62% for the initial intake appointment (Geetha Gopalan, et.al.2010). Children engaging in mental health services often attend a few sessions and drop out quickly (Ibid.) Family engagement in services may be impacted by a number of factors including: family poverty, parent and family stress, single parent status, effectiveness of parental discipline, type of services offered and family cohesion and organization (Ibid.) A needs assessment completed as part of a system of care project also identified factors of isolation, geographic distance, and lack of awareness or trust in service providers as potential barriers to treatment engagement (CTC 2011community needs assessment). The Family Care Coordination Project seeks to address many of these challenges and barriers faced by children and families needing these services by the addition of two Family Care Coordinators and a part time Parent Support Coordinator to the community and a previous Network Grant supporting the implementation of a Pediatric Developmental Center.

Part IV: Program Services

A. Evidence-based and/or promising practice model(s)

Explicitly state the evidence-based model or promising practice model(s) that your project adopted and/or adapted. If applicable, describe how your project adapted the evidence-based model or promising practice model(s).

The evidence based models used in this project included Care Coordination, and Strengthening Families (Parent Cafes) and Parent, Support, and Education practices.

Care Coordination is an accepted and widely utilized approach but specific models applied to children's social behavioral developmental needs are lacking. There is a care coordination model, Critical Time Intervention which focused on severely mentally ill adults in a time limited care coordination model that yielded some promising results. The goal of this model is to use care coordination practices to improve engagement and sustain length of stay in services for families with children who are demonstrating problems with emotional, social, behavioral and developmental concerns, and who present as "difficult to engage" in services.

The 2 Family Care Coordinators (FCC) were individuals who had prior experience working with challenging families, and had the skills and personal attributes to relate effectively with these families. Care Coordinators were trained to offer screenings for depression and anxiety for adults, and developmental and social-emotional screenings to children under 5. Children between 5 and 17 were offered age appropriate screenings for parental concerns, depression and anxiety. The activities of the Family Care Coordinators were consistent with general care coordination and case management. However, FCCs were encouraged to reach out frequently and in an appropriately assertive manner rather than stopping after one or two attempts. To support access to services, FCCs were supported in providing transportation, attending appointments or meetings with their families, or providing child care while parents attended services. The expectation was that the care coordinator would help the family seek out and utilize local or natural supports when possible.

Strengthening Families Illinois (SFI) began in 2004 as early childhood primary prevention collaboration convened by the Illinois Department of Children and Family Services (DCFS). The Center for the Study of Social Policy has provided ongoing support and research review of a protective factors framework. "*The Strengthening Families Approach and Protective Factors Framework: Branching Out and Reaching Deeper*" released in 2014 describes the foundational ideas and research for the entire framework. The Protective Factors Survey (PFS) has been utilized as a measure as part of the FCC Project. <https://www.cssp.org/young-children-their-families/strengtheningfamilies/about>. One component of the Strengthening Families model that we have used actively throughout our area is Parent Cafes:

Parent Cafés engage parents in meaningful conversations about what matters most – their family and how to strengthen that family by building protective factors. Our Parent Cafés are focused on building the 5 research based protective factors that

mitigate the negative impacts of trauma. Parent Cafes are an adaptation of the World Café process (an internationally recognized small group conversation technology which was developed for strategic planning and community consensus building). <http://www.beststrongfamilies.net/build-protective-factors/parent-cafes/parent-cafe-model/>

The FCC Project has used Parent Café's as a way to support and engage parents.

B. Description of Activities

Activities provided through the Family Care Coordinator Project include the following:

- Identifying families with children who have complex needs who are at risk of non-engagement in services. This was accomplished by working actively with the pediatric developmental center, Florissa during, reaching out to and developing relationships with pediatricians and family practice providers, schools, early childhood entities, child welfare and mental health providers. Regular meetings, phone calls, and emails were exchange to identify and support families who met the criteria of the project. Program brochures and parent education materials were developed and shared throughout the four county area.
- Refine the program model based on experience with challenging families. FCCP staff was place on site at one pediatric practice on a weekly basis to engage families. FCCPs were in weekly contact with Florissa to identify families who were seeking services that were on the waiting list or experiencing challenges with services engagement. At a different pediatric practice, FCCP staff met weekly with office staff to identify possible referrals. The project model was marketed to Sinnissippi Centers programs who served adults with substance abuse and mental health problems that have children with complex needs. As a result of efforts to engage these families, a large number of referrals were received but very few actual client families were recruited. By focusing on the method of referral, we discovered that "cold handoffs" with only a name and a phone number were not effective; however, "warm handoffs" where the family experienced an actual face to face linkage with the care coordinator resulted in a much higher percentage of families following through with the linkage. Preliminary data reveals approximately 13.6% follow through for "cold" referrals and 100% linkage for "warm" referrals. This altered the protocols for recruiting families into the project.
- A number of screening tools were offered to adults and children who were engaged by the care coordinators. Adults were offered screenings for depression and anxiety, and youth depending on age were offered screenings on developmental and social emotional concerns. Parents were also asked to complete the Protective Factors Survey at early engagement and periodically throughout the course of involvement.
- The care coordinator roles have been recognized throughout the community has having great benefit for families; the project has been incorporated into the area system of care for children's mental healthcare needs, the NWILCCC, and referrals have continued to be made. Additional funding has not been accessed. Sustainability for the FCCP will occur through utilizing them in families with and identified funding sources such as Medicaid.

C. Role of Consortium Partners

The formal consortium consists of three organizations that have worked collaboratively to attract and successfully manage grants at the state and federal level since 2008. Representing health care, mental health and intellectual disabilities, and autism and early intervention, KSB, Sinnissippi, and Kreider have well established working relationships. Each entity has been the lead for grants that complement their primary focus. There has been co-location amount the three organizations which has fostered more integrated care. There are three grants currently being managed by the consortium with input from the network and community as large: HRSA Network Development Grant (ends April 2020), HRSA Outreach Grant (ends April 2018) and ILCHF which (ends December 2018).

Each consortium member is an active participant in the system of care for children in our region. Each consortium member has shown a consistent commitment to improving the quality of life for children in our region and is committed to expanding the system of care for children. Each agency has at least two representatives that serve on a board that oversees consortium projects. The executive committee of the system of care for NWILCCC meets monthly, and a larger system of care meeting for all providers occurs quarterly. There are over 100 members of the larger network, some meet with the larger group, and some meet at their county level. The network includes various child providers from the four counties. These participants include, but are not limited to, local health departments, special education cooperatives, school personnel, child care providers, Child and Family Connections, the local community action agency, Lutheran Social Services of Illinois, University of Illinois Extension Office, and juvenile justice representatives. For those that cannot attend regularly, we have healthy relationships based on collaboration and can reach out to partners to assist with specific projects as they arise. On a regular basis, every 1-2 years, we hold community summits to gather feedback and information on the direction of system-wide goals. Additionally, technology, such as Survey Monkey and Go To Meeting, allows us to reach out and to gather input as issues arise.

Members of the Executive work group include leads of active grants, the network director, the school work group chair, the leaders of the family engagement work group, and other members of the consortium organizations and the wider community. It is an open group, and individuals are invited to attend in order to focus on various projects. Most recently, the director of curriculum development from the Region Office of Education has been attending to collaborate on two recent grant submissions.

Part V: Outcomes

A. Outcomes and Evaluation Findings

The sustained impact of our Outreach Grant is the focus on complex families with multiple needs who are not historically well served by traditional behavioral health office based services. We have continued to champion the importance of outreach services to our local partners including primary care, schools, social services agencies, health departments, probation, EI providers, and the community at large. There are many children and families who for some of the reasons outlined above, don't, won't, or can't link to important resources and services. The ACEs research is clear that the longer children are exposed to violence, trauma, poverty, and chronic family dysfunction, the more profound the impact will be on the entire trajectory of their lives. Child serving organizations in our area are aware and supportive of the value of outreach and non-traditional services to help combat and reduce these factors in future generations.

Each care coordinator has had an ongoing caseload of about 20 families with varying levels of need with whom they work. Some families need multiple visits and contacts per week, transportation to appointments, help with basic life skills, cleaning, budgeting, and parenting. A few families have been involved with the FCCP for a year or longer if there are complex needs for parents, children, and basic survival. Other families are involved for shorter periods of time if they are well linked to the resources best matched with their family needs. Care coordinators collaborate with other agencies and organizations involved with families in order to improve effective and efficient utilization of services.

Although the primary focus of this grant was to improve access to resources and linkage to services for children and their families, the consortium and the larger community network, NWILCCC is committed to supporting the value of home/community based resources and interventions. The network supports activities such as Adult and Youth Mental Health First Aid trainings, family support groups, joint efforts with the faith based community, and improving the skills and depth of resources through the implementation of a PDC, the development of a patient centered pediatric medical home, parent education and training, and the ongoing expansion of school based behavioral health services

B. Recognition

The Family Care Coordinator Project (FCCP) is well known throughout the four county areas. The FCCP has been promoted as a resource consistently at community meetings and to the larger membership of the NWILCCC system of care. Referrals come from multiple sources including primary care, providers, schools, child serving agencies, the faith based community, the Pediatric Developmental Centers, Early Intervention providers, and the programs within Sinnissippi Centers.

Part VI: Challenges & Innovative Solutions

The original proposal as envisioned anticipated a substantial number of referrals from the Pediatric Developmental Center as well as primary care providers. Several factors impacted these expectations. The PDC had a long wait time during the first 12-18 months of the duration of this grant. Although families on the waiting list were offer the support of a care coordinator, families did not respond to the offer. Also during the first 12-18 months of the grant, substantial efforts were made to link with pediatric practices. The two practices identified were very supportive of the concept of the FCCP but we had challenges connecting with identified families. We had a family care coordinator on site four hours a week at one practice, with the intent that prescribers would schedule families during the time that the care coordinator was on-site. This proved to not be helpful in practice. Families had such varying needs for appointment times that the care coordinator's schedule didn't coincide with the times that families were actually at the medical practice. We addressed this challenge by analyzing the data regarding keep rates for three types of referrals: cold referrals where a provide simply sent a referral form to us to make contact and follow up, informed referrals where the referral source informed the family of the referral and placed a call with the family there, or actively encouraged the family to respond to the care coordinator contact, and warm referrals where the care coordinator was introduced face to face to the family. Our data from 2016 indicated that the successful linkage rates for "cold" referrals was 13.6%, for "informed" referrals was 38.9%, and for "warm" handoffs the linkages were 100% successful.

As part of our initial grant proposal we had identified the target population for this project was families with complex needs who were likely to be difficult to engage and successfully link to needed services. We found that the time and effort required to follow up on

referrals was substantial. Grant funding was integral in supporting the time that was required to work on engaging these challenging families.

The consortium submitted a HRSA Network Development grant application which was awarded July 1, 2017 for the implementation of a pediatric patient centered medical home for KSB pediatric practices. The patient pediatric patient centered medical home model includes staff person who will provide care coordination services for the practice.

Part VII: Sustainability

A. Structure

The consortium is bound by MOUs, and consists of the three agencies identified above: KSB, Kreider and Sinnissippi Centers. The consortium agencies act as the fiscal agent for managing grants. When an agency manages a specific grant, it takes responsibility for oversight of the grant budget and staffing needs. Each of the agencies has been the fiscal agent for one or more grants since 2008. The board of directors for the consortium meets quarterly for oversight of the active grants and budgets. There are key areas for the network to work on which have been established through community input. These include 1. Create a collaborative Network structure; 2. Develop sustainable funding; 3. Increase family engagement; 4. Develop shared data base; 5. Efficient use of resources across partners; 6. Optimize advocacy efforts; 7. Enhance stakeholder communication; and 8. Increase education opportunities for stake holders. The executive work group is the oversight group for the various goals, and reports to the consortium board of directors. Prior to the evolution of the WNILCCC three years ago, there were two systems that interfaced but were somewhat separate: The Community That Cares, a system of care for children's mental health largely supported by the Illinois Children's Healthcare Foundation, and the Rural Health Network, initially formed as part of earlier grants. The consortium board of directors suggested formally combining the two groups into one large system of care.

B. On-going Projects and Activities/Services To Be Provided

i) Will all, some or none of the elements of the program be sustainable once Outreach grant funding has ended? Please check the appropriate selection.

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained (i.e. the program will completely end after the grant period)

ii) Identify the projects and activities that will be sustained beyond Outreach grant period.

The two care coordinator positions supported by this grant will be sustained by Sinnissippi Centers, Inc. However, the scope of the program will be limited somewhat due to the lack of grant funds to support the active outreach efforts required to engage some families. The parent coordinator position is being sustained through other grant funding (.2 FTE). The Family Engagement Workgroup, part of the NWILCCC remains very active in working with the community to support opportunities for parent and family support and engagement activities.

C. Sustained Impact

Care coordination services in our area have become an accepted and valued resource for our communities. There is recognition that many families, often those most in need who are not willing or able to participate in the traditional office based model of mental health practice. Consistent with the research that underscores the cumulative impact of Adverse Childhood Experiences (ACEs) and various types of trauma (acute, chronic, complex, cultural, and multigenerational) efforts to locate and engage children and families in need must be innovative, compassionate, and community based. Reaching out to children most in need at the earliest possible opportunity improves the odds that these children will be able to lead healthier and more successful lives.

Part VIII: Implications for Other Communities

Programs seeking to replicate a similar model would benefit from the data we developed regarding the importance of a face to face linkage to families who are reluctant to engage in traditional office based mental health treatment services. While we had large numbers of referrals from providers, the lack of a personal connection with the person they were going to be working with appeared to be a significant barrier to engagement. By definition these were families that may have had a less than satisfactory previous experiences with a mental health provider or other social service agency, who may not agree with recommendations for their child, may have mental health or substance about issues, or may be struggling with many life stressors. A key lesson learned for us was the value of finding a way to meet the family face to face.

A. Defining Success

i) How do you define “success” for your grant program? Please check the appropriate selection(s). You may choose more than one option. If other, please describe.

- Access to a new or expanded health service
- Increased number of people receiving direct services
- Improved quality of health services
- Operational efficiencies or reduced costs
- Integration of process improvement into daily workflow
- Continuation of program activities after grant funding
- Continuation of network or consortium after grant funding
- Health improvement of an individual
- Health improvement among your program participants
- Health improvement among your community
- Enhanced staff capacity, new skills, or education received
- Improved capacity to adapt to changes in healthcare
- Other: increased access to mental health care for children with complex needs

ii) Do you believe that your program has achieved success? If so, how?

Yes, we believe we have achieved success. We have demonstrated the value of using care coordination services to engage children with complex needs who may not otherwise engage in mental health services due to a number of barriers. Data suggests that approximately 1-5 children will develop an emotional, social or behavioral issue before age 18. Data also suggests that many children do not receive a formal intervention for several years after early symptoms appear. We are more aware of the impact of Adverse Childhood Experiences and trauma across the entire life span of individuals. Efforts to bring services early to these vulnerable children and families have the potential to significantly improve future outcomes for these children. Our project was able engage with over 100 families during the course of this grant to help improve their lives. The value of care coordination has been demonstrated to our communities and partners, and the care coordinator positions will be sustained. Family engagement and support activities continue to be sustained through other grants and community support.

B. Organizational Capacity

How has the federal funding of your grant program increased local capacity at your organization, within your network, and/or in your community? Please check the appropriate selection. If other, please describe.

- Formalized networks or coalition
- Developed new partnerships or relationships
- Enhanced skills, education, or training of workforce
- Enhanced data collection and analysis

C. Contributions to Change

Change in individuals’ lives, your organization, consortium, or community:

We have several success stories where both the child and the parent improved dramatically throughout their involvement with the program. Success may include securing safe, clean, and stable housing, improving food security, and receiving behavioral or substance abuse treatment. Some parents have returned to school to pursue careers, and children who were described by the referral sources as out of control and unable to learn, and now highly successful in their learning environments.

- A single mother of 5 children is struggling with managing her substance addition. She has had a hard time keeping appointments and complying with her court mandates. Due to her lack of compliance, she was at risk of going to jail. If she had gone to jail, the children would have gone into care. As a result of the consistent presence of the care coordinator, mom is keeping her treatment appointments and satisfying her court requirements. One of her children has been linked to mental health treatment based on his response to these stressors. Mom is receiving parent support and coaching, and has been able to continue parenting her children. Both mom and the children are seeing mom improve, and there is more stability and predictability for the entire family.

- A 15 year old girl was experiencing gender identity confusion with significant depression and bullying in school. The child and her mother reside in a small town in a very rural area of the county. At first mother didn't understand what her child was struggling with, and reacted with anger and frustration. Over the past two years, the care coordinator was instrumental in linking the youth and his mother to specialized services to help them understand options. Mother has also engaged in mental health treatment for herself. The youth is now living as a male, and beginning hormone treatment with the goal of eventual surgical reassignment. He was not able to remain in schools but has completed his GED. The relationship between the youth and his mother has improved to the point where his mother is supportive of his preferences. The role of the care coordinator was critical in helping this family locate specialized services not readily available in their area. The care coordinator has remained involved with the family to provide periodic support and encouragement.

Change in policies, systems, and environment:

Our grant program has been part of a larger system change process within the larger community. The NWILCCC, of which the consortium is a part, has continued to advocate for improved services for children with emotional social behavioral and developmental needs for the past 10 years. The consortium has successfully managed four HRSA grants which serve to improve and expand services to children and families. Care coordination has become an important part of the service array in our communities for both children and adults. The NWILCC and the community at large are collaborating effectively in expanding resources for families. There is an expanding partnership between schools and behavioral health to place providers onsite in schools. The collaboration among the consortium is mirrored in other parts of the community as we work to take services to where children are located and can more readily access services.

Illinois

Part I: Organizational Information

Grant Number	D04RH28413
Grantee Organization	Stephenson County Health Department
Organization Type	County health department
Address	10 West Linden Street, Freeport, IL 61032
Grantee organization website	http://www.co.stephenson.il.us/health/
Outreach grant project title	The Stephenson and Carroll County Healthy Living Project – Win With Wellness
Project Director	Name: Craig Beintema
	Title: Public Health Administrator
	Phone number: 815-235-8271
	Fax number: 815-599-8443
	Email address: craig.beintema@aeronic.net
Project Period	2015 – 2018
Funding level for each budget period	May 2015 to April 2016: \$199,561
	May 2016 to April 2017: \$198,016
	May 2017 to April 2018: \$199,194

Part II: Consortium Partners

* Indicates consortium partners who have signed a Memorandum of Understanding/Agreement

Partner Organization	Location (town/county/state)	Organizational Type
Stephenson County Health Department*	Freeport/Stephenson County/Illinois	County Health department
Carroll County Health Department*	Mt. Carroll/Carroll County/Illinois	County Health department
Freeport Health Network*	Freeport/Stephenson County/Illinois	Healthcare system
United Way of Northwest Illinois*	Freeport/Stephenson County/Illinois	Community organization
Monroe Clinic*	Freeport /Stephenson County/Illinois	Healthcare system
University of Illinois College of Medicine Rockford*	Rockford/Winnebago County/Illinois	Research University

Part III: Community Characteristics

A. Area

Win With Wellness (WWW) activities target residents 18 years of age or older residing in Stephenson and Carroll Counties, two very rural counties located in the northwest corner of Illinois. Both counties consist of mostly small towns with populations of 2,000 to 4,000 people or less. The economy of both counties is primarily agriculture based. The largest town in the project area is Freeport with a population of about 25,000 and is the county seat for Stephenson County. The population of Mt. Carroll, the county seat of Carroll County was about 1,700 in the 2010 census. The northern border of Stephenson County is adjacent to the Wisconsin border and the western boundary of Carroll County is the Mississippi River. The two county seats are about 45 minutes driving time from each other. Project activities occurred throughout both counties with a focus on towns with community organizations interested in wellness activities.

B. Community description

At the time of the original grant application in 2015, the following description of Stephenson and Carroll Counties reflected conditions impacting the health of the target population. Stephenson County the larger of the two counties has a population of 46,959 and Carroll County has a population of 15,011. A significantly higher proportion of adults are classified as rural as compared to Illinois overall. A higher percent of adults in the both counties are over the age of 65 than the state overall. The

proportion of individuals 65 years and over in Stephenson, and Carroll Counties is rapidly growing and will likely continue to increase in the coming years, similar to the overall aging rate in Illinois. In the case of Stephenson County, in the next five years, this population segment is expected to increase by over 14% while Carroll County's senior population is expected to increase by over 11%. Unusual for a Midwest rural area, Stephenson County is home to a substantial minority population, with 9% African American and 3%, Hispanic. The minority population is concentrated in Freeport, which is 14% black and 4% Hispanic; the corresponding percentages for Carroll County are 1% and 3%. Focus group and key informant discussions conducted for the Illinois Project for Local Assessment of Needs (IPLAN) have confirmed that a substantial portion of the local black population does not routinely access primary care, waiting until health concerns become serious before seeking help. A Stephenson County household survey in 2009 found that 28% of minority respondents were unable to receive needed medical care, and 53% were unable to get needed dental care in the past 5 years. Stephenson County residents have a lower educational level, 79% graduate from high school, 60.5% have some college, as compared to Illinois overall, 84% high school graduation rate, and 66.4% have some college. Stephenson and Carroll Counties have a substantially lower median income, roughly \$42,500, than Illinois overall, \$55,126. 15% of Stephenson and Carroll County residents live in poverty, which is slightly higher than the state's rate of 14%. The unemployment rate was also slightly higher in Stephenson County, (9.4%) than in Carroll County and Illinois overall, 8.9%.

C. Need

Based on data from 2015, Residents of both Stephenson and Carroll Counties show higher rates of diabetes, heart disease, and current smoking compared to Illinois overall. The percentage of residents with diabetes (12% in Stephenson County, 11% in Carroll County) is somewhat higher than the state's 9%. The premature age-adjusted mortality rate per 100,000 persons is markedly higher in both counties (359 in Stephenson County, 387 in Carroll County) than the state's 338. Potential years of life lost per 100,000 individuals is also markedly higher in these two counties (7,325 in Stephenson County, 8,295 in Carroll County) than in the State of Illinois, 6,604. The percent of current smokers is also higher in both project counties (29% in Stephenson County, 20% in Carroll County) compared to 16% in Illinois.

The percent of residents who are overweight or obese is also higher in both counties than the State overall. Over two-thirds (69%) of Carroll County adults and 66% of Stephenson County adults were obese or overweight. Adult obesity is 31% and 25% in Carroll and Stephenson Counties respectively; however, of greater concern is the high rate of overweight (38% and 41% in Carroll and Stephenson Counties respectively). Overweight adults are at high risk of being obese in the future, subsequently increasing the risk for CVD and other chronic diseases. Additionally, many residents in these counties have reported limited access to physical activity and healthy foods.

Based on the needs outlined above and the limited number and scope of wellness programs that serve Stephenson and Carroll Counties, the consortium partners sought to create and implement a wellness program, WWW, which targeted residents of Stephenson and Carroll Counties.

Part IV: Program Services

A. Evidence-based and/or promising practice model(s)

WWW incorporated two evidence-based interventions using the socio-ecological framework that addresses behavior change to support healthy lifestyles; TOPS (Taking Off Pounds Sensibly) and Heart-to-Heart (HH).

Taking Off Pounds Sensibly® (TOPS Club, Inc.) TOPS is a non-profit, 501(c)3, weight-loss organization serving adult men and women and children age 7 and older across the US and Canada. TOPS involves creating self-sustaining weight-loss support groups within a framework of weekly meetings and weigh-ins. Using this evidence-based model, TOPS members collectively lose over 400 tons per year. TOPS often attracts participants who cannot afford other structured commercial weight-loss programs, which charge 5 to 60 times the annual TOPS membership fee (\$32) and chapter dues (\$7 monthly). TOPS gains credibility and trust through its effectiveness, and it empowers members through peer-to-peer support facilitated by trained lay leaders who understand weight loss struggles. Participants receive sensible, accurate, realistic information about food, physical activity and emotional wellness to improve health status, and support from group leaders who know what is required to successfully lose and keep off weight. TOPS has developed a successful model for creating healthy lifestyle changes that result in sustainable weight loss and improved quality of life in members.

TOPS was chosen as an intervention strategy because the program has demonstrated effectiveness in behavior modification and weight loss with over 5% weight loss over one year, and maintenance of that weight loss among those who remained in the

program for at least one year. The program is consistent with the Institute of Medicine's definition of successful long-term weight loss and TOPS can therefore be considered an effective weight loss program. In addition, compared to other weight loss programs, TOPS has a low implementation cost. Because TOPS is a non-profit organization and annual membership costs are relatively low, it is a feasible and sustainable option for weight reduction in lower income and vulnerable populations.

Heart-to-Heart (HH) HH is a health promotion curriculum that focuses on self-efficacy and skill building for physical activity and healthy eating through interactive, 15-30-minute presentations delivered by a health educator. These brief presentations were conducted at local libraries, church groups, health events and at places of business. HH was designed in modules to allow peer educators to conduct sessions one-on-one or in groups in 15 minute sessions. Eight modules were originally developed, four focusing on physical activity and four on nutrition, with interactive worksheets to support each module. Our choice of this intervention was based on previous experience implementing HH in rural communities in Southern Illinois.

Description of Activities

Pre-Intervention Assessment Activities:

Within the first 6 months of the grant (by November, 2015), focus groups and key stakeholder interviews were conducted to obtain perspectives of community members and stakeholders on health, wellness, chronic disease, obesity and the relationship with lifestyle behaviors. Six focus groups were conducted with (four in Stephenson County, two in Carroll; one group was conducted in Spanish) with a total of 44 adults across age groups, race categories and income levels. Fifteen stakeholder interviews were conducted with individuals representing community agencies, healthcare providers, churches and other organizations in both counties. After analyzing the interviews and focus groups, the findings were used to develop the media plan and content for the media messages. Findings were also used to tailor aspects of the interventions to meet the needs of the target population.

TOPS: Between November 2015 and November 2017, WWW started 27 TOPS groups with 352 participants. Currently, 17 groups are active (10 worksites, 7 community) with 179 active participants. At monthly partner meetings, we discuss recruiting efforts to attract new organizations to start TOPS groups as well as retention efforts to retain our existing groups and participants. TOPS participants who have continued in the program for one year have achieved a mean weight loss of 11.9 pounds (Standard Deviation (SD)=16.2)

Heart-to-Heart (HH): In the first year of the grant, the HH curriculum was updated to reflect unique aspects of Stephenson and Carroll County and the 2015 US Dietary Guidelines. Between January 2016 and March 2018, 42 HH sessions were conducted, with 364 participants (84.6% female, 15.4% male). The majority of HH participants (70%) reported planning to make one or more changes in physical activity and 83% of respondents reported planning to make one or more changes in eating habits as a result of attending the HH session.

Media Campaign: The project was branded in the community as "Win With Wellness" with a logo that appears on all our materials. Implementation of the media plan began in June 2016. In summary, we used the following strategies:

- Radio Ads and interviews: A total of 400 radio spots/month for 3 months were run. Additionally, nine radio interviews were conducted over the same three-month period.
- Billboards: Six billboards (2 in Carroll County and 4 in Stephenson County).
- Print ads: 20 full-page ads and 13 full-page ads were placed in two local newspapers respectively, and appeared any day of the week.
- Social media: The WWW Facebook page went live June 2016. Posts occur two to three times a week and include wellness information, program events, and TOPS members' achievements. The page had 269 likes as of March 2018.
- Direct mail: WWW ads are included in newsletters and e-mail campaigns. Program information about WWW was included twice in FHN's INSIGHT magazine (circulation of 68,000 US Postal Services addresses) and once in Freeport Health Network (FHN) FHNews (circulation of 1,700 US Postal Service addresses). An e-mail campaign was distributed to 35,000 e-mail addresses consisting of one e-mail once a month for three months.
- Brochures: To date, 1,287 WWW brochures have been disseminated to health clinics, libraries, and community events such as county fairs.

Food Demonstrations: Five food demonstrations were conducted in November – December 2017. 86 people attended at least one of the food demonstrations. An additional five are planned for Year 3 of the grant, scheduled for March and April 2018.

Partner Meetings: Attendance at partner meetings has been near perfect. There is a representative from each partner organization at every meeting. In Year 1, 10 partner meetings were held, in Year 2, 7 partner meetings were held and, to-date in Year 3, 9 partner meetings have been held. When partner representatives could not attend in person they joined by conference call. Between the monthly meetings partners were kept informed about developments using e-mail and if necessary additional conference calls.

Dissemination: Information about the program has been shared in a variety of ways including word-of-mouth, ads in local news outlets, social media, radio interviews, community presentations and national conferences.

B. Role of Consortium Partners

- **Stephenson County Health Department**
 - Lead agency on the project
 - Planning, fiscal management, program management and implementation
 - Chair of the leadership team
 - Initiates and develops collaborations in the target counties to start TOPS chapters and conduct community presentations (H2H)
 - Hosts a worksite TOPS chapter
 - Assists with data collection
- **Carroll County Health Department**
 - Initiates and develops collaborations in the target counties to start TOPS chapters and conduct community presentations (H2H)
 - Facilitates TOPS chapters in Carroll County
 - Assists with data collection
- **Freeport Health Network (FHN)**
 - Member of leadership team
 - Facilitates recruitment of participants for TOPS
 - Hosts a worksite TOPS chapter
 - Develops collaborations in the target counties to start TOPS chapters and conduct community presentations (H2H)
 - Through M45 (local public relations firm), takes the lead in developing the media campaign
 - Assists with data collection
- **University of Illinois College of Medicine Rockford**
 - Co-chair of the leadership team
 - Assist with program implementation
 - Lead evaluator
 - Data collection, analysis and reporting
 - Dissemination to the community and other scientific venues

Part V: Outcomes

A. Outcomes and Evaluation Findings Below is a description of our formative evaluation findings, evaluation findings for our WWW programs, and our assessment of the WWW partnership.

Formative Evaluation Findings: Prior to intervention implementation, we engaged community members through focus groups (n=6) and key stakeholder interviews (n=15) to obtain perspectives on health needs, challenges and barriers to healthy living, and community assets and strengths. Through the interviews and focus groups, we learned that community residents face both internal barriers to engaging in healthy dietary and physical activity behaviors, such as motivation and time, as well as external barriers including cost, travel and transportation, lack of available resources, and a sedentary culture. Participants specified numerous opportunities for increasing health-related knowledge and skills, as well as community resources that may be leveraged to support healthy lifestyles. Results were used to inform intervention programming and the WWW mass media campaign, and inspired the creation of the WWW Facebook page.

TOPS: We assessed TOPS participants eating and physical activity behaviors, as well as weight and BMI from baseline to one-year follow-up. Among participants enrolled in WWW's TOPS program, we currently have 1-year follow-up data for 60 participants. While we did not observe changes in eating or physical activity behaviors from baseline to one-year, we did observe statistically significant changes in weight and BMI (Table 1). Notably, these reductions remained highly significant even after omitting an extreme outlier who lost 86 lbs.

Table 1. TOPS participant changes in behavior, weight, and BMI from baseline to one-year (n=60)

	n	Time 1		Time 2		Difference		p-value
		Mean	SD	Mean	SD	Mean	SD	
Weight	59	214.5	48.2	202.6	46.6	11.9	16.2	<.0001
Weight (excluding outlier)	58	213.3	47.6	202.6	47.0	10.7	13.0	<.0001
BMI	58	34.7	7.3	32.8	7.3	2.0	2.4	<.0001
BMI (excluding outlier)	57	34.7	7.3	32.9	7.3	1.8	2.0	<.0001
Vegetable cups	49	1.6	1.4	1.4	1.0	-0.2	1.4	0.23
Fruit cups	55	0.8	0.7	0.8	0.7	0.0	0.6	0.92
		n	%	n	%			
Meets recommended moderate PA	45	30	66.7	30	66.7			1.0

Heart-to-Heart: Between January 2016 and March 2018, 42 HH sessions have been conducted, with 364 participants (84.6% female, 15.4% male). In post-session surveys conducted with HH participants (n=226), they were asked if they intended to make changes in their physical activity or eating habits as a result of attending the HH session (Table 2).

Table 2. Post Heart-to-Heart intention to change behavior (n=226)

HH Exposure	n	Intend to make physical activity changes		Intend to make changes to eating habits	
		n	%	n	%
Healthy eating topic(s) only	153	98	64.1	130	85.0
Physical activity topic(s) only	24	20	83.3	16	66.7
General topic (overcoming plateaus)	18	12	66.7	14	77.8
Both healthy eating and physical activity topics	31	27	87.1	25	80.6
All HH participants	226	157	69.5	185	81.9

Media Campaign: The WWW media campaign began in June 2016, and included: radio ads (n=400) and interviews (n=9) over three months; six billboards (2 in Carroll County and 4 in Stephenson County); 20 full-page and 13 half-page print ads placed in two local newspapers; creation and implementation of the WWW Facebook page, which posts two to three times per week that include wellness information, WWW event announcements, TOPS members' achievements; direct mail and email, including ads in FHN's INSIGHT magazine (circulation: 68,000 USPS addresses) and FHN News (circulation: 1,700 USPS addresses) and an e-mail campaign to 35,000 e-mail addresses consisting of one e-mail per month for three months; WWW brochures distributed in community locations such as clinics and libraries, and at community events such as county fairs; and a WWW web page on the FHN website (available at: <http://www.fhn.org/win-with-wellness.asp>).

Food Demonstrations: WWW implemented five food demonstrations in November-December 2017, and served 86 community members. Satisfaction surveys were implemented with participants (n=84), who rated the sessions across multiple areas. Among survey respondents, 94.0% found the food demonstration somewhat or very useful; 89.2% indicated they were likely or extremely likely to use the recipes shared; 88.0% were interested in participating in other food demonstrations; and 77.4% of respondents indicated they planned at least one behavior change after attending the food demonstration, such as reducing their sodium intake, eating healthier by making different food choices, and planning meals ahead of time.

WWW Partnership Evaluation: In 2017, we assessed our collaborative functioning using the Wilder Collaboration Factors Inventory. Surveys were sent to all members of the WWW collaborative (n=13). Scores suggested strengths across all factor groups (environment, membership characteristics, process and structure, communication, purpose, and resources.) Only two of the 20 factors were evaluated as "Borderline" (i.e., appropriate cross section of members; sufficient funds, staff, materials, and time). We also surveyed our community partners (e.g., partner organizations and TOPS leaders) to understand their perspectives related to partnering with WWW (n=14 responses). Among respondents, 84.6% agreed or strongly agreed they had a

“relationship of mutual trust,” 80.0% planned to continue their relationship with WWW, 83.3% indicated that the relationship met their needs and expectations, 92.3% reported feeling comfortable contacting WWW staff, 90.9% reported that WWW staff respected their opinions and recommendations, 81.8% reported WWW staff provide timely and accurate responses to requests, 83.3% reported being satisfied with their relationship to WWW, and 90.9% would recommend partnering with WWW.

B. Recognition

WWW has received recognition and acknowledgement locally as well as nationally through radio interviews, community presentations and national conferences. Dr. Manorama Khare and Dr. Martin MacDowell were interviewed by Rural Health Leadership Radio which aired on January 3, 2017. The complete interview can be found here: <http://rhlradio.libsyn.com/024-a-conversation-with-drs-khare-and-macdowell>

The Win With Wellness model is featured on Rural Health Information Hub's web site as a Rural Health Models & Innovations. The site also includes the HRSA interview with Dr. Khare: <https://www.ruralhealthinfo.org/project-examples/946>

Presentations

Khare M, Afayee S and Campos R. Findings from chronic disease and obesity prevention programs. Will be presented at the annual conference of the National Rural Health Association, New Orleans, LA 2018.

Khare M, Zimmermann K, Wang Q and MacDowell M. Focus groups and stakeholder interviews informing rural health programs. Presented at the annual conference of the National Rural Health Association, Minneapolis, MN 2016.

Zimmermann K, Wang Q, Khare M, Weidenbacher-Hoper V and MacDowell M. Informing Rural Healthy Lifestyle Programs: Planning for a collaborative, community-based intervention targeting rural adults. Presented at the annual conference of the American Public Health Association, Denver, CO, October 2016.

Zimmermann K, Khare M, Beintema C, Weidenbacher-Hoper V and MacDowell M. Win With Wellness: A collaborative strategy to reduce chronic disease risk in rural adults through community-based weight loss groups. Presented at the annual conference of the American Public Health Association, Denver, CO, October 2016.

Radio Interviews

Eleven radio interviews were conducted by Big Radio located in Freeport, Illinois. All interviews can be accessed through Freeport Health Network's web site at: <http://www.fhn.org/win-with-wellness.asp>

Part VI: Challenges & Innovative Solutions

Challenge 1: Personal barriers to healthy behavior change

In our WWW focus groups, we found there was a general awareness of the role of physical activity and eating patterns as a factor for obesity and chronic disease; however, adults in the target area lacked the knowledge and skills to make healthy behavior change and they lacked access to resources and facilities to support this change. Current project participants have expressed the need for information about practical strategies to increase physical activity and improve eating behaviors.

Solution: In response to this need, WWW wrote a new HRSA grant application, Enhanced Win With Wellness (E-WWW), for that incorporates a menu of interventions to address CVD risk factors including referrals for individuals with high blood pressure, referrals for smokers (Tobacco Quitline), physical activity (PA) monitors (Fitbit) to motivate participants to increase PA, TOPS and HHW interventions, and food demonstrations using the Cooking Matters curriculum.

Challenge 2: Structural barriers to participation in wellness initiatives

The rural geography, lack of or distance to physical activity facilities and resources, lack of availability of healthy food options, and lack of transportation pose significant barriers to accessing healthcare and engaging in wellness initiatives in Carroll County and much of Stephenson County, especially for low income residents. Currently, efforts are underway to expand the Freeport public transportation system to all of Stephenson County. However, the system is considered inconvenient, as all rides must be arranged in advance, and for low-income residents, it would likely be viewed as expensive.

Solution: E-WWW (the 2018 Outreach HRSA proposal) will conduct programs where residents in these 2 counties live, work, play and pray, to make programming as accessible and convenient as possible. WWW health educators have provided rides to participants or

suggested carpooling to TOPS sessions. The United Way of Northwest Illinois has also provided bus fares for participants who needed it, although this is only possible in the town of Freeport (Stephenson County). To broadly address the lack of access to health resources and facilities, we have incorporated a community/policy component to assess the physical activity and nutrition environments with the goal of planning and implementing environmental improvements.

Challenge 3: Retention of TOPS Participants for 3 years of the project

Residents of rural communities face multiple barriers to health intervention participation that make continued, long-term enrollment challenging, such as long travel distances and lack of time. In WWW, TOPS was effective for weight loss among those who stayed in the program (mean weight loss at 1 year=11.9 ± 16.2 lbs., p<.0001), but some participants faced barriers to staying in TOPS. Of the 352 participants recruited, 96 (27.3%) dropped out of the program. An additional 77 (21.9%) stayed in the program but did not renew at one year. In a survey of those who dropped out of our TOPS program, respondents reported withdrawing because the group stopped meeting (44.8%), lack of time due to work (31.0%), lack of time due to family or other reasons (13.8%), no longer interested (13.8%), and the meetings did not help (13.8%). The outcomes section includes results on the 1-year follow-up of participants. Participants described the time commitment as a primary reason for dropping out.

Solution: E-WWW builds on our successes with TOPS by providing ongoing support to existing groups, and to new groups that will be formed in community and worksite settings. E-WWW health educators will maintain regular contact to provide technical assistance, and support, motivate and empower groups to engage in healthy behaviors. In E-WWW, we will emphasize positive health outcomes as well as understanding best practices for retaining TOPS groups and individuals in those groups. Additionally, TOPS groups will be enhanced through Health Assessments with Feedback (AHRF) using the Centers for Disease Control and Prevention (CDC) Heart Age calculator, physical activity monitors, and health education opportunities. To address TOPS participation barriers, we will also implement and assess the effectiveness of alternative mechanisms for health promotion offered through worksites. The worksite component is structured around AHRF, and is intended to engage participants in cardiovascular wellness through a series of tailored strategies framed around the social ecological model. Overall, E-WWW will inform best practices for the longitudinal study of rural adults at risk for Cardiovascular Disease (CVD). Additionally, E-WWW will allow us to test interventions of varying intensities in reducing CVD risk.

Challenge 4: Sustaining WWW in the region

A final challenge is sustaining WWW beyond the life cycle of the grant and maintaining access to wellness initiatives for Stephenson and Carroll county residents.

Solution: The WWW consortium worked on sustainability planning from the start of the project, with a focus on leveraging networks and resources to sustain community-level wellness programming after grant funding ends. Our two health system partners have responded to our success by providing nutrition staff to conduct community food demonstrations. In preparation for E-WWW, we have informally approached local funders (FHN Foundation, Monroe Clinic Foundation, United Way of Northern Illinois, Community Foundation of Freeport) and received positive feedback about their support for components of WWW.

Part VII: Sustainability

A. Structure

The original WWW partnership organizations have a history of working together on various rural health issues in various capacities. Thus, the partners believe the group will continue to work well together on new wellness initiatives. Over the course of three years, the WWW partnership has expanded to include other key organizations and has become a vibrant, active partnership that strives to serve the community through innovative, collaborative and community-based programming. Each partner brings different strengths to the overall project. The following partners will continue to participate in the WWW consortium: Stephenson County Health Department, Carroll County Health Department, Freeport Health Network (FHN), United Way of Northwest Illinois, Monroe Clinic and the University Of Illinois College Of Medicine Rockford. Two additional partners that will be added to the WWW consortium include the Freeport School District and OSF Saint Anthony College of Nursing.

Craig Beintema, PI and public health administrator of the SCHD, has the trust of the community and understands the community's needs. Holly Calcaterra, WWW Program Manager and the team of WWW health educators are the "boots on the ground." As the WWW Co-Principal Investigator, Dr. Manorama Khare, research assistant professor at UICOMR, is an expert in community-based interventions and evaluation. Dr. Khare leads the evaluation team to facilitate WWW's engagement in a systematic research

process. Each partner's involvement is respected and valued. No unilateral decisions are made. This has resulted in a dynamic partnership that is able to move forward with new and innovative programming based on community input and evaluation results.

B. On-going Projects and Activities/Services To Be Provided

i) Will all, some or none of the elements of the program be sustainable once Outreach grant funding has ended? Please check the appropriate selection.

- All elements of the program will be sustained
- Some parts of the program will be sustained
- None of the elements of the program will be sustained (i.e. the program will completely end after the grant period)

ii) Identify the projects and activities that will be sustained beyond Outreach grant period.
The WWW partnership met to discuss the outreach activities that should be continued. We established criteria to make decisions about the continuation of each WWW grant activity, TOPS, H2H and Food Demonstrations, and a rating scale:

Criteria for prioritizing listed in order of Importance:

1. Community awareness and support
2. Available resources to implement
3. Positive impact on community as evidenced by CHNA & community participation
4. Positive impact on individuals as evidenced by cost of care and quality of life (QOL)
5. Replicability across community sectors

Rating scale to rank each activity against the established criteria outlined above:

- 1 = Definitely does not meet the criterion
- 2 = Probably does not meet the criterion
- 3 = Probably meets the criterion
- 4 = Definitely meets the criterion

Each member of the partnership received a form to rate WWW activities **based** on the established criteria. The table below presents the mean scores for each activity based on the criteria. The highest score was for TOPS with Heart-to-Heart and Food demonstrations not far behind. The criteria set for the selection provide justification for why WWW should continue these activities. There is commitment from all partners to contribute what they can to continue these outreach activities.

Community Awareness and Support	4	3	3
Available Resources to Implement	3	3	3
Positive Impact on Community as Evidenced by CHNA & Community Participation	4	3	3
Positive Impact on Individuals as Evidenced by Cost of Care and QCL	4	3	3
Replicability across Community Sectors	3	4	3
TOTAL	18	16	16

Each partner member completed this form and presented in the table above are the mean scores for each activity based on the criteria. Overall, the highest score was for TOPS with Heart-to-Heart and Food demonstrations not far behind. The criteria set for the selection provide justification for why these activities need to continue. There is commitment from all partners to contribute in any way they can to continue these outreach activities.

C. Sustained Impact

Partnership: The original WWW partnership organizations have a history of working together on various rural health issues in various capacities. Over the course of three years, the WWW partnership has expanded to include other key organizations and has become a vibrant, active partnership that strives to serve the community through innovative, collaborative and community-based programming. Each partner brings different strengths to the overall project and each partner's involvement is respected and valued. This has resulted in a dynamic partnership that is able to move forward with new and innovative programming based on

community input and evaluation results. The partnership under the banner of WWW is exploring several funding options with the United Way of Northwest Illinois, the FHN foundation, the Monroe Foundation and the Aetna Foundation to continue health promotion work in these communities.

Recruitment and Retention: Another sustained impact is the ability to recruit and retain participants in our programs. Residents of rural communities face multiple barriers to health intervention participation that make continued, long-term enrollment challenging, such as long travel distances and lack of time. The fact that TOPS groups were initiated in places where residents live, work, play and pray makes programming as accessible and convenient as possible and allows for programs to be sustained in the long-term. Additionally, ongoing support and encouragement is provided to existing TOPS groups and individuals in those groups through quarterly celebration events and regular posts on social media. To address TOPS participation barriers, the WWW partnership continually assesses the effectiveness of alternative mechanisms for health promotion, such as through worksites.

Multi-level Interventions using the Socio-Ecological model: WWW uses an ecological framework to support multiple evidence-based interventions and promising practices focused on reducing obesity. The approach was to employ health promotion strategies that address health at multiple levels, including individual, interpersonal, organizational, community, and public policy. Using this theoretical model as the basis, we offered multiple programs (described above) that reached individuals and communities in different ways.

Part VIII: Implications for Other Communities

The model of community engaged program planning and implementation has been proven to be very successful in promoting health and wellness in the rural communities we work with. An innovative technique we used is social media as a way to promote health and wellness and create a virtual community. This model can be tailored and translated to other rural communities. The key is to go engage with communities by obtaining their perspectives - asking them what they want and need - then work with the communities to address these wants and needs.

Identifying key stakeholders (both individuals and organizations) with credibility in the communities can provide community buy-in for the project. Conducting key stakeholder interviews and focus groups with various segments of the target population (by age, gender, race/ethnicity, community sectors etc.) provides rich data from a broad representation of the community. This information can be used to tailor programming to address the needs while taking into account the assets and constraints of the community. It allows programs to meet people where they are – i.e., where they live, work, play and pray.

Part IX: Success, Increased Capacity, and Contributions to Change

A. Defining Success

- i) How do you define “success” for your grant program? Please check the appropriate selection(s). You may choose more than one option. If other, please describe.
- Access to a new or expanded health service
 - Increased number of people receiving direct services
 - Improved quality of health services
 - Operational efficiencies or reduced costs
 - Integration of process improvement into daily workflow
 - Continuation of program activities after grant funding
 - Continuation of network or consortium after grant funding
 - Health improvement of an individual
 - Health improvement among your program participants
 - Health improvement among your community
 - Enhanced staff capacity, new skills, or education received
 - Improved capacity to adapt to changes in healthcare
- ii) Do you believe that your program has achieved success? If so, how?

Prior to WWW, 6 TOPS groups existed in Stephenson and Carroll Counties. TOPS groups can be established by anyone interested in starting a group. Because of the WWW model of providing infrastructure, organization, support and evaluation an additional 27 TOPS groups with 352 participants were started in these two counties over the 3-year period of the grant. That is a 5.5 time increase in the number of TOPS group serving these rural communities. Seventeen of these groups sustained for the full three years. Among participants enrolled in WWW's TOPS program for a year, statistically significant changes in weight and BMI were observed (Table 1).

The WWW partnership is strong and continues to engage in new wellness initiatives by seeking feedback from the community as to the type and kinds of programming they want. The food demonstrations were a direct result of community input. The number of attendees, 86, indicates strong support for this program and additional demonstrations were added. Additionally, the partnership has sought out additional funding through local and national foundations as well as federal grant opportunities.

B. Organizational Capacity

How has the federal funding of your grant program increased local capacity at your organization, within your network, and/or in your community? Please check the appropriate selection. If other, please describe.

- Formalized networks or coalition
- Developed new partnerships or relationships
- Enhanced skills, education, or training of workforce
- Enhanced data collection and analysis

C. Contributions to Change

Testimonials from TOPS Participants

- John Smith (not his real name) was not able to even climb 13 stairs for the first meeting without stopping twice. He can now do them in one go! He has lost over 60 pounds, joined the gym and is walking one mile on the treadmill, although knowing him, he will be up to 2 miles soon.
- Joe Smith (not his real name) is a diabetic who was in poor health at our first meeting. He has lost 25 pounds and has also joined the gym. His A1C levels were 9 to 10 and now stand at 6.7, which is normal! The doctors have reduced his blood pressure and other medications.
- Jane Smith (not her real name) is now completely off her blood pressure medication and has lost 30 pounds, half of her goal. With TOPS' support, motivation, education and accountability she is learning a healthier life style to make a lifelong commitment to healthy eating.
- Sue Smith (not her real name) was diagnosed with diabetes as a result of discussions and an education program during one of the TOPS groups. She has lost 15 pounds and changed her dietary habits.

Potential for funding from United Way: The United Way of Northwest Illinois requested a presentation about the WWW efforts to their board. As a result of this presentation we were approached to submit an application for potential funding for future WWW wellness efforts. The application is due April 15, 2018 and the WWW team is working on submitting it.

WWW partner Freeport Health Network (FHN) and Freeport School District offer employee wellness programs. Both organizations are working towards adding TOPS group to their employee wellness program. At the Freeport Township rental and utility assistance program has required citizens who receive assistance to participate in a TOPS group at their location. Programming encourages healthy lifestyles of eating, exercise and better choices.

Illinois

Part I: Organizational Information

Grant Number	D04RH28417
Grantee Organization	Transitions of Western Illinois
Organization Type	Community Mental Health Center
Address	4409 Maine Street, Quincy, IL 62301
Grantee organization website	www.twi.org
Outreach grant project title	Adams County Health Outreach Program
Project Director	Name: Mark Schmitz
	Title: Executive Director
	Phone number: 217-223-0413
	Fax number: 217-223-0461
	Email address: mschmitz@twi.org
Project Period	2015 – 2018
Funding level for each budget period	May 2015 to April 2016: \$200,000
	May 2016 to April 2017: \$200,000
	May 2017 to April 2018: \$200,000

Part II: Consortium Partners

* Indicates consortium partners who have signed a Memorandum of Understanding/Agreement

Partner Organization	Location (town/county/state)	Organizational Type
Adams County Health Department	Quincy / Adams / Illinois	Public Health Department
Blessing Hospital	Quincy / Adams / Illinois	Hospital and Primary Care Clinic
Quincy Medical Group	Quincy / Adams / Illinois	Rural Health Clinic
Transitions of Western Illinois	Quincy / Adams / Illinois	Community Mental Health Center
United Way	Quincy / Adams / Illinois	Social Service Organization

Part III: Community Characteristics

A. Area

Adams County, Illinois

B. Community description

Adams County is located in the western-most point of Illinois along the Mississippi River, just south of the intersection of Southeast Iowa, Northeast Missouri and Western Illinois. Quincy is the largest city in a 100-mile radius and is the hub of a tri-state area. The county ranks 80th out of 102 counties in terms of adoption of health behaviors according to County Based Rankings and Roadmaps. This low ranking is the result of high rates of adult smoking, adult obesity, and low levels of physical activity as well as significantly higher rates of preventable hospital stays compared to the entire state of Illinois. These vulnerabilities present significant challenges for clinical health care teams in their efforts to help engage individuals in making needed behavioral changes likely to result in disease prevention and better illness self management.

C. Need

The target population for the proposed project were residents of Adams County who were either: 1) in need of community-based support to address barriers to accessing or appropriate use of medical services; or who were 2) individuals with a severe mental illness in need of assistance with prevention of or management of a chronic health condition.

The first group identified by the health care members of the consortium included individuals who presented with complexity making it unlikely that the care coordination efforts available at their medical site would be effective in helping them make progress on their healthcare goals. This complexity could include but was not limited to co-morbid health conditions, lack of family support, low socioeconomic status, or poor health literacy skills.

The second target group included individuals who had a severe mental illness. Individuals with serious mental illness (SMI) on average die 25 years younger than the general population, largely due to preventable health conditions (National Association of State Mental Health Program Directors, 2006). While suicide and injury account for about 30-40% of excess mortality, 60% of premature deaths in persons with schizophrenia are due to medical conditions such as cardiovascular, pulmonary and infectious diseases. People with serious mental illness also suffer from a high prevalence of modifiable risk factors, in particular obesity and tobacco use. Compounding this problem, people with serious mental illness have poorer access to established monitoring and treatment guidelines for physical health conditions.

According to County Health Rankings and Roadmaps, Adams County Ranks 80th out of 102 counties in Illinois in terms of adoption of Health Behaviors. This low ranking is the result of high rates of adult smoking, adult obesity and physical activity compared to the entire State of Illinois.

Adams County also ranks 71st out of 102 Illinois Counties in terms of preventable hospital stays. According to the County Rankings and Roadmaps data, Adams County's rate of preventable hospitalizations was 91 per 1000 Medicare enrollees compared to a rate of 73 statewide. Ambulatory care-sensitive conditions include: convulsions, chronic obstructive pulmonary disease, bacterial pneumonia, asthma, congestive heart failure, hypertension, angina, cellulitis, diabetes, gastroenteritis, kidney/urinary infection, and dehydration.

In terms of chronic health conditions, according to the Adams County Community Health Assessment and Health Plan, the coronary heart disease mortality rates (per 100,000) for Adams County were higher than Illinois both in respect to crude numbers (rate of 230 as opposed to 149) and premature deaths (45.6 as opposed to 34.2). Similarly, the mortality rates for cerebrovascular disease were higher for the county (62.7) than the state (46.6); there were insufficient data to assess the premature mortality rate. Lung cancer mortality rates were higher in the county than the state both in respect to crude totals (71.7 as opposed to 51.9) and premature mortality (27.4 as opposed to 17.2). Finally, in respect to colorectal cancer mortality rates, the county rate per 100,000 was higher (31.4) than the state (19.5) with insufficient numbers to calculate premature mortality rates for this disease.

The mortality rate (per 100,000) in Adams County is nearly twice that of the state of Illinois, 1206.7 as compared to 795.8. However, when the ten leading causes of mortality are compared, the order and percentage vary little. The top three causes in Adams County were diseases of heart (26%), malignant neoplasms (22%), and coronary heart disease (19%). The order and percentage were the same for Illinois except for malignant neoplasms which accounted for a greater percentage of mortality (24%). Other differences were slight: nephritis and septicemia each showed up on the Adams County list (both at 3%), and accidents (4%) and colorectal cancer (2%) were on the Illinois list.

Part IV: Program Services

A. Evidence-based and/or promising practice model(s)

This project utilized the following evidence-based or promising practice models:

- Community Health Workers (CHW) to address chronic disease management;
- Wellness Recovery Action Planning (WRAP) to promote self-advocacy and better health; and
- Care Management based on the SAMHSA Case Management to Care Management model of utilizing mental health case managers to help individuals with mental illness manage or prevent chronic health conditions.

Community Health Workers (CHW): CHW programs are designed to improve access to care, increase knowledge, prevent disease, and improve selected health outcomes for populations. CHW programs are carefully tailored to meet the unique needs of the community. CHWs can serve as a lay health worker, a member of the care delivery team, a care coordinator or manager, health educator, outreach and enrollment agent, and a community organizer or capacity builder. This project blended aspects of the Care coordinator/Manager and Health Educator Models. As a care coordinator or care manager, CHWs helped individuals with complex health conditions to navigate the health care system. They were the liaison between the target population and a variety of health, human, and social services organizations. They also supported individuals by providing information on health and community resources, coordinating transportation, and assisted in making appointments and delivering appointment reminders. Additionally, CHWs may work with patients to develop a care management plan and use other tools to track their progress over

time (e.g., food and exercise logs). In the health model, CHWs deliver health education to the target population related to disease prevention, screenings, and healthy behaviors.

Wellness Recovery Action Planning (WRAP): WRAP is a manualized group intervention for adults with mental illness. WRAP guides participants through the process of identifying and understanding their personal wellness resources ("wellness tools") and then helps them develop an individualized plan to use these resources on a daily basis to manage their mental illness. WRAP has the following goals: 1) Teach participants how to implement the key concepts of recovery (hope, personal responsibility, education, self-advocacy, and support) in their day-to-day lives 2) Help participants organize a list of their wellness tools--activities they can use to help themselves feel better when they are experiencing mental health difficulties and to prevent these difficulties from arising 3) Assist each participant in creating an advance directive that guides the involvement of family members or supporters when he or she can no longer take appropriate actions on his or her own behalf 4) Help each participant develop an individualized post crisis plan for use as the mental health difficulty subsides to promote a return to wellness.

SAMHSA Case Management to Care Management is a practice model supported by the SAMHSA-HRSA Center for Integrated Health Solutions. The training model expands the traditional case manager role from helping consumers with serious mental illness establish a life in recovery to a broader role of assisting them to learn to manage chronic physical illness.

B. Description of Activities

The primary activity conducted through the program was the delivery of health outreach services. During the course of the project, 620 unique individuals received community health worker services, which included 254 people identified by their primary care providers and 435 individuals with severe mental illness in need of health promotion support.

Additional project activities included:

- Development of a methodology to identify and prioritize individuals in the target population.
- Creation of clear intake, assessment, service delivery, and discharge procedures for individuals receiving health worker services.
- Enhancement of existing electronic medical record software to configure, test and validate program components and ensure efficient workflows.
- Modifications of existing mental health assessment, treatment planning and service delivery protocols to facilitate access to primary care, enhance adherence to primary care services, and motivate health behavior change.
- Development of a methodology to stratify the target population of severely mentally ill individuals by presence or risk of co-morbid health problems.
- Offer evidence based Wellness Recovery Action Planning (HRSA / SAMHSA Model Programs) targeted to clients interested in managing health issues.
- Development and implementation of training for program staff on disease management strategies for most common health issues of population.

C. Role of Consortium Partners

As the lead agent for the consortium, Transitions of Western Illinois had the responsibility for contractual and fiscal compliance, reporting, and execution of the grant terms. Through at least quarterly meetings, the leaders of the consortium provided advice and feedback to Transitions as the lead agent for overall project direction, use of financial resources, and participate in continuous quality improvement efforts. Transitions had the responsibility and authority for selecting and managing project staff. This selection and ongoing performance feedback was conducted in close collaboration with the primary care providers in the consortium membership.

The primary care providers in the consortium (Blessing Health System, SIU Center for Family Medicine, and Quincy Medical Group) identified individuals for referral to the project full time community health workers. They provided support for inclusion of the project health workers by giving access to their practice's electronic medical record system to facilitate coordination of care and ongoing communication with referred individual's health team. Each site convened regular meetings of project staff with their care coordination teams to assure connection and continuity between their usual and customary care coordination services and project community health workers.

The United Way of Adams County and Adams County Health Department assisted the consortium by providing feedback and guidance to the direct service partners about the direction of the project, and consultation to community health workers about connecting patients to existing community resources.

A. Outcomes and Evaluation Findings

- **Improvement in physical and mental health** (quality of life).
 - *Did people participating in health outreach experience an improved quality of life?*
Individual program participants completed items from the Health Related Quality of Life scale from the CDC. Individuals reported a reduction of poor physical health days in the last month from 13.5 at intake to 10.6 at 6 months or case closure. Participants also reported a reduction in poor mental health days from 17 days in the last month at intake to 12.1 days at 6 months or case closing.
- **Improvements in access to primary and preventative healthcare**
 - *Did introduction of community health worker services improve participant access to and use a regular source of primary medical care?*
Since all the individuals in the primary care part of the project already had a PCP by definition, this measure was applied only to seriously mentally ill individuals participating in the project. Comparing individuals enrolled in the program from February 2016 to February 2018, there was no significant change in the percent of clients who reported having a primary care physician (From 91% to 94%). However, in that same timeframe, the percent of individuals who reported having had a routine appointment with their PCP in the last year did increase (from 69% to 84%).
 - *Did SMI clients improve their likelihood of receiving regular screening and monitoring for diabetes?*
In the first quarter measured, 21% of individuals served had an A1c screening test in the prior year. In subsequent quarters this increased ranging in the last year from a low of 45% to a high of 87%.
- **Improvement in illness self-management**
 - *To what extent are people with diabetes who are being served successfully managing their illness?*
During the project, the percent of individuals who had an A1c test in the prior 6 months ranged from a low of 68% (in the first quarter of the project) and an average of 85% in the last 4 quarters.
- **Impact on health utilization and resulting cost savings**
 - *Did health outreach clients experience a reduction in emergency room visits (and associated costs)?* That information is in the process of being evaluated and will be included in our project final report.
 - *Did health outreach clients experience a reduction in hospital readmission (and associated costs)?* That information is in the process of being evaluated and will be included in our project final report.

B. Recognition

An article appeared in the Quincy Herald Whig (our local newspaper) announcing the receipt of the grant award and hiring of community health worker staff.

Part VI: Challenges & Innovative Solutions

Clarification about target population: In the first 6 months of operation, it took some trial and error learning to identify the types of patients that our community health workers services could provide value. For example, some initial referrals included individuals discharged from hospital and awaiting nursing home placement. They had a need for pretty intensive home health services and social work assistance to select and coordinate linkage for nursing home placement. We quickly found our stride in terms of the types of problems / health barriers that our health workers could be successful in addressing. The key for us was keeping good community and relationships between each care coordination team supervisor and the project supervisors.

Adjusting to Different Organizational Cultures of Each Referring Practice: Our initial design for community health workers had in mind one approach which we would be using across the three practices we accepted referrals from. However, it became very apparent early in the project that this wasn't realistic. Since each practice was at differing stages of development of their own care coordination capability, they sometimes wanted different things from our health workers. For example, one practice saw our community health workers as "extender staff" for their care coordination team. As a result, our primary point of contact was the assigned care coordinator at that practice who provided direction to the community health workers about activities they felt would support their overall team goals. At another practice, when they referred a case to the project, they saw our project staff as being the primary source of care coordination with that patient and wanted us to instead directly relate to the physician's nurse. It was important for our project to be able to accommodate the work style that best matched that practice.

A. Structure

The Consortium as it exists today will not continue in its same form after the end of this project. As in many rural areas, the partners on this project have multifaceted relationships and together sit on multiple consortia.

The work of this project will be continuing through the following described relationships:

- Care Coordination Consortium - The primary health care coordination programs have developed regular meetings during which they share existing care coordination improvement projects and work on joint goals. Blessing Hospital, Quincy Medical Group, and SIU Center for Family Medicine all participate in this consortium.
- Mental Health Solution Team - All of the consortium partners participate in a community-wide consortium aimed at coordination and improvement of access to mental health services (sponsored by the United Way of Adams County).

B. On-going Projects and Activities/Services to Be Provided

i) Will all, some or none of the elements of the program be sustainable once Outreach grant funding has ended? Please check the appropriate selection.

- All elements of the program will be sustained
- Some parts of the program will be sustained
- None of the elements of the program will be sustained (i.e. the program will completely end after the grant period)

ii) Identify the projects and activities that will be sustained beyond Outreach grant period.

Continuation of Health Outreach Services connected to primary care provided directly by the health care teams.

Quincy Medical Group and Blessing Physician Services intend to utilize community-based staff to deliver outreach services to the population. During the course of this grant, these practices have expanded their care management programming to include use of non-RN staff extenders able to provide the types of health outreach services available through this project. SIU Center for Family Medicine understands the recommendation and value of outreach services and should funding become available will consider these services.

Continuation of Whole Health Mental Health Case Management and Wellness Promotion by Transitions. The changes in assessment, planning, and staff training relating to health promotion will continue beyond the term of this project. With recently revised interpretation of mental health rules for Medicaid, many of the activities previously covered through this project funding will be able to be billed through fee-for –service Medicaid. The health promotion groups (WRAP, NEW-R, and Smoking Cessation) will continue as well. Activities not able to be captured through fee for service will be funded for the next year through Transitions Foundation funding while additional longer term sustainable funding is secured.

C. Sustained Impact

For the primary care – community outreach portion of the project, sustained outcomes will include:

Continued use of non-nurse staff as care coordination extenders to assist patients with accomplishment of their healthcare goals, address social determinants of health, and increase compliance with health care team recommendations.

Use of systems created during the grant period to identify individuals within the healthcare practices likely to benefit from enhanced care coordination / outreach services.

Coordination of care management program development across the three care coordination programs through continued periodic meetings to share information and problem solve.

For the mental health and wellness promotion aspects of the project, sustained outcomes will include:

Ongoing use of the revised assessment tools developed during this project for mental health clients which included a much more extensive collection of health related information.

Continued inclusion of health promotion and wellness related goals as part of mental health service planning.

Inclusion of health related assessment, planning, and service delivery as part of mental health staff training developed during the grant period.

Continuation of health promotion groups which will be able to be billed as part of Medicaid Mental Health funding (WRAP, NEW-R, and Smoking Cessation).

Part VIII: Implications for Other Communities

Our project connected with three very distinct primary care settings run by three different types of organizations and at different stages of care coordination program development. For example, our three primary care settings included 1) A primary care practice which was affiliated with a local community hospital 2) A rural health clinic operated by a for-profit physician practice and 3) An FQHC embedded within a family practice residency program of a state university. Our project was most successful when we kept in mind that we needed to adjust our community health worker practices to what each practice needed rather than having one approach across all the practices.

When we first started the project, we thought that obtaining feedback from primary care physicians would be the most important indicator of project success. However, we found that the actual care coordination programs saw us as extenders for their staff and obtaining their feedback was equally if not more important.

Part IX: Success, Increased Capacity, and Contributions to Change

A. Defining Success

i) How do you define "success" for your grant program? Please check the appropriate selection(s). You may choose more than one option. If other, please describe.

- Access to a new or expanded health service
- Increased number of people receiving direct services
- Improved quality of health services
- Operational efficiencies or reduced costs
- Integration of process improvement into daily workflow
- Continuation of program activities after grant funding
- Continuation of network or consortium after grant funding
- Health improvement of an individual
- Health improvement among your program participants
- Health improvement among your community
- Enhanced staff capacity, new skills, or education received
- Improved capacity to adapt to changes in healthcare

ii) Do you believe that your program has achieved success? If so, how?

The program has had two primary impacts:

- 1) For the primary care providers, it reinforced the role that non-nursing community health workers can play as extenders staff to help advance the goals of achieving positive health outcomes. Two of the three practices have incorporated these types of staff into their usual and customary care coordination teams.
- 2) For the mental health service system, the project has allowed for adjustments which allow service teams to take more of an integrated approach to client issues to include physical (and not just mental) health.

B. Organizational Capacity

How has the federal funding of your grant program increased local capacity at your organization, within your network, and/or in your community? Please check the appropriate selection. If other, please describe.

- Formalized networks or coalition
- Developed new partnerships or relationships
- Enhanced skills, education, or training of workforce
- Enhanced data collection and analysis

C. Contributions to Change

The following was a response from a care coordinator who referred a patient to the program:

I referred a patient that suffers from seizures and has memory loss as a result. The patient missed many appointments and had been fired from several physicians of various specialties. After enrollment in the Health Outreach program, the patient has not missed any appointments (or calls prior to appointments to cancel/reschedule them if needed) and has been reinstated with a neurologist who previously fired the patient. Outreach worker has also assisted patient in setting up appointments for specialized

testing that takes place approximately 2.5 hours away and has even taken the patient to one of them in order to ensure patient had a complete understanding of what was discussed and what further testing/appointments needed to be done. The patient has been successful with compliance and has been able to arrange follow-up events with the assistance of the worker that Health Outreach has provided.

A story from one of the project's community health workers:

I worked with a woman who has a history of being a victim of domestic violence. The abuse that she suffered led to her having seizures and memory loss. She was referred to health outreach because she was fired from all specialty care because she missed multiple appointments. While working with health outreach she was able to return to specialty care in town and also attended appointments out of town for specialized testing that was needed. She was able to work through her depressive symptoms and manage her anxiety and reconnect with her children. Before her case was closed, she was able to start to attend appointments on her own or with the support from her family. She reached both her own and her doctor's goals of her attending appointments and being able to be successful living on her own.

A story from one of the project's community health workers:

I have had the opportunity to work with an incredible, kind individual over the past 5 months. He was referred to the health outreach program for numerous reasons, including: barriers implementing his plan of care with his healthcare team, multiple missed doctor's appointments, difficulty managing medications, lack of natural support, housing, medical benefits, etc. This individual was new to our area and knew little to nothing about the town and resources it had to offer. He had uncontrolled diabetes with a history of cardiac health issues. He also had two different last names which posed a problem with the Social Security Office, IDHS, and medical offices. Unfortunately, he had a history of neglecting his most basic needs. Throughout my journey with him I have been able to assist with confirming his identity, enrolling him in a medical benefit plan, seeking specialty care, establishing care with multiple providers, finding housing, accessing community resources needed, transportation, and most importantly, familiarizing him with his new home town. He has completed diabetes education courses and has been able to reduce his A1C. He is taking his medications daily. He lives in a beautiful apartment. He is finally seeking all forms of medical care needed to improve his overall wellbeing.

Please provide an example of how your grant program may have directly or indirectly contributed to policy changes, systems changes, or environmental changes

- One of the most important contributions has been the demonstration of how paraprofessional community-based contracts and services can help individuals meet their health goals and support the overall health team.
- A second change has been in helping the mental health service teams embrace a whole health approach to assessment, service planning and service delivery.

Indiana

Part I: Organizational Information

Grant Number	D04RH28392
Grantee Organization	Affiliated Service Providers of Indiana (ASPIN)
Organization Type	Network of behavioral health and addiction service providers
Address	8440 Woodfield Crossing Blvd, Suite 460 Indianapolis, IN 46240
Grantee organization website	www.aspin.org
Outreach grant project title	ASPIN's Community Health Worker Network
Project Director	Name: Kurt Shipley
	Title: Assistant Director
	Phone number: 317-671-3036
	Fax number: 317-735-0019
	Email address: kshipley@aspin.org
Project Period	2015 – 2018
Funding level for each budget period	May 2015 to April 2016: \$200,000
	May 2016 to April 2017: \$200,000
	May 2017 to April 2018: \$200,000

Part II: Consortium Partners

* Indicates those consortium partners who have signed a Memorandum of Understanding/Agreement

Partner Organization	Location (town/county/state)	Organizational Type
Bowen Center*	Warsaw, IN	CMHC
Centerstone of Indiana*	Richmond, IN	CMHC
Four County Counseling Center*	Logansport, IN	CMHC
Wabash Valley Alliance*	Lafayette, IN	CMHC

Part III: Community Characteristics

A. Area

Cass, Fayette, Huntington, Wabash, Wayne, and White counties in Indiana.

B. Community description

The targeted population lives in Indiana counties deemed by HRSA data warehouse to qualify as 100% rural; as whole health professional shortage areas, as whole mental health professional shortage areas, as whole or partial Medically Underserved Areas or Populations, and contain a minimum of 600 individuals served by ASPIN community mental health centers. Additionally, these counties experience greater disparities in terms of access to health coverage, chronic disease incidence, lower education levels, and poverty.

C. Need

In order to identify the needs of the populations in the targeted counties, data related to vectors such as area demographics, age distribution, economic indicators, alcohol and drug arrest statistics, health indicators, and cancer rates were collected.

From this data, it was identified that the targeted counties had an uninsured rate of 18.4% - 25.5%, an adult obesity rate between 28% - 36%, adult physical inactivity rates of 27% - 32%, adult smoking rates of 20% - 28%, and a diabetes prevalence rate of 8.9% - 11.2%.

Given these data points, the needs identified for the populations in the targeted counties included obtaining health insurance coverage; education on health insurance literacy, preventive services, and chronic disease management; as well as tobacco cessation assistance.

A. Evidence-based and/or promising practice model(s)

The American Public Health Association (APHA) defines a community health worker (CHW) as “a frontline public health worker who is a trusted member of and/or has an unusually close understanding of the community served. This trusting relationship enables the worker to serve as a liaison/link/intermediary between health/social services and the community to facilitate access to services and improve the quality and cultural competence of service delivery.” (APHA, www.apha.org) This definition is utilized by our Consortium as it is the definition employed by Indiana Medicaid as it develops billing codes for CHW services and the Department of Mental Health and Addiction (the certifying body for CHWs in Indiana). Studies published in peer reviewed journals support the use of community health workers to lead interactive workshops to increase positive health behavior and identify effectiveness in rural environments (Community Health Workers Offer Culturally Tailored Interactive Workshops and Counseling to Filipino Americans” accessed at: <https://innovations.ahrq.gov/profiles/community-health-workers-offer-culturally-tailored-interactive-workshops-and-counseling>). CHWs have also been successfully employed in rural communities as enrollment specialists and insurance benefit educators (Promising Practices for Rural Community Health Worker Programs, Infante, Knudson, Brown, 2011; Measures to Increase Health Insurance Coverage in Children, Meng, Yuan, Wang, & Garner, 2012).

B. Description of Activities

The utilization of community health workers dually trained as health insurance navigators allowed our Network to support enrollment in health insurance coverage; assist in the planning of community health events; and to provide education on both health improvement/chronic conditions as well as health insurance literacy. Specifically, ASPIN’s Community Health Worker Network (ACHWN) set out to increase adult insurance coverage by 5% in each county, to increase referrals from primary medical providers to behavioral health providers by 5% in each county, increase the utilization of primary care/preventive services by those that received insurance enrollment assistance, provide community health development programming to 600 participants per year, and increase the number of tobacco cessation referrals by 10%.

We addressed these goals by:

- Cross-training CHWs as federal and state enrollment assisters.
- Conducting outreach and education to Consortium staff and clients as well as local residents to market enrollment services and promote attendance at educational events.
- Providing enrollment assistance to Consortium and local residents. Many consumers had tried previously to complete applications only to be denied multiple times. Well-trained and experienced enrollment assisters are able to trouble shoot during the application process as well as educate on utilization of benefits after enrollment has been effectuated.
- Consortium members and the network (ASPIN) became preferred tobacco quit line providers and an online referral process was created for providers referring patients to the state Quit Line.

C. Role of Consortium Partners

Consortium members offer input on many levels. First, they offer programmatic input as they are referring agencies for enrollment; they offer space and marketing support for community activities; they are engaged in tobacco cessation supports; they participate in community health needs assessments; and offer community benefits as not-for-profit organizations. Each of them convenes Advisory Boards and Boards of Directors from within the communities they serve. They offer feedback and consumer insight into the operations of the program. Within their communities, the Consortium partners participate in human service provider networks and refer clients to many other agencies. They also participate in many statewide and local committees and in professional organizations such as the Indiana Council of Community Mental Health Centers and the Indiana Hospital Association. Insights gathered from these various stakeholder groups help inform our program approach.

Member	Targeted Counties Served	Role in Consortium (same for each)
Bowen Center	Huntington, Wabash	Monthly and ad hoc meeting participation, space hosting for educational meetings, enrollment events, marketing, community partnership support, strategic and sustainability planning participation, tobacco referrals
Centerstone of Indiana	Wayne, Fayette	
Four County Counseling Center	Cass	
Wabash Valley Alliance, Inc.	White	

The Consortium needs are surveyed annually to identify priority areas of focus. The Consortium meets monthly and is given reports on the grant’s progress as well as how to reduce any barriers, questions about reported activities and/or results. As the

project evolves information is shared quarterly at three provider committees: the Navigator Committee, the Performance Improvement Committee, and the Chief Financial Officer Committee. The Consortium members also provide offices or space for health insurance enrollments and health education.

Part V: Outcomes

A. Outcomes and Evaluation Findings

The activities of the ACHWN program appears to have had positive effects on the identified needs of the communities. First, enrollment efforts resulted in a decrease in the uninsured rate across the Consortium from 22% to 12%. Second, referrals received from primary medical providers to behavioral health providers showed consistent increase across all three years of the grant. There was an increase in referrals in each of the project years: 5%, 6.4%, and 9.5%.

Third, through the utilization of a four-part consumer survey developed in-house, we were able to gauge primary care utilization among those consumers that were enrolled in coverage by the grant's CHWs. Specifically, 78.2% had selected a primary medical provider (PMP), 76.7% had seen a PMP in the past year, 75.9% knew preventive services are free, 50.4% had scheduled a preventive service visit, 69.9% committed to scheduling a well visit in the next year, and on average felt that their health had improved by 8.43 out of 10 by having insurance coverage.

Fourth, community health education was also improved through public education events. Through 12/31/2017, 453 public education events have been held, reaching 6,300 individuals. With regard to the final goal, increasing the number of tobacco cessation referrals from the Consortium; 880 referrals to Indiana's 1-800-Quit-Now have been made through the end of 2017.

B. Recognition

The Rural Health Community Champion HRSA Community Base Division All Grantee Meeting: ASPIN has been distinguished with an honorable mention for the Rural Health Community Champion in the category of evidence-based models (criteria #6) and was noted in the program booklet.

ACHWN program staff were active in disseminating information about the program at the state, regional and national levels. Below is a listing of the presentations conducted over the three year grant period.

Federal Meetings

Substance Abuse and Mental Health Services Administration (SAMHSA), Health and Human Services Region V Great Lakes Community Health Worker Summit, Chicago, Illinois October 30, 2015

Indiana's Integrated Care Training Program: Training and Certifying Community Health Workers

SAMHSA Regions 5 and 7 Workforce Summit (ten states represented), St. Paul Minnesota on 9-8-16

The Evolution of the Integrated Care Community Health Worker Training and ASPIN Recruitment and Retention Consortium Program

SAMHSA Region 5,6,7 Workforce Summit, Kansas City, MO August 22-23, 2017 15 States Represented

Indiana's Integrated Community Health Worker/Certified Recovery Specialist Certification/Navigator Model

National Webinars

Federal Office of Rural Health Policy, ACA Office Hours, Dec. 9th, 2015

Outreach Strategies for Health Insurance Education

Georgia Health Policy Center, Webinar to FORHP grantees, March 9, 2016

Positioning your Organization for Sustainability

National Conferences

National Association for Rural Mental Health Conference, Portland Maine June 18, 2016

The Evolution of an Integrated Community Health Worker Certification and the Workforce Opportunities for CHWS with the Implementation of the Affordable Care Act

Unity Conference, Atlanta, Georgia. July 18, 2016.

Community Health Workers: Social Change Agents Advancing Health Equity and Improving Outcomes

Indiana's Evolution of the Certified Community Health Worker Program and Professional Development

Rural Health Outreach Grantee Meeting, Rockville, MD October 26, 2016
Getting Ready for Open Enrollment.

HRSA All Grantee Meeting Poster Presentation, Rockville, MD February 27-March 1, 2018
The Rural Community Health Worker: Navigating the Gravel Road to a Healthy Lifestyle

Part VI: Challenges & Innovative Solutions

Turnover of staff was a challenge faced and addressed during the project period. As community health worker positions are entry level, the program experienced turnover in all positions. To counter act this, the navigator hourly rate was increased and specific job performance feedback given at 90 days. A fifty cent raise was given at six months if they were on track to meet their annual milestones. Another fifty-cent raise was given at completion of a year if they achieved their milestones.

The political context was a challenge for this project as well. Entering the last year of the grant, there was a change in enrollment focus and strategies at the national level which impacted staff morale and consumer willingness to participate in the Health Insurance Marketplace. To address this challenge, we kept the community health workers informed of changes as they occurred and reassured them that we were still contracted to assist with enrollments. We also created a navigator committee to communicate any changes to the navigators working at the provider level. And finally, we trained the navigators in motivational interviewing to help consumers understand why having health insurance coverage is beneficial.

Part VII: Sustainability

A. Structure

As the Consortium members are a subset of ASPIN's Board of Directors, it is fully expected for the Consortium to continue into the future, especially our member locations (Bowen Center, Centerstone of Indiana, Four County Counseling Center, and Wabash Valley Alliance). Additionally, we have some new partners that are key stakeholders in dealing with the growing public health issue of the opioid crisis. They will be instrumental in assisting us as we continue to expand the CHW role into care coordination from incarceration into treatment programs for those affected by substance abuse disorder/opioid use disorder. These partners include: the Indiana Sheriff's Association, County Jails, Community Corrections and Probation departments, the Department of Mental Health and Addiction, and Indiana's Department for Drug Prevention, Treatment, and Enforcement.

B. On-going Projects and Activities/Services To Be Provided

i) Will all, some or none of the elements of the program be sustainable once Outreach grant funding has ended? Please check the appropriate selection.

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained (i.e. the program will completely end after the grant period)

ii) Identify the projects and activities that will be sustained beyond Outreach grant period.

In one form or another, the activities initiated under ACHWN are largely expected to continue forward after the end of the grant period. Across the Consortium spectrum, referrals to 1-800-QUIT-NOW will continue to be completed as we attempt to further reduce the prevalence and/or frequency of tobacco use. We also expect to continue to provide public health education programming. These activities will be conducted by CHW/Navigators supported by other grants as well as by the network provider's staff that ASPIN has trained as both navigators and community health workers.

There is a strong future for CHWs at ASPIN. The CHW programming options that will be provided are being augmented by pursuit of the Chronic Care Professional (CCP) designation for our CHW/Navigators. This training is provided from a population health perspective, covers more than 25 chronic health conditions, explores lifestyle management, and delves into motivational interviewing techniques for encouraging behavior change. In addition to the CCP training, the Consortium will also continue to be able to train CHWs via our recently approved online CHW curriculum.

The Consortium also expects to continue in-person assister services for insurance enrollment. The shape that this function/designation will take is not exactly clear at this point as there has been some discussion at the federal level of discontinuing the Navigator title. If there are changes at the federal level it is expected the state of Indiana will follow suit.

We will continue to diligently monitor the status of in-person enrollment assisters and adjust as necessary. For those consumers enrolled by ASPIN Navigators, we also expect to continue conducting follow-up health insurance utilization surveys.

Our next steps involve looking at entering into the care coordination aspect of CHWs' Scope of Practice. In this capacity, we are planning to begin offering transition services to volunteers we provide enrollment assistance to at county jails. We expect the primary population served to be those dealing with substance use disorder (SUD); especially opioid use disorder (OUD), and look to provide assistance with post-incarceration social determinant of health (SDOH) needs until they can be connected with a treatment program.

C. Sustained Impact

Over the course of the grant, there have been a number of activities which will have sustained impacts. The first examples include the direct results from ACHWN activities which will continue to affect the future: Quit Line referrals and support for the reduction and cessation of tobacco use, the public health education consumers and providers received, the insurance coverage individuals and families have obtained, and the health care engagement/utilization encouraged through the follow-up health surveys that have been conducted.

At the Network level, ACHWN's cross-trained Navigator/CHWs are expected to be utilized in their respective communities thereby continuing to build capacity. As the program continues to mature, the Navigator/CHWs are also being further trained as chronic care professionals. This training is helping to provide the foundation for a transition away from an assister focus for the Navigator/CHWs to that of public health and toward a model that fully embraces the designation and scope of community health workers.

At the individual Consortium member level, the integration and continuation of both Quit Line referrals and utilization of internal staff trained as Navigators and CHWs will further propel impacts of the program into the future.

The overarching impact of ACHWN was the establishment of the ASPIN Navigator/CHWs as subject matter experts and resource for health insurance enrollment; whether through Marketplace or Medicaid Expansion (HIP). Many ASPIN Network providers have duplicated this position in their organizations and will continue employing them. Additionally, these positions have had significant positive impact on reducing the uninsured rates of consumers seeking treatment at these organizations; resulting in positive financial results. From a health aspect; by providing access to health services through insurance enrollment communities have benefited for years to come as consumers can live healthier lives.

Part VIII: Implications for Other Communities

The ACHWN program can easily be replicated by other counties in Indiana, as the capacity for training and certifying navigators and community health workers is in place statewide. Tobacco Quitline services and coalitions are also in place statewide. The ACHWN project can serve as a pilot, with outcome data telling the actual impact on rural communities. In terms of national impact, the essential element of a paraprofessional workforce dually trained to enroll in health coverage and provide healthcare utilization support, health education, and connection to tobacco cessation must be in place. As states are opting for various approaches to health coverage and qualifications for enrollment specialists and community health workers, the workforce needs to meet state-specific training and certification requirements. Once that is achieved, the project could be adopted.

This model/strategy can be replicated in any state by training staff as Certified Application Counselors through CMS and then as Community Health Workers ASPIN offers CHW training on line. This CHW model is highly effective in health professional shortage areas as CHWs can assist with care coordination to address the health disparities of uninsured rural population. Qualitative measures may include health literacy, medical, behavioral, and dental health improvement and financial liabilities of health costs.

Part IX: Success, Increased Capacity, and Contributions to Change

A. Defining Success

- i) How do you define "success" for your grant program? Please check the appropriate selection(s). You may choose more than one option. If other, please describe.
- Access to a new or expanded health service
 - Increased number of people receiving direct services

- Improved quality of health services
- Operational efficiencies or reduced costs
- Integration of process improvement into daily workflow
- Continuation of program activities after grant funding
- Continuation of network or consortium after grant funding
- Health improvement of an individual
- Health improvement among your program participants
- Health improvement among your community
- Enhanced staff capacity, new skills, or education received
- Improved capacity to adapt to changes in healthcare

ii) Do you believe that your program has achieved success? If so, how?

- Partner buy-in
- Identified as a promising practice
- Quit Line referrals
- Combining Navigator certification with CHW & CCP training
- Poised to take advantage of pending implementation of Medicaid billing codes for CHW services.

B. Organizational Capacity

How has the federal funding of your grant program increased local capacity at your organization, within your network, and/or in your community? Please check the appropriate selection. If other, please describe.

- Formalized networks or coalition
- Developed new partnerships or relationships
- Enhanced skills, education, or training of workforce
- Enhanced data collection and analysis

C. Contributions to Change

Change in individuals' lives, your organization or consortium, or your community.

One example of how the cross training helped a consumer was at an enrollment meeting when a CHW noticed that the gentleman was sweating and very nervous. When asked if they could get him a glass of water, he shared that he and his family had just been evicted from their apartment and had nowhere to sleep that night. The CHW listened and then called a local homeless shelter and made arrangements for the family. He then completed his enrollment application and the CHW/Navigator was asked to conduct enrollment appointments at that location.

Another example is a consumer who enrolled in insurance with help from a navigator utilized the preventative services for a wellness check. The doctor found a lump in her throat and she was diagnosed with stage one thyroid cancer. The consumer had surgery and radiation and she is now in remission. The consumer was appreciative for the insurance that covered her medical services.

Change in policies, systems, and environment:

Indiana Governor's Workforce Development Committee's CHW Workgroup. ASPIN is a committee member helping the state create core CHW curriculum requirements for certifications and CHW billing codes for Medicaid. Helped state's 1-800-Quit-Now transition from faxed referrals to secure electronic transmitted referrals.

Iowa

Part I: Organizational Information

Grant Number	D04RH28398
Grantee Organization	Child Abuse Prevention Services
Organization Type	501(c)(3)
Address	811 E. Main St., Marshalltown, IA 50158
Grantee organization website	www.capsonline.us
Outreach grant project title	Refugee Health Connections
Project Director	Name: Nikki Hartwig
	Title: Program Director
	Phone number: 641-752-1730
	Fax number: 641-753-1336
	Email address: nikki@capsonline.us
Project Period	2015 – 2018
Funding level for each budget period	May 2015 to April 2016: \$199,826
	May 2016 to April 2017: \$199,195
	May 2017 to April 2018: \$199,728

Part II: Consortium Partners

* Indicates consortium partners who signed a Memorandum of Understanding/Agreement

Partner Organization	Location (town/county/state)	Organizational Type
*Primary Health Care	Marshalltown/Marshall/Iowa	Federally Qualified Health Center
*McFarland Clinic	Marshalltown/Marshall/Iowa	Multi-specialty Clinic
*Unity Point Health	Marshalltown/Marshall/Iowa	Hospital
*The Women's Care Group	Marshalltown/Marshall/Iowa	Obstetrics/Gynecology Clinic

Part III: Community Characteristics

A. Area

Marshall County, Iowa

B. Community description

Marshall County, Iowa has a total population of approximately 40,735 people. Approximately 68% of the county's total population resides in Marshalltown. The racial/ethnic make-up of the county (2016 American Community Survey) is 63.6% identifying themselves as white only, 27.6% Hispanic or Latino of any race, 4.4% Asian, 2.5% identifying two or more races, 1.5% Black, 0.2% American Indian and Alaska Native, and 0.1% Native Hawaiian and other Pacific Islander. The Marshalltown community hosts a large meat processing facility, which provides employment for many newcomers. However, the community experiences high rates of poverty and historically has demonstrated higher rates of abuse and neglect when compared to state averages. The economic conditions alone can create stress for families, but local refugees face many other obstacles such as language barriers, lack of understanding of Western medicine, customs, and traditions.

C. Need

The Refugee Health Connections program was designed to assist refugees from Southeast Asia in accessing and understanding Western medicine, building a trusting relationship with a primary care provider, accessing other needed medical resources and social supports within the community, and increasing knowledge of child health and development. Community Health Workers who speak the primary languages were recruited and hired to assist the population in addressing the identified needs.

Part IV: Program Services

A. Evidence-based and/or promising practice model(s)

The Refugee Health Connections program used the following Community Health Worker Models: Outreach and Enrollment Agent Model; Lay Health Worker Model; Care Coordinator/Manager Model; and Health Educator Model. Community Health Workers also utilized the Parents as Teachers evidence based curriculum with families. The Parents as Teachers materials were delivered verbally in the family's spoken language, as the materials are only available in English and Spanish.

B. Description of Activities

Describe the activities conducted through your Outreach grant program.

The Refugee Health Connections program is available to refugee families from Southeast Asia who are expecting a child or have a child under age 5. Families are assigned to one of three Community Health Workers based on the family's language preferences. Services are provided in English, Burmese, Karen, Karenni, and Chin.

Home Visitation

Community Health Workers provide home visitation services with a focus on family health and well-being. The Parents as Teachers curriculum is used to provide child development information and screenings are administered to monitor child development (Ages and Stages Questionnaire), as well as maternal depression (Edinburg Postnatal Depression Scale). Assessments are completed to monitor child health and overall family functioning. The CHWs work with the family to identify goals that will assist the family in meeting needs, encouraging child development, or improving health and safety. CHWs ensure that families are linked to necessary community resources, assist with enrollment in government programs, and provide social support.

Transportation/Interpreting

CHWs provide transportation to local medical appointments when needed and assist with interpreting for medical appointments and other appointments that are necessary for the well-being of the family, such as heating assistance or accessing the local food pantry.

Care Coordination

CHWs assist families with establishing medical and dental care, coordinating appointments, and understanding diagnosis and treatment needs. Assistance is also provided in completing applications for state funded health insurance. The local FQHC provides the CHW with a visit summary for each family that has been seen in the clinic and is enrolled in the Refugee Health Connections program. This summary allows the CHW to ensure medications are filled and taken according to instructions, that follow up appointments are scheduled, and also provides the CHW with information regarding the diagnosis/treatment so they can assist the family in understanding their diagnosis and needs.

Health Education

Health Education is delivered to families in a group format on a monthly basis. Information is delivered in Burmese/Karenni, Chin, and Karen in separate group sessions. Information is provided by CHWs, consortium members, and other local professionals. These sessions provide more in depth information on health and safety topics, such as: mental health, oral health, children's nutrition, AIDS/HIV, hepatitis, gestational diabetes, Summer/outdoor safety, and infant/toddler car seat safety. Health education is also delivered individually to families through home visitation and includes oral health, nutrition, and information regarding well-child exams/immunizations.

Training for Professionals

Refugee Health Connections has been able to provide training/presentations for local professionals. The CHWs provided information regarding their journey to the United States, and shared information about their culture, customs, and traditions. Information has been provided regarding the common food choices for this population. The U.S. Committee for Refugees and Immigrants provided a presentation to improve understanding of the process required for a refugee to come to the U.S. In addition, the CHWs were asked to provide two additional presentations in other counties in Iowa in which they are beginning to see an increase in Southeast Asian refugees.

Local Awareness

The Refugee Health Connections program has also been featured in the local newspaper, bringing awareness and understanding to our community.

C. Role of Consortium Partners

Consortium partners meet on a monthly basis and participate in various activities related to the grant. All partners have had the opportunity to provide a health education session and they provide regular input regarding needs or concerns. Consortium partners have played a major role in addressing potential health risks for this population. For example, it was reported by one

participant that birth control pills were being sold over the counter in a local Asian store. The local store owner was welcoming and allowed the consortium partners to visit the store and look at the available medications. While the birth control pills had already been removed from the shelf, the store owner wanted the medical professionals to let him know if any of the medications were unsafe as he did not want to sell something that would potentially be harmful. In addition, another over the counter medication was identified as being used to induce miscarriage. One consortium partner was able to work with a local pharmacist to identify the ingredients and determine if there was potential danger from misuse of the medication. The CHWs were then able to convey correct information to families.

Consortium partners have been a vital link to our medical community. They have provided insight and expertise and have made a direct impact on this population by providing health education sessions and assisting with identifying potential health risks within the community. Due to monthly meetings that involve the CHWs, the consortium partners are also able to ask the CHWs about traditions or customs to help them better understand the population they are serving.

Part V: Outcomes

A. Outcomes and Evaluation Findings

Staff Training and Development

- 3 Community Health Workers were hired and trained as Parent Educators through Parents as Teachers
- 32 taskforce and 20 advisory committee meetings have been held
- 8 trainings were provided to professionals
- 100% of professionals reported receiving new knowledge as a result of the training provided

Services Provided

- 3,550 home visits and 801 transports were provided to 109 families
- 80 health education sessions were provided to the target population (through March 2018)
- 98% of all target children that were enrolled in the program for at least 6 months were screened for developmental delays
- 1,708 referrals have been provided to families for other community resources/events

Program Satisfaction

- 100% of program participants reported being satisfied with the services received
- 100% of community professionals reported being satisfied with the interaction and services provided by the Community Health Workers

Client-level Outcomes

- 95% of participants that entered the program without health insurance, and were enrolled for at least 6 months, secured and maintained insurance while participating in program
- 95% of the children that entered the program without a medical home, secured a medical home within 6 months of program participation
- 58% of participants who started using a birth control method while participating in the program, reported implementation of birth control as a result of program participation
- 100% of participants that were diagnosed with gestational diabetes received formal education
- 100% of program participants reported receiving new knowledge of general health and wellness
- 93% of program participants demonstrated an increase in knowledge of child development, as measured by the Life Skills Progression tool
- 87% of program participants demonstrated an improvement in nurturing and attachment between parents and children, as measured by the Life Skills Progression tool
- 100% of health session attendees reported receiving new knowledge of the topic as a result of the session
- Only 5% of participants that had a child while enrolled in the program gave birth to a subsequent child within 18 months of the previous birth

B. Recognition

The Refugee Health Connections program has been featured in the local newspaper two times. One article focused on the presentation that was provided by the Community Health Workers in which they shared their personal stories, and the other article featured a local participant family and showcased how the program assisted them. Our agency also received the "Dan Chavez Beyond the Horizon Award" in November 2017 as a result of our work with the refugee population. This award is given to one

Iowa organization and is presented at the Iowa Culture and Language Conference each year. Nominees must advocate on behalf of the immigrant, refugee, and non-English speaking population of Iowa; promote the development of policies and procedures that are supportive of new Iowans in an area of need such as social services, education, workforce development, or housing; and must have made a difference by initiating beneficial change in policies, structures, or processes and has left a lasting mark on Iowa's human landscape.

Part VI: Challenges & Innovative Solutions

One of our biggest challenges during the initial implementation of the program was balancing the primary role of the Community Health Workers while also trying to assist other agencies with in our community with interpreting needs. We wanted to provide support and assistance to other community agencies, but had to develop guidelines to ensure that the Community Health Workers could primarily focus on families. Our program made a determination that we would assist other agencies with interpreting when it directly related to a family's health, safety, and well-being, and no other options for an interpreter existed. In addition, some families entered the program with tremendous needs as they were newly arrived to the United States. We had to establish similar guidelines for providing assistance to families so we could maintain a focus on family health and well-being, and then had to assist them in utilizing other community resources for needs that were outside of our scope of service.

Another challenge was that we underestimated the amount of time that would need to be dedicated to transporting families to local medical appointments. In order to address this, the Community Health Workers would assist families upon service initiation, help familiarize them with other transportation options with in the community, and then assist the family in utilizing other options independently. CHWs still provide interpretation services when needed, but will meet that family at their appointment, which has saved in time in then not having to transport the family when they have other means of transportation available to them.

Part VII: Sustainability

A. Structure

The consortium will not continue to have monthly meetings, but will continue to collaborate as we have done for many years. Consortium partners have been, and will continue to be, a strong referral source. Two of the consortium partners (the local FOHC and Women's Care Group) are involved in monthly meetings through another program and these meetings will continue.

B. On-going Projects and Activities/Services To Be Provided

- i) Will all, some or none of the elements of the program be sustainable once Outreach grant funding has ended? Please check the appropriate selection.
- All elements of the program will be sustained
 - Some parts of the program will be sustained
 - None of the elements of the program will be sustained (i.e. the program will completely end after the grant period)
- ii) Identify the projects and activities that will be sustained beyond Outreach grant period.
- Two Community Health Workers will continue their employment at Child Abuse Prevention Services and they will continue to provide home visitation services to families. The direct services that are provided to families will remain the same through June of 2018. Dependent on grant funding, services may be offered to families with children up to age 3 if funding does not allow us the capacity to continue to serve children up to age 5. The ability to provide transportation to medical appointments will also be dependent on additional funding. However, family support and care coordination will continue to be a priority and the Southeast Asian population will continue to be served. While we will no longer have formal consortium partner meetings, our relationships with the consortium partners will continue. We collaborate with the partners on a regular basis as we work to improve care coordination and to meet the needs of the refugee population.

C. Sustained Impact

The Refugee Health Connections program has provided new knowledge to our community, as well as other communities within the state, through presentations, newspaper articles, and through collaboration with other agencies and services. This knowledge has impacted service delivery as local professionals have a better understanding of this population's culture and beliefs and has created a more understanding community. Child Abuse Prevention Services has become known in the community as a trustworthy agency that provides consistent support for local refugee families. In addition, the Community Health Worker model is a new concept in our area and has proven to be an asset to our local medical providers.

Part VIII: Implications for Other Communities

While many medical facilities now have access to telephone interpreters, this program has demonstrated the benefit of having a trusted member of the patient's community provide face-to-face interpretation, as well as ensuring continuity of care. Participants of the program developed a trusting relationship with the Community Health Worker and shared information with them throughout the course of service delivery that is not always captured in a single doctor's visit.

Through group health education sessions we found that many of the same families were returning and over time formed relationships with each other. This created a group environment in which the families were comfortable sharing and discussing the presented topic, resulting in an improved learning experience. It was also beneficial to allow the participants to provide suggestions for future topics.

Supervision of the Community Health Workers took a significant amount of time at program implementation. Due to the fact that the CHWs are refugees, they came with varied work experience, had differences in their journeys to the U.S., and all had been in the U.S. for different lengths of time. The supervisor devoted a lot of time to working one-on-one with the CHWs to ensure that they understood job expectations, as well as being available to provide ongoing support and guidance.

Part IX: Success, Increased Capacity, and Contributions to Change

A. Defining Success

- i) How do you define "success" for your grant program? Please check the appropriate selection(s). You may choose more than one option. If other, please describe.
- Access to a new or expanded health service
 - Increased number of people receiving direct services
 - Improved quality of health services
 - Operational efficiencies or reduced costs
 - Integration of process improvement into daily workflow
 - Continuation of program activities after grant funding
 - Continuation of network or consortium after grant funding
 - Health improvement of an individual
 - Health improvement among your program participants
 - Health improvement among your community
 - Enhanced staff capacity, new skills, or education received
 - Improved capacity to adapt to changes in healthcare

- ii) Do you believe that your program has achieved success? If so, how?
- As a result of the Refugee Health Connections program, we are now able to serve Southeast Asian families in our community in their language, and can provide them with the knowledge, skills, and support needed to ensure their families are healthy and stable. These services will continue after grant funding has ended as Child Abuse Prevention Services will continue to employ 2 Community Health Workers. Programming has resulted in the target population gaining new knowledge regarding family health and well-being, which they share with other families in the community. Programming has also assisted families in becoming confident in accessing local services independently, which is a skill they are sharing with others within their own network of family and friends, and some families are comfortable seeking medical assistance independently. As a result of local presentations/training there is a better understanding of the refugee population, leading to better service delivery to families.

B. Organizational Capacity

How has the federal funding of your grant program increased local capacity at your organization, within your network, and/or in your community? Please check the appropriate selection. If other, please describe.

- Formalized networks or coalition
- Developed new partnerships or relationships
- Enhanced skills, education, or training of workforce
- Enhanced data collection and analysis

C. Contributions to Change

Change in individuals' lives, your organization, consortium, or community:

RHC received a referral for a new family in town. This family had recently moved from Washington, they were referred to the program by a family member. Although the family had lived in town for more than one month, the children were not yet enrolled in school, and medical homes had not yet been established. Upon enrolling the family and assessing their current medical needs it was discovered that one of the children had very extensive medical needs including the use of a feeding tube, occupational and physical therapy, and extensive cardiac concerns. Our Community Health Worker was able to assist with enrolling the children in school, helping the family apply for medical coverage, and establishing a medical home. As a result, the child's cardiologist and pediatrician have regular contact with the Community Health Worker. They call our office after each medical visit to ensure both the family and the worker have a clear understanding of follow up needed, and to answer any questions. The child's school nurse also communicates with our worker regularly, as she knows she can relay important information to the family in their native language. Parents have on several occasions reported how this true coordination of care has helped their child receive the medical care he needs, while keeping them informed of important decisions being made in regards to his health, they feel confident in being able to meet their child's needs.

RHC continues to be viewed as a valuable resource in addressing the needs of Southeast Asian refugees in Marshalltown. Many agencies and organizations regularly reach out to our program to help them better serve the refugee families using their services. The school district has asked for assistance with interpreting many times in their efforts to address concerns with students and family needs. One particular elementary school observed some suspicious bruises on a child, and because English was not their first language, the parents had difficulty explaining the source of the bruises to school staff. Before making a report of suspected child abuse, the school reached out to RHC and asked that one of our staff visit with the child in an effort to gather more information. In conversing with the child, staff learned the bruises were from falling off a bike, the parents corroborated this story, and what could have been a potentially difficult situation for the family was avoided.

Change in policies, systems, and environment:

Refugee Health Connections provided a cultural training to nurses at our local hospital, detailing cultural practices and traditions common with child birth and labor. Due to this training the hospital changed its practices while serving Southeast Asian Refugee families to better incorporate traditions and customs important to them. As part of this shift, the hospital asked our program to translate some written materials so that families had access to important information in their native language.

Kansas

Part I: Organizational Information	
Grant Number	D04RH28400
Grantee Organization	Community Health Center of Southeast Kansas
Organization Type	Federally Qualified Health Center
Address	3011 N. Michigan, Pittsburg, KS 66762
Grantee organization website	www.chcsek.org
Outreach grant project title	Oral Health Outreach
Project Director	Name: Jason Wesco
	Title: Executive Vice-President
	Phone number: 620-240-5076
	Fax number: 620-235-0869
	Email address: jwesco@chcsek.org
Project Period	2015 – 2018
Funding level for each budget period	May 2015 to April 2016: \$200,000
	May 2016 to April 2017: \$200,000
	May 2017 to April 2018: \$200,000

Part II: Consortium Partners		
* Indicates consortium partners who have signed a Memorandum of Understanding/Agreement		
Partner Organization	Location (town/county/state)	Organizational Type
Class, LTD, Inc.	Pittsburg/Crawford/Kansas	Community Developmental Disabilities Organization
Tri-Valley Developmental Services	Chanute/Neosho/Kansas	Community Developmental Disabilities Organization
New Beginnings Enterprises	Neodesha/Wilson/Kansas	Community Developmental Disabilities Organization
Mosaic, Inc.	Pittsburg/Crawford/Kansas	Community Service Provider
New Hope Services	Pittsburg/Crawford/Kansas	Community Service Provider
Spring River Mental Health and Wellness	Riverton/Cherokee/Kansas	Community Mental Health Center
Southeast Kansas Mental Health Center	Iola/Allen/Kansas	Community Mental Health Center
Labette Center for Mental Health Services, Inc.	Parsons/Labette/Kansas	Community Mental Health Center
Crawford County Mental Health Center	Pittsburg/Crawford/Kansas	Community Mental Health Center
Crawford County Mental Health-Addiction Treatment Center	Girard/Crawford/Kansas	Addiction Treatment Center
Four County Mental Health Center	Independence/Montgomery/Kansas	Community Mental Health Center
ResCare Residential Services	Parsons/Labette/Kansas	Home Health Agency
Comfort Care Homes	Pittsburg/Crawford/Kansas	Long-Term Care/Assisted Living Facility
Via Christi Village	Pittsburg/Crawford/Kansas	Long-Term Care/Assisted Living Facility
Windsor Place At-Home Care	Coffeyville/Montgomery/Kansas	Long-Term Care/Assisted Living Facility

Part III: Community Characteristics

A. Area

The counties/communities served by the project include:

- Allen County: Iola
- Bourbon County: Ft. Scott

- Cherokee County: Columbus, Riverton
- Crawford County: Pittsburg, Girard
- Labette County: Parsons
- Montgomery County: Coffeyville, Independence
- Neosho County: Chanute
- Wilson County: Neodesha

B. Community description

The communities served are located in the southeast region of the state and are historically the poorest and most underserved region, facing significant health disparities as a result of the area's poor socio-economic status. These counties also have historically poor social determinants of health, being placed in the lowest ranking quartile for both health outcomes and health factors by County Health Ranking—a project of the Robert Wood Johnson Foundation and University of Wisconsin Population Health Institute. Health outcome data includes data regarding the length and quality of life, while health factors details clinical care, health behaviors, social and economic factors and physical environment. As is common in rural areas, the percent elderly is higher than in urban areas, and, service area counties all have a higher percentage of elderly (persons 65 and older) as compared to both the state and nation. Demographically, service area counties are primarily homogeneous, with the vast majority of the population being White or Caucasian, with few minority populations. Service area counties also have lower percentages of persons reporting Hispanic ethnicity, compared to Kansas and the United States.

C. Need

In rural America, and particularly in poor rural areas like southeast Kansas, treatment for oral disease is not available to all. In addition to an overall shortage of dentists, private practitioners limit acceptance of insurance, and, in the majority of Kansas counties, no private dental providers accept Medicaid. Correspondingly, it is extremely difficult for mentally ill and disabled populations living in rural Kansas to access dental care due to a host of barriers, including limited coverage of dental services through Medicaid and lack of provider understanding of the particular needs of the patient population. The Oral Health Outreach project is designed to minimize barriers by bringing services to patients where they are currently receiving services—such as local area mental health centers, long-term care facilities and community developmental disability organizations.

The target population for the project includes Medicaid waiver recipients and persons diagnosed as SMI in the following Kansas Counties: Allen, Anderson, Bourbon, Cherokee, Crawford, Labette, Montgomery, Neosho, Wilson and Woodson. These counties are located in the southeast region of the state and are historically the poorest and most underserved region, facing significant health disparities as a result of the area's poor socio-economic status. These counties also have historically poor social determinants of health, being placed in the lowest ranking quartile for both health outcomes and health factors by County Health Rankings. The Oral Health Outreach project targets comprehensive dental services for a challenging population that is in dire need of increased access to oral health services.

Part IV: Program Services

A. Evidence-based and/or promising practice model(s)

Consortium members used the Oral Health Disparities Collaborative Model to provide comprehensive dental service delivery using a portable mode of care in outreach settings. As it was primarily designed for pregnant women and early childhood oral health intervention, the model was modified to meet the specific needs of the project's oral health outreach initiative and tailored to meet the special needs of the Medicaid waiver and SMI populations. Because CHC/SEK is not new to dental outreach programs, its current promising practices were incorporated into the design as well.

B. Description of Activities

Outreach teams provide onsite dental services at community partners serving individuals who face barriers to receiving oral health services—a program that emphasizes equality—as everyone is given an opportunity for dental care, regardless of their insurance status or ability to pay.

The Oral Health Outreach project addresses the oral health needs of Medicaid waiver beneficiaries (the frail elderly, individuals with physical and disabilities and Severely Emotionally Disturbed children, for example) and persons diagnosed as Seriously Mentally Ill (SMI). The project has built on the proven track record of the Community Health Center of Southeast Kansas (CHC/SEK) in providing high quality, affordable and accessible dental outreach services (CHC/SEK has the largest dental outreach program in the state) and its history of working collaboratively to meet the needs of vulnerable individuals in the region.

Unique program elements include:

- Formal agreements are maintained with community partners, e.g., local area mental health centers, to provide comprehensive dental care onsite – as opposed to screenings or preventative services only. These agreements clearly outline the roles and responsibilities of each partner for the provision of truly collaborative care.
- A robust electronic health record is used for dental services, and also fully integrated across the continuum of services provided, including medical, dental and behavioral health—allowing providers to focus on whole-person wellness.
- Comprehensive services are provided using a team-based, patient-centered approach and include oral exams, x-rays, cleanings, sealants, fluoride treatments, fillings and extractions of primary teeth. Portable equipment, with minimal equipment expense, is used and set up onsite at community partners (i.e., much lower expense to provide care as opposed to a mobile van).
- Technology, e.g., direct digital dental x-rays, is linked with the electronic health record, to provide cost-effective services and to reduce x-ray exposure
- Dental teams incorporate oral health education into onsite service delivery.
- Patients are connected with Community Health Center resources/services, such as Outreach and Enrollment specialists, who work with the dental outreach teams to connect low income families with access to affordable insurance options, including KanCare, the State of Kansas Medicaid system.

C. Role of Consortium Partners

Four of the five consortium partners participate in the Eastern Kansas Health Network (EKHN), a health network formed in 2014 resulting from a rural health planning grant. Each consortium member had a clear role in the project, in order to increase oral health access for Medicaid waiver beneficiaries and persons diagnosed as SMI. Community Health Centers provided leadership and expertise in dental outreach services while other partners provide services to the project's target population and played a critical role in linking participants with delivery of dental services.

Part V: Outcomes

A. Outcomes and Evaluation Findings

Evaluation is an important aspect of the program. Patient data captured in our existing electronic health record (EHR) allows us to track completion of treatment plans as well as treatment needed. That information is supplemented with an internally developed spreadsheet that tracks other data including number of patients served and those with outstanding treatment in order to ensure proper care coordination.

Evaluation questions for the project were grouped under three primary strategies. A brief discussion follows each.

Strategy: Improve Access

- Is access to care improved?
 - Yes. More than 600 individuals during 1,400 visits have received services.
- Are program partners engaged?
 - Yes. The fifteen program partners communicate regularly with staff regarding logistics, follow-up and care coordination.
- Is the program effectively staffed?
 - Yes. The current staffing – with grant support – is effective, though to sustain the project through third part billing, staffing will be reduced.
- Is the program operational as outlined in the application?
 - Yes.

Strategy: Improve Quality

- Are quality services being delivered?
 - Yes. Provider staff dedicated to the project include a Registered Dental Hygienist with more than twenty years' experience and a Doctor of Dental Surgery (previously trained as a Physician Assistant) with more than five years' experience. All program patients have access to the same care protocols as patients seen in traditional clinic setting (i.e. patients receive a comprehensive oral examination and treatment plan as well as preventive services). While overall clinical quality can be hard to illustrate systematically due to profession's lack of focus in this area (for example, the annual Uniform Data System report for health centers had twenty medical health related measures and only one for oral health — sealants for children between 6-9), our dental program has a quality focus. The program is overseen by the Director of Dental Services — a clinician who is a member of our

Quality Improvement Team. Additionally, that team is incorporating dental measures into the array of outcomes measured each year (including diagnostic vs definitive care, ration of fillings to extractions, etc.).

- Is oral health status improved?
 - Yes. More than 75% of patients who received a Comprehensive Oral Evaluation had treatment plans completed. More informally, program partners report improved oral health status among program participants.
- Are services continually assessed for quality improvement?
 - Yes. There is continuous evaluation of quality through informal evaluation such as patient and program feedback and more formal review through CHC/SEK quality improvement program.
- Is the EHR maximized to support / document quality services?
 - No. While services are documented in the EHR, CHC/SEK staff have had to create registries, etc of patients receiving care because it was not easily accomplished using the EHR.

Strategy: Sustainability

- Are services delivered in a sustainable manner?
 - Yes. Program services will continue, though with staffing modifications as outlined below.
- Can modifications in expense be implemented to ensure sustainability?
 - Yes. Staffing will be reduced from current levels (5.5 FTE) to approximately 2 FTE to ensure program sustainability. The Program Director (.5) and Care Coordinator (1.0) positions are no longer necessary with duties being assumed by the Dental Hygienist. The remaining FTE for dental assistants and the dentist will be reduced to a composite single FTE.
- Are there alternate forms of reimbursement to sustain services?
 - Yes. In addition to billing Medicaid, we are also exploring Incurred Medical Expense in the long-term care setting. To date, we have been somewhat frustrated in our inability to locate a facility that will partner with us to pilot this reimbursement methodology.
- Are patients cared for in a timely manner?
 - Yes. We see most patients two to four times per year. If patients need care in the interim, we are either able to travel to see them or to refer them to one of our five dental clinics located throughout the region.

B. Recognition

On October 24, 2016 CHC/SEK was recognized as the 2016 Outstanding Community Partner by CLASS LTD, a Community Developmental Disability Organization (CDDO) and first Rural Health Outreach Grant program partner. CLASS LTD presented the award stating "CHC/SEK has gone above and beyond to care for our client's health and dental needs. We are very thankful to have such amazing services available to us." In addition to being the lead partner and the largest provider of services to individuals with intellectual and developmental disabilities in the region, CLASS LTD has become a champion for the project which has increased both the credibility and visibility of the program.

On November 2, 2017, Oral Health Kansas awarded program hygienist Lesley Johnson with the Outstanding Dental Hygienist Award during its annual Excellence in Oral Health Awards reception. Lesley was nominated for the award by Class LTD. for her work providing dental outreach services to their clients who have physical and mental disabilities. In nominating Lesley, Class LTD's nurse Cheryl Mahan said, "Lesley is concerned for our clientele that they receive the much-needed dental care that they have gone without for so long and goes out of her way to meet their needs whatever it takes. She is always patient, kind and caring and puts the clients at ease."

Part VI: Challenges & Innovative Solutions

One of the initial barriers we encountered was with many of the facilities/organizations having difficulty getting consent and health history forms returned from guardians in a timely manner. As each facility/organization is structured differently, it is challenging to develop a standardized solution. While the issue is not completely resolved, our current process is effective but can be somewhat time consuming. We continue to meet with program partners and brainstorm about potential solutions with a particular focus on how technology might help us overcome this barrier.

As CHC/SEK pursues the possibility of utilizing Incurred Medical Expense (IME) payments as a potential method of sustainability, we have discovered that many long-term care facilities view the IME billing process as cumbersome and overwhelming. We will continue to work with program partners as well as CHC/SEK's Billing Department to evaluate ways to simplify the process for facilities. Our goal in the next six months is to establish an IME pilot program with at least one long-term care facility.

While knowledge of the program has increased through both traditional marketing efforts as well as word of mouth, we still have difficulty identifying the most effective ways to identify and reach those individuals on the Frail Elderly (FE) waiver. The FE program provides an option for Kansas seniors who receive Medicaid and qualify functionally to receive community based services as an alternative to nursing facility care. Services include personal care, household tasks, and health services. The program promotes independence within the community and helps to offer residency in the most integrated environment. Given that these individuals are more dispersed than individuals in more traditional settings, they are exceedingly difficult to reach in large numbers.

Although contact was made with the Area Agency on Aging early in the program development, they seemed unable to provide any guidance. In order to overcome this barrier, we feel it would be beneficial to reconnect with the Area Agency on Aging now that the program is more developed and to explore other agencies that may be more able to connect us to those on FE waivers.

The Lack of specialty dental care providers is a challenge for all individuals living in southeast Kansas. The barriers become nearly insurmountable when adding lack of resources and physically or mentally disabling condition. While the challenge moves far beyond the scope of this project, a persistent issue is access to specialty care – particularly for Severely Emotionally Disturbed (SED) children and for those individuals with disabling conditions that would benefit from sedation dentistry.

In constructing its newest clinic in Parsons, CHC/SEK has created specialized space for a pediatric dentist. It is our goal to recruit and hire one to begin work in the summer of 2018 – which would be historic as there are currently no pediatric dentists practicing in any rural counties in Kansas.

Finally, in our efforts to market the program, we encountered a few facilities/organizations who serve the target population and see the value of the project but are satisfied with the oral health care their clients currently receive (whether at a CHC/SEK clinic or elsewhere). We have found that these facilities/organizations are usually open to the outreach team providing in-service training or continuing educational opportunities for their staff.

Part VII: Sustainability

A. Structure

This project, undertaken as part of the Eastern Kansas Health Network, will continue as will the consortium. The network has existed since 2014 and includes core partners that also participated in the project including Windsor Place, Four County Community Mental Health Center, New Beginnings and the Community Health Center of Southeast Kansas. In addition, the program has added partners to the project who are not formally part of the Eastern Kansas Health Network.

B. On-going Projects and Activities/Services To Be Provided

i) Will all, some or none of the elements of the program be sustainable once Outreach grant funding has ended? Please check the appropriate selection.

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained (i.e. the program will completely end after the grant period)

ii) Identify the projects and activities that will be sustained beyond Outreach grant period.

Given that the project was specifically designed to increase access to dental care using a proven cost-effective approach, many of the on-site oral health services currently provided will continue. Those targeted as part of the project — Medicaid waiver recipients and persons diagnosed as SMI — receive Medicaid which includes limited dental benefits for services such as comprehensive exams, x-rays as well as preventive services like cleanings, sealants and fluoride treatments. CHC/SEK will continue to provide and bill for these services as they not only improve overall outcomes but also provide a source of sustainable revenue.

In the case of those without dental coverage of any kind, CHC/SEK will provide care at a greatly reduced fee of \$35 but will not deny care due to the inability to pay. During the grant period, no payment was expected of the uninsured, but both patients and facilities were made aware that this would change after the grant period was up.

In addition, CHC/SEK will continue to provide the services and oversight of a dentist for the project. However, instead of having one dentist solely dedicated to the project, the workload will be shared using CHC/SEK's five dental clinics across southeast Kansas as primary hubs based on each clinic's geographic location to the partner facility. In addition, CHC/SEK

will fold the targeted case management duties into the role of the hygienist thereby eliminating the need for any additional staffing.

Any individuals needing restorative services such as fillings or extractions — which are not covered by Medicaid — will be referred to the local CHC/SEK clinic hub where care will be provided at a greatly reduced fee. Again, no one will be denied care due to the inability to pay.

CHC/SEK will also continue providing on-site education at partner facilities. Above and beyond the overwhelmingly positive feedback it has received from program partners, education activities can typically be done in conjunction with the delivery of preventive services thereby eliminating the need for additional, non-billable encounters.

Finally, CHC/SEK will keep looking to expand organizational partners and sites in an effort to consistently generate new patient volume. Moving forward, the Project Manager position is no longer needed as continued promotion of the program will be primarily through word of mouth from current partners as well as CHC/SEK's general marketing efforts.

C. Sustained Impact

Access to regular dental services delivered through the project has not only led to improved oral health for the targeted demographic but an improvement in overall systemic health as well. In addition, the social aspect of regular care and contact with dental professionals encourages increased self-respect and self-image which can be challenging at times for those with disabilities.

The professional and comfortable working relationships among the partner organizations created by the project has allowed better communication and understanding of how CHC/SEK can better serve each community. It has also generated discussion about how partners might work together in other ways (medical, behavioral health and pharmacy care, for instance) to best serve individuals and communities in need.

While CHC/SEK, specifically, has provided dental services to individuals with disabilities and mental illness since 2005, we had not, until the Rural Health Outreach Grant (RHOG), had a program that was specifically focused on serving these hard to serve populations. Nearing the end of the RHOG, we had greatly increased our organizational capacity to provide direct services to this population and to work with the agencies that also serve them. Moreover, the hygienist hired for the project – who will continue after the grant is expended – is a tremendous advocate for the patient population who has and will continue to work to ensure that CHC/SEK continues to focus on both their oral and overall health needs.

A better utilization of clinical time for the dental provider by incorporating on-site services has resulted in more treatment provided and less down time in the clinic setting due to physical and/or intellectual limitations of the individuals.

Part VIII: Implications for Other Communities

CHC/SEK has always had a commitment to “paying it forward” by sharing our experiences, lessons learned and expertise with others who are working to help those in need. This program, though it has many state and local elements that have been critical to success does have applicability to other states. Some general thoughts about the program, our experiences and qualitative measures that may be beneficial include:

- Critical to this program has been the existence of the Extended Care Permit (I, II & III) in Kansas. The ECP allows Registered Dental Hygienists who have an ECP to provide certain services without the direct, on-site supervision of a dentist. The ECP was created in 2005 expressly to expand access to care for those most in need. It came out of a statewide coalition that included advocates, practitioners and the state dental association. The lasting impact of the ECP has been immeasurable.
- Also vital to this program's creation and sustainability was the change in Kansas to Medicaid Managed Care in 2013. This change introduced three for-profit Managed Care Organizations. In that transition, additional adult dental services (exams and cleanings) were included as value added services – previously only limited exams and extractions were covered. The revenue for these additional preventative services will sustain this program.
- CHC/SEK's organizational culture supports both dental (about 25% of our overall program – much higher than many health centers) and outreach – both services have been provided since 2005. So, there is certainly administrative support and an organizational culture that values outreach services. Organizational culture has been critical to program success.
- CHC/SEK also enjoys solid collaborative relationships in the region – relationships for the most part that existed before this program was launched.

- Finally, finding the right staff to provide this service is crucial. Having provided outreach services for thirteen years and also having cared for the population for that same time, it was clear to CHC/SEK leadership the kind of staff needed to make the program a success. Without a doubt, staffing has been the most critical piece of the puzzle.

Part IX: Success, Increased Capacity, and Contributions to Change

A. Defining Success

- i) How do you define “success” for your grant program? Please check the appropriate selection(s). You may choose more than one option. If other, please describe.
- Access to a new or expanded health service
 - Increased number of people receiving direct services
 - Improved quality of health services
 - Operational efficiencies or reduced costs
 - Integration of process improvement into daily workflow
 - Continuation of program activities after grant funding
 - Continuation of network or consortium after grant funding
 - Health improvement of an individual
 - Health improvement among your program participants
 - Health improvement among your community
 - Enhanced staff capacity, new skills, or education received
 - Improved capacity to adapt to changes in healthcare
- ii) Do you believe that your program has achieved success? If so, how?
Yes, in several ways:
- Expanding access to quality dental services for those who would likely otherwise go without.
 - Developing a sustainable care delivery model.
 - Creating and deepening relationships with other service providers.
 - Furthering organizational capacity to manage on-site dental services for those with mental illness and disabling conditions.
 - Seeing the smiles on our patients’ faces.

B. Organizational Capacity

How has the federal funding of your grant program increased local capacity at your organization, within your network, and/or in your community? Please check the appropriate selection. If other, please describe.

- Formalized networks or coalition
- Developed new partnerships or relationships
- Enhanced skills, education, or training of workforce
- Enhanced data collection and analysis

C. Contributions to Change

Change in individuals’ lives, your organization, consortium, or community:

An on-site screening performed at a service center revealed a fractured tooth that a non-verbal client had. He was unable to communicate his distress to the point of understanding. His mood, appetite and behavior indicated a problem, but staff was unable to determine it was dentally related. Because we were at his service center, he was comfortable with allowing a screening. We then provided information to his mother so they could seek sedation dentistry. The next time we saw him, three months later, he was smiling and happy to let the hygienist clean his teeth. His behavior, mood and appetite were all improved as he was no longer in pain.

A client would only sit in a recliner, every day, Monday through Friday, for the entire time at a service center. He is now volunteering at the local animal shelter three times a week. He is walking daily and making better food choices. His staff believe that our on-site services, in part, helped with his self-awareness and self-respect due to the social interaction that is involved with each encounter. Being obese, he is not a candidate for sedation dentistry due to his BMI. His behavior has gone from not cooperative at all to extremely cooperative; allowing on site extractions. Not only is this client improved with his health, but he has become a productive member of our community with his volunteer work.

Change in policies, systems, and environment:

Our grant program has not had the explicit goal of policy, system or environmental change in favor of more localized specific change in the lives of those in need. However, as we have provided the service, we have seen a change in the systems of care with which we interact – organizations that serve those with disabling conditions or those with mental illness. At least informally, we believe they are becoming more aware of the importance of oral health in overall health and are taking steps to be sure this realization is made part of the policy and culture of the organization.

Kansas

Part I: Organizational Information

Grant Number	D04RH28390
Grantee Organization	Unified School District #498 Marshall County Kansas
Organization Type	School District
Address	121 E Commercial St – Waterville, KS 66548-8917
Grantee organization website	www.valleyheights.org
Outreach grant project title	Schools That Care
Project Director	Name: Philisha Stallbaumer
	Title: Project Director
	Phone number: 785-292-4453
	Fax number: 785-292-4455
	Email address: philishas@bluevalley.net
Project Period	2015 – 2018
Funding level for each budget period	May 2015 to April 2016: \$199,574
	May 2016 to April 2017: \$192,117
	May 2017 to April 2018: \$184,267

Part II: Consortium Partners

* Indicates consortium partners who have signed a Memorandum of Understanding/Agreement

Partner Organization	Location (town/county/state)	Organizational Type
Unified School District #498 Valley Heights	Waterville/Marshall/Kansas	School District
Unified School District #380 Vermillion	Vermillion/Marshall/Kansas	School District
Nemaha Valley Community Hospital	Seneca/Marshall/Kansas	Hospital
Blue Valley Telecommunications	Home/Marshall/Kansas	Telecommunications Business
School-Business Educational Consortium	Frankfort/Marshall/Kansas	Non-Profit Organization
Pawnee Mental Health Services	Marysville/Marshall/Kansas	Mental Health Center

Part III: Community Characteristics

A. Area

This Rural Health Care Services Outreach Grant served the following communities and counties in Northeast Kansas:

- Marshall County – The towns of Frankfort, Vermillion, Blue Rapids & Waterville
- Nemaha County – The towns of Centralia & Corning

B. Community Description

According to most recent data from the US Census Bureau, Marshall and Nemaha Counties are comprised of 20,077 residents. Based on this total number of residents, 6.9% of the total population in these two counties is under the age of five; 24.8% under the age of 18; and 21% age 65 years or over. In 2016, the Kansas Department of Health and Environment reported that suicide constituted as the second leading cause of death in the state for both the 15-24 and 25-44 age group and had risen to the third leading cause of death for the 5-14 age group. Unfortunately, no local suicide/mental health data for students in K-12th grades (target population) is collected except for what is being conducted through this grant project. Gaps in mental health services are present and do exist in the local service area. The Health Resources Services Administration has identified both Marshall and Nemaha Counties as county-wide Mental Health Professional Shortage Areas and county-wide Primary Care Health Professional Shortage Areas. Furthermore, both Marshall and Nemaha Counties are also designated as Medically Underserved Areas. Additionally, there are also economic and social conditions that impact the health status of these local communities. In 2016, the

median household income for Marshall County was \$47,532 and \$50,400 for Nemaha County. These figures are below the average of Kansas at \$53,571 and the United States at \$55,322. There is also a big discrepancy in the percentage of Marshall and Nemaha County residents ages 25 and older that have a bachelor's degree or higher when compared to state and national data. Only 17.9% of Marshall County Residents and 21.8% of Nemaha County residents hold a bachelor's degree or higher versus 31.6% of Kansas residents and 30.3% of United States residents.

C. Need

The Schools That Care Project was developed to address the unmet need for, and support of, awareness, education, prevention and early intervention as integral instruments in alleviating the ongoing mental health issues of students and their families in Marshall and Nemaha Counties located in Kansas. This program was designed as a pilot project that focused on K-12th grade students attending school at USD #380 Vermillion and USD #498 Valley Heights. Within the two-county area, these two local school districts were prioritized to serve as the focal point for the pilot project because of their high socio-economic need and lack of mental health resources/services provided to students and their families.

At the inception of the program, several factors indicated a need to address the challenges of mental health issues. Highlighted factors included the following:

- No participating schools were served on site by a Licensed Masters Social Worker or had a Mental Health Prevention Team in place. Furthermore, a limited number of school sites had written policies and procedures in place to address mental health issues pertaining to their students.
- No school instructors had received any type of professional development or training specific to mental health practices and procedures.
- Limited school sites utilized an evidence-based, comprehensive, mental health curriculum and school instructors rarely or never received any type of professional development on evidence-based mental health curriculum/programs.
- In Kansas, suicide was the 2nd leading cause of death for 15-24 year old individuals and the 3rd leading cause of death for 5-14 year old individuals.
- In one grant-participating school alone, four parents out of a class of 22 students (18%), had died by suicide. Within this same school, at least three high school students had also attempted suicide within a two-year span of the project's commencement.
- 22.1% of Kansas youth were bullied on school property in the previous 12 months before administration of the Kansas Youth Risk Behavior Survey compared to 14.8% for the United States.
- 31.76% of USD #498 students and 32.81% of USD #380 students reported parental attitude favorable towards drugs compared to 28.60% for the state of Kansas.

In addition, and as mentioned previously, the Health Resources Services Administration has identified both Marshall and Nemaha Counties as county-wide Mental Health Professional Shortage Areas and county-wide Primary Care Health Professional Shortage Areas. Furthermore, both Marshall and Nemaha Counties are also designated as Medically Underserved Areas.

Part IV: Program Services

A. Evidence-based and/or promising practice model(s)

The Kansas Multi-Tier System of Supports (MTSS) is the foundation model that was chosen to guide the project. No adaptations were needed and all activities in this grant fall into one of the following three levels of support:

- Tier 1: Serve all students with evidence-based curriculum/programs for prevention
- Tier 2: Serve some students with interventions at the earliest identification
- Tier 3: Serve a few students with targeted/specific student-centered interventions

All evidence-based curriculum/programs executed during the grant cycle were implemented as Tier 1 activities and are as follows:

- **Kansas Social, Emotional and Character Development Model Standards:** This model was used to train K-6th grade instructors to ensure for integration into the school setting. The purpose of the Social, Emotional, and Character Development Standards is to provide schools a framework for integrating social-emotional learning (SEL) with character development so that students will learn, practice and model essential personal life habits that contribute to academic, vocational and personal success.
- **Youth Mental Health First Aid:** Youth Mental Health First Aid was used to train 7-12th grade staff and community members how to help an adolescent (ages 12-18) who is experiencing a mental health or addictions challenge or is in crisis. The course introduces common mental health challenges for youth, reviews typical adolescent development, and teaches a 5-step action plan for how to help young people in both crisis and non-crisis situations.

- ***AlcoholEdu for High School:*** AlcoholEdu for High School is an online, alcohol education and prevention course designed to increase alcohol-related knowledge, discourage acceptance of underage drinking, and prevent or decrease alcohol use and its related negative consequences. This program is offered to all incoming freshman at each high school.
- ***Yellow Ribbon Suicide Prevention Program:*** The Yellow Ribbon Suicide Prevention Program is dedicated to preventing suicide and attempts by making suicide prevention accessible to everyone and removing barriers to help by empowering individuals and communities through leadership, awareness, and education. This program was implemented into grant project schools for all 7-12th grade students and staff.
- ***Olweus Bullying Prevention Program:*** The Olweus Bullying Prevention Program was integrated into classroom curriculum for grades K-12. It is a long-term, system-wide program for change involving program components at four levels: School Level, Classroom Level, Individual Level, and Community Level. All students participate in most aspects of the program, while students identified as bullying others, or as targets of bullying, receive additional individualized interventions. Goals of the program include: reducing existing bullying problems among students; preventing the development of new bullying problems; and achieving better peer relations at school.

B. Description of Activities

During the first year of the grant cycle (2015-2016), the Schools That Care Project accomplished numerous activities. First and foremost, a school social worker was hired to serve students and families within the two participating school districts. Each school identified and created active Mental Health Prevention/Early Intervention Teams. Assessment, Communications and Strategic Plans were created and implemented by all schools. Data collection protocols were established by the Evaluator/Strategic Planner. Lastly, professional development/training took place to educate school staff and project staff on evidence-based curriculum to be implemented in Years 2 and 3 of the grant.

In the second year of the grant (2016-2017), many activities from Year 1 continued. The school social worker provided mental health services to various students and/or families. Mental Health Prevention/Early Intervention Teams continued to meet to provide project expertise and guidance. Regular data collection continued to help ensure successful completion of program outcomes. Professional development/training was offered to those schools who did not partake in it during Year 1. Also, both the Communications Plan and Strategic Plan were updated and approved by network partners.

Furthermore, Year 2 included the addition of new activities. This included the updating and/or creation of written mental health policies and procedures for all schools. Community partnerships were formed to offer special events to engage students, parents and community members to support mental health education. Finally, discussions also began to take place on project sustainability and the future of the Schools That Care Project.

Like Year 2, Year 3 (2017-2018) included the continuation of many activities from the previous year. The school social worker was now seen as an integral part of the school environment and the number of students and families served by her knowledge and expertise continued to increase. Mental Health Prevention/Early Intervention Teams continued to meet on a regular basis. Data collection moved forward, and the Evaluator/Strategic Planner began to prepare for the Final Assessment Report. Written mental health policies and procedures were updated as needed. Evidence-based mental health curriculum continued to be implemented in schools. Additional community partnerships were formed to carry out related mental health activities. Also, both the Communications Plan and Strategic Plan were updated and approved by network partners. Finally, as the final year of the grant period proceeded, the Sustainability Plan was developed, completed and approved by grant partners along with the offering of Mental Health First Aid training to parents, first responders, health care providers and community members.

C. Role of Consortium Partners

In the planning phase of the grant-funded program, the following roles and responsibilities were outlined to ensure that all consortium partners had appropriate involvement in the needs identification process; ensure commitment of partners; and define roles for the target population:

- A variety of partners from different disciplines were utilized and involved to establish initial priorities in the project.
- Grant partners generated ideas and suggestions for the collaboration of specific activities to address the goals and strategies of the project.
- Partners also gathered ideas and suggestions for the collaboration of specific activities to address the goals and strategies of the project from the target population.
- Opportunities for continual input by partners were made available throughout the entire planning process.
- Dissemination of information from the planning process was provided to partners and community participants with the chance for them to offer feedback.

However, when it came to the implementation of grant activities, consortium partners had more specific roles/responsibilities according to their function and area of specialty. The School-Business Educational Consortium (SBEC) was the governing entity over the Health Education Action Partners (HEAP) and provided a Project Director and Project Assistant for the coordination of the *Schools That Care Project*. The Project Director and Project Assistant provided oversight for the implementation of proposed project goals, objectives, and activities to ensure successful collaboration and completion. Other Consortium partners that were involved in the Outreach Program are listed below along with their pertinent roles/responsibilities:

CONSORTIUM PARTNERS	ROLES/RESPONSIBILITIES
<p><u>Fiscal Agent:</u> Valley Heights, USD #498</p>	<ul style="list-style-type: none"> ● Provided financial accounting. ● Filed financial reports with HRSA. ● Worked with HEAP to verify that all funds were being spent as appropriated.
<p><u>Schools:</u> Vermillion, USD #380 Valley Heights, USD #498</p>	<ul style="list-style-type: none"> ● Offered assistance in strategic planning. ● Helped develop a Media & Communications Plan. ● Disseminated grant produced educational materials. ● Recruited and expanded community partnerships. ● Developed healthy learning environments. ● Collected and provided mental health related data. ● Created and implemented written mental health policies. ● Increased the awareness and decreased the stigma of mental health issues. ● Engaged and empowered parents and community members. ● Implemented evidence based mental health curriculum. ● Participated in professional development opportunities. ● Promote and implement sustainability activities in Years 4 & 5 of the grant project.
<p><u>Hospital:</u> Nemaha Valley Community Hospital</p>	<ul style="list-style-type: none"> ● Offered assistance in strategic planning. ● Helped develop a Media & Communications Plan. ● Assisted with mental health special events ● Provided input for mental health policies, procedures, programs and services offered. ● Helped with identification of mental health resources. ● Promote and implement sustainability activities in Years 4 & 5 of the grant project.
<p><u>Mental Health Facility:</u> Pawnee Mental Health Services</p>	<ul style="list-style-type: none"> ● Offered assistance in strategic planning. ● Helped develop a Media & Communications Plan. ● Assisted with mental health special events ● Provided input for mental health policies, procedures, programs and services offered. ● Helped with identification of mental health resources. ● Provided Mental Health First Aid Training for 7th – 12th grade school staff. ● Promote and implement sustainability activities in Years 4 & 5 of the grant project.
<p><u>Businesses:</u> Blue Valley Tele-communications</p>	<ul style="list-style-type: none"> ● Offered assistance in strategic planning. ● Helped develop a Media & Communications Plan. ● Assisted with mental health special events. ● Promote and implement sustainability activities in Years 4 & 5 of the grant project.

Part V: Outcomes

A. Outcomes and Evaluation Findings

To date, the Schools That Care Project has provided an impetus to make great strides in alleviating the ongoing mental health issues of students and their families within Marshall and Nemaha Counties in Kansas. The program has been able to accomplish the original goals, and the work plan was implemented as envisioned with minimal modifications to the timeline for just a few specific activities. This successful implementation can be contributed to countless factors including, but not limited to, ongoing collaboration; skilled program leadership; project activities being tailored to specific environments; effective communication; and the previous experience and success of other grant initiatives executed within local schools.

Data results from the first two years of the grant program show that the school sites and communities have experienced many positive outcomes. Noteworthy results collected by the end of Year 2 include:

- 1,837 unique individuals have participated in the mental health promotion/disease management activities offered to the public (students, school staff, parents, etc.)
- 336 unique individuals have received mental and/or behavioral health direct services through the school social worker.
- There has been a 1300% increase (from categories one to 14) in the number of unique mental health services offered to students and their families at each school district.
- 96% of school district staff, school building administration, project staff and Health Education Action Partners (HEAP) have been trained in implementing evidence-based, multi-tiered, mental health practices.

The success of data collection and positive outcomes can be contributed to school administration, instructors, and the social worker being trained in proper data collection procedures; measurements being specific, measurable, attainable, realistic and timely; and the previous experience of the project staff and evaluator conducting successful program assessment and evaluation.

Besides positive data results, constructive outcomes have occurred in both school and community settings. For example, instructors have now been trained to identify mental health risk factors and warning signs; implement and integrate mental health activities and lessons into curriculum; and to offer special events to engage parents and community members. Furthermore, project staff has provided Yellow Ribbon Suicide Prevention training to two additional communities and school districts. In fact, one of these school districts has created a Yellow Ribbon chapter within their own high school setting.

Through the Schools That Care Project, consortium partners have learned the value of addressing the mental health needs of students and their families early. In addition, school administration and instructors have been very receptive to receiving education and training pertaining to mental health issues. The caseload of the school social worker has exceeded the expectations of grant partners and the community/family need for more mental health related services is still prevalent. Lastly, despite increased training opportunities, it is notable that not everyone has the same level of expertise or experience with mental health issues, and this can prove to be a challenge at times.

B. Recognition

After receiving initial notification of the grant funding, newspaper articles and radio announcements prevailed throughout local communities. As grant activities continued to be implemented and events took place during the grant cycle, various newspaper articles were written and submitted along with pictures containing information on things such as special events. Many times, this same information was sent home in school newsletters and placed on school websites for parents and other community members to peruse and view.

Part VI: Challenges & Innovative Solutions

Although minimal in nature, following are some unanticipated challenges experienced during the Schools That Care initiative:

- Since the initial award came towards the end of a school year, calendars for the schools were already set, so this made it difficult to schedule trainings. Therefore, there was a delay in training for district administration and staff. Solving this required some creativity and adjustments to the work plan to reflect the needed changes. This just set back some activities but did not affect implementation.
- During the third year of grant implementation, the facilitator of the school district's bullying program left the district and had to be replaced. This caused some inconsistencies with implementation of activities, but new staff was hired, and the problem has been resolved.
- Finding time for administration and School-Business Consortium staff to meet with the school social worker has been a challenge due to her workload. This issue was resolved by meeting over the phone and internet.

Part VII: Sustainability

A. Structure

The consortium will continue since it is comprised of suitable partners to successfully manage and sustain the prioritized program activities beyond the grant period. Continuing partners include: USD #498 Valley Heights, USD #380 Vermillion, Pawnee Mental Health Services, Nemaha Valley Community Hospital, the School-Business Educational Consortium, and Blue Valley Telecommunications. Their involvement is explained in the next section B ii).

B. On-going Projects and Activities/Services To Be Provided

i) Will all, some or none of the elements of the program be sustainable once Outreach grant funding has ended? Please check the appropriate selection.

- All elements of the program will be sustained
- Some parts of the program will be sustained
- None of the elements of the program will be sustained (i.e. the program will completely end after the grant period)

ii) Identify the projects and activities that will be sustained beyond Outreach grant period. Moving forward towards the continuation of program activities beyond the grant period, Consortium partners decided it was crucial to reevaluate their roles in the process and develop an organizational structure to maximize the ability of those being served to participate and to produce intended results. While accomplishing this task, they kept in mind decisions needed surrounding the vital areas of program structure including management/coordination; staffing structure; and collaboration among partners.

The first program structure component reviewed was management/coordination. Discussion took place regarding management/coordination processes and structures that had worked well in the past; improvements that could be made; management/coordination functions necessary to sustain the prioritized activities; and if the management/coordination role could be assumed by a consortium partner or partners.

Regarding staffing structure, the conversation focused on the expertise needed to continue and sustain the prioritized program activities; absorption of prioritized activities by consortium partners; volunteerism; and any necessary paid staff to carry out prioritized activities.

Dialogue on collaboration among partners included updating and clarifying partner roles; recognizing partners' expertise; the flow of communication and coordination among partners; the continuation of consortium existence for sustainability; and the need, if any, for new or different partners.

Based on the reflection centered on the three areas of program structure, it was ultimately decided that the Consortium currently has the right partners to successfully manage and sustain the prioritized program activities beyond the grant period. However, some partners will fulfill newly defined roles with their level of project involvement based upon the continued implementation of various activities and their specific relationship to each partner. It was also concluded that current personnel exists within partner organizations that comprise the necessary skills and knowledge to adequately staff the continuation of program activities, and this role will be absorbed by such partners.

The designated roles for consortium partners pertaining to sustainability follow: USD #380 Vermillion and USD #498 Valley Heights: School district partners will play a very large role in the continuation of program activities. School district administration will be responsible for providing oversight in the management/coordination of continued program activities at each of their school sites. School districts will also oversee staffing personnel at each of their sites to ensure implementation of prioritized program activities. This will include the funding and employment of the school social worker. In addition, the two school districts will split the annual fee for AlcoholEdu to ensure its continuation and work with Pawnee Mental Health Services to provide new hires training in Youth Mental Health First Aid. Other Consortium partners will fulfill sustainability activities in the following ways:

- **School-Business Educational Consortium (SBEC):** The School-Business Educational Consortium will assume a smaller role than previously in the continuation of program activities. They will no longer provide paid staff to provide management/coordination of program services to school districts nor help with activity implementation unless on a volunteer basis. However, the SBEC will continue to offer expertise and skills to schools that is built on a strong foundation of experience. Partners will also continue to meet monthly to discuss ways to meet mental health needs.
- **Pawnee Mental Health Services:** Pawnee Mental Health Services will continue to undertake the same role as previously by providing expertise, skills, and assistance with special events and the identification of quality mental health resources for students and their families. In addition, they will provide Youth Mental Health First Aid or Mental Health First Aid training to local schools and communities for a minimal fee on an as needed basis.
- **Nemaha Valley Community Hospital:** Nemaha Valley Community Hospital will continue to undertake the same role as previously by providing expertise, skills, and assistance with special events, classroom presentations, and other special projects as needed.

- **Blue Valley Telecommunications:** Blue Valley Telecommunications will continue to undertake the same role as previously by providing expertise, skills and assistance with communication and technology endeavors.

The continuation of program activities prioritized by consortium partners is dependent upon the modifications to the organizational structure of the program and the modifications to the management structure of the program noted in the next section. Working together, these changes to the overall program structure will be conducive to creating and maintaining sustained impacts.

C. Sustained Impact

The sustained impacts resulting from activities implemented during the Schools That Care Project initiative are diverse and numerous, including on-going collaboration; improved service models; increased capacity in local systems; new policies; and changes in knowledge, attitudes and behaviors.

- On-Going Impacts of Collaboration:
 - New lines of communication have been established between participating school districts and a school social worker.
 - The culture of collaboration in communities has changed by schools incorporating and engaging health care partners to be involved in mental health special events.
- Improved Service Models:
 - New mental health curriculum models incorporated into the school environment.
 - School instructors trained in the integration of various mental health curriculum.
- Increased Capacity in Local Systems:
 - Hiring and employment of a school social worker to provide mental health services to students and their families.
 - Purchasing and implementation of mental health curriculum that can be integrated into school classrooms.
- New Policies to Sustain Impact:
 - Written mental health policies and procedures at school sites that are consistently enforced and updated regularly.
- Changes in Knowledge, Attitudes and Behaviors:
 - School staff, student, parent, and community awareness on the importance of addressing mental health issues has increased due to outreach and training.
 - School instructors have approached their teaching instruction in a new way and recognize the benefits and significance of mental health activities and services within the school setting.

Identified dedicated resources to sustain the long-term impacts listed above include various human resources; partnership resources; and material resources. These include, but are not limited to the following:

- Human Resources:
 - Health Care Partners, including Health Education Action Partners (HEAP)
 - Community Partners/Community Support
 - SBEC Board
 - School Administration & Staff
 - Parents
 - Public Support
- Partnership Resources:
 - Partner Connections
 - School/Site Facilities including Classroom and Office Space
 - Time, Energy, Expertise and Skills of Partners
- Material Resources:
 - Mental Health Policies for Students
 - Manipulatives & Resources for Mental Health Awareness and Education

All mental health endeavors selected to be continued will remain integrated into the school environment, and each school site will be accountable for its own coordination of services. The integration for most of the mental health curriculum into the classroom setting will continue at no additional cost, except for the yearly fee to continue implementation of the AlcoholEdu program and a minimal fee for Youth Mental Health Training of new instructors. This expenditure, along with the salary for the school social

worker, will be sustained equally between the two school districts. Since the "train the trainer" model was utilized in providing professional development for the mental health curriculum/programs, this built in resource can be used for any future training of new instructors. Furthermore, school sites will be responsible for the maintenance and service of any mental health resources. If new or replacement resources are needed to implement mental health related activities, they will be placed on a rotational basis like other school purchasing processes. Currently, there is no need for fiscal resources or funding streams outside of the two school districts to sustain impacts.

Part VIII: Implications for Other Communities

The experiences and outcomes of the Schools That Care Project have resulted in a belief that it definitely could be of benefit to other small rural communities; and furthermore, easily replicated. Because most of the activities in the program are incorporated into the school setting, the model for this project can be applied to other similar and not so similar school districts with very little adaptability. For instance, all of the mental health curriculum purchased and implemented during the program period can be utilized in any type of school environment as demonstrated by the two school districts whom participated in the grant project. Therefore, the schools that have been involved in this grant program can now share their experiences and expertise with other schools on how to select appropriate evidence-based curriculum and resources and provide demonstrations on how to implement both within and outside of the classroom setting. Additionally, they can also share recommendations on the implementation of other grant activities such as policy and environmental changes and community engagement and empowerment.

Qualitative measures/indicators that may be beneficial for others to consider when creating their programs include but are not limited to the following: an increased awareness within the community as a whole; increased knowledge of project participants; and increased engagement in appropriate mental health behaviors by both students and families.

Part IX: Success, Increased Capacity, and Contributions to Change

A. Defining Success

- i) How do you define "success" for your grant program? Please check the appropriate selection(s). You may choose more than one option. If other, please describe.
- Access to a new or expanded health service
 - Increased number of people receiving direct services
 - Improved quality of health services
 - Operational efficiencies or reduced costs
 - Integration of process improvement into daily workflow
 - Continuation of program activities after grant funding
 - Continuation of network or consortium after grant funding
 - Health improvement of an individual
 - Health improvement among your program participants
 - Health improvement among your community
 - Enhanced staff capacity, new skills, or education received
 - Improved capacity to adapt to changes in healthcare

- ii) Do you believe that your program has achieved success? If so, how?
- This program has achieved success because it has created and/or provided access to new or expanded health services (a total of 16 mental health services for two school districts); increased the number of unique people receiving direct services (from 0 in Year 1 to 169 in Year 3); provided the opportunity for continuation of program activities after grant funding (all project activities will be sustained after the end of the three-year grant period); provided the ability for the continuation of network or consortium after grant funding (all grant project partners will be involved in the sustainability of the project); and enhanced staff capacity, new skills or education received (96% of school administration and staff, project staff, and HEAP have been trained in/on mental health related issues).

B. Organizational Capacity

How has the federal funding of your grant program increased local capacity at your organization, within your network, and/or in your community? Please check the appropriate selection. If other, please describe.

- Formalized networks or coalition

- Developed new partnerships or relationships
- Enhanced skills, education, or training of workforce
- Enhanced data collection and analysis

C. Contributions to Change

Story #1: The Schools That Care initiative has had a huge impact on the Valley Heights School District (USD #498) and the communities it serves. One specific example is that through the project's initiative and the help of the school social worker, a homeless family was able to be connected to appropriate agencies and resources for assistance. Additionally, within the same school district, a student who was originally preparing to drop out of school was connected to a mental health agency and is engaged with the school social worker. This student has now decided to remain in school.

Story #2: At Frankfort Schools (USD #380), having a social worker within the schools has been viewed as a blessing. When the social worker initially started her employment, it was thought that her services would be used maybe minimally. However, school administration has now come to the realization that they don't know how they ever "survived" without a social worker. The school social worker has worked with students to improve issues with self-confidence and decrease disciplinary referrals to the principal's office.

The Schools That Care grant program has provided both direct and indirect contributions to policy changes, systems changes, and environmental changes. Mental health policies and procedures were created and/or updated by all participating partner schools and are approved annually by each district's Board of Education. Mental Health Prevention/Early Intervention Teams were identified and created in each school to focus on mental health issues. A school social worker was hired to provide direct mental health services to students and their families. School administration and staff were trained and received professional development in mental health awareness and specific mental health programs. Evidence-based mental health curriculum was identified, implemented and integrated into the classroom setting. Lastly, "de-escalation" areas were created in all schools in order for students to have the opportunity, if needed, to decompress while experiencing a mental health issue.

Kentucky

Part I: Organizational Information

Grant Number	D04RH28376
Grantee Organization	Montgomery County Health Department (MCHD)
Organization Type	Local Independent Health Department
Address	117 Civic Center Mount Sterling, KY 40353
Grantee organization website	www.montgomerycountyhealth.com
Outreach grant project title	Western KY Health Care Access Consortium
Project Director	Name: Jan M Chamness
	Title: Public Health Director
	Phone number: 859-498-3808
	Fax number: 859-498-9082
	Email address: JanM.Chamness@ky.gov
Project Period	2015 – 2018
Funding level for each budget period	May 2015 to April 2016: \$200,000
	May 2016 to April 2017: \$200,000
	May 2017 to April 2018: \$200,000

Part II: Consortium Partners

* Indicates consortium partners who have signed a Memorandum of Understanding/Agreement

Partner Organization	Location (town/county/state)	Organizational Type
*Sterling Health Solutions	Mount Sterling, KY (Montgomery County)	Federally Qualified Health Center
*Saint Joseph Mount Sterling	Mount Sterling, KY (Montgomery County)	Hospital
*CHES Solutions Group	Lexington, KY (Fayette County)	External Evaluator
*Montgomery County industrial Authority	Mount Sterling, KY (Montgomery County)	Industrial Authority/Chamber of Commerce
*Montgomery County Cooperative Extension	Mount Sterling, KY (Montgomery County)	University Cooperative Extension
*Mount Sterling/Montgomery County Council of the Arts	Mount Sterling, KY (Montgomery County)	Arts Center
*Dr. A.M. Vollmer, DMD	Mount Sterling, KY (Montgomery County)	Dentist
*Pathways, Inc.	Mount Sterling, KY (Montgomery County)	Mental Health Counseling Center
*Mount Sterling Public Library	Mount Sterling, KY (Montgomery County)	Public Library
*Montgomery County Schools	Mount Sterling, KY (Montgomery County)	Public School System
*Mount Sterling/Montgomery County Parks and Recreation	Mount Sterling, KY (Montgomery County)	Parks and Recreation

Part III: Community Characteristics

A. Area

The Consortium has worked with a five-county service region which includes Bath, Menifee, Morgan, Rowan, and Montgomery counties located in rural Appalachia Kentucky.

B. Community description

The 2015 population of the Consortium's five-county service region (Montgomery, Bath, Menifee, Rowan, and Morgan) is 83,451 residents. More than one third of these residents live in Montgomery County, which serves as a regional hub for business, industry, education, recreation, and health care. Another third of the population lives in Rowan County which serves as a regional hub as well as housing one of the state's public universities, (Morehead State University). About 95 percent of the service region's

residents are Caucasian, with the remainder split evenly between Latino and African American in the counties served that constitute the Gateway Area Development District (ADD) (State planning districts are organized as ADDs) However, the fastest growing group is Latinos. According to the 2015 U.S. Census, 687 Latinos live in Montgomery County, and another 722 live in other counties in the Consortium service region. We suspect, however, that many undocumented Latinos living in the area did not complete a census form.

The population in the five county service region resides in the Appalachian region of Eastern Kentucky. This region is considered one of Kentucky's most rural, most remote and most poor. Persons residing in this area demonstrate numerous needs and barriers to care, including: 1) poverty and unemployment rates well above state and national averages; 2) incarceration rates above the national average; 3) significant problems in accessing affordable health care; 4) fewer health care providers per capita when compared to national averages; 5) substance abuse and mortality rates well above national averages; and 6) individual and community health indicators that are ranked nationally near the bottom in most health-related metrics (e.g., chronic disease, substance abuse and addiction, heart disease, diabetes, etc.). More recently, Kentucky ranks in the top five among states that have been impacted by the opiate crisis. According to the Kentucky Injury and Prevention and Research Center (KIPRC) approximately 30 out of every 100,000 people have died of a drug overdose in Kentucky from 2011 to 2014. In the five-county service region, approximately 80 in every 100,000 people have died of an overdose from 2012 to 2015, and this trend is expected to continue to increase.

Two significant contributing factors of Kentucky's health disparities are poor literacy and educational attainment rates, which in these counties are well below national averages. Extensive research has demonstrated numerous linkages between poor literacy and educational attainment rates and negative health outcomes. Therefore, continuing and improving the CHW model is vital to addressing needs in this region.

C. Need

The Consortium service area is seeing the same health care issues that are so prevalent in other parts of Appalachia. This region has a high death rate from chronic disease that directly correlates with high rates of risk-related behaviors and conditions such as smoking, obesity, lack of physical activity and lack of regular preventive medical care. Rural areas in Kentucky face a number of challenges that limit access to dental care services for many residents. These include geographic and travel barriers, fewer fluoridated community water supplies, a shortage of dental health professionals relative to the rest of the country, fewer providers willing and able to serve racial and ethnic minority populations, limited oral health literacy, and a lower rate of people covered by dental insurance.

Dental disease also adds to overall health care cost and is a large factor in unreimbursed care. For example, poor families unable to get regular dental care are more likely to use a hospital emergency room when a tooth or gum problem becomes acute – a much more costly treatment than a visit to a dentist's office. Preventive dental care for a child's first six years of life costs \$200 to \$250, but if the teeth are neglected and become diseased, experts estimate that a hospital stay and surgery could cost \$5,000, which in many cases is paid by the tax-funded Medicaid program. The cost of managing untreated dental disease has been apparent during the 12 years of the Bridge/El Punte program. While it was anticipated that primary care costs would be the larger portion of expenses for the program, the reality is that the costs for dental care far outpaced the cost of providing primary care. While there is still unmet need in the areas of primary care, dental care and mental health care, we have also discovered that the prevalence of chronic diseases is significant and that many Latinos do not have the information or ability to manage their disease appropriately.

Part IV: Program Services

A. Evidence-based and/or promising practice model(s)

We have based the project on the promising practice of employing Community Health Workers (CHWs) to provide outreach, education, navigation, and care coordination services to clients in order to improve access to care, ability and confidence to manage chronic diseases, and to improve overall health status. Through the course of the project, we have monitored the literature regarding the use of CHWs especially as it relates to clients with chronic disease. This project is innovative in that we can provide an evidence base that demonstrates that CHWs can also be effective in improving clinical measures in patients with chronic disease by improving self-efficacy and improving patient satisfaction. Another evidence based model that is incorporated into the CHW model is the Stanford Chronic Disease Self-Management Program. All CHW's are trained as Lay Leaders for the CDMSP program thus giving them a sound basis for helping each client learn to self-manage their chronic disease, increasing their self-efficacy as evident from the Stanford Chronic Disease Self-Efficacy Questionnaire of all clients and overall health outcomes.

B. Description of Activities

The Bridge/EI Puente Program has four focus areas; Health Care Access, Chronic Disease Management, Health Outcomes and Sustainability, and finally, Evaluation. Meetings began with consortium partners to implement the work plan immediately upon NOA. With evaluation and sustainability in every meeting, the program was successful in the placement of three Community Health Workers (CHWs) in two service area hospital emergency departments (EDs) and a local FQHC. This also provided increased access to health care for the program's target population. Going further, program presentations were conducted with PCPs throughout the service area. This resulted in an increased referral base to the program, helping to identify persons with chronic disease within the service area.

Through the use of CHWs, the program is able to provide culturally competent chronic disease self-management information to the target population in a way that has been shown, through an external evaluator, to increase program participant self-efficacy scores. The program has also reached statistical significance in the following areas: reduction of HbA1C scores, reduction of ED visits, increased self-efficacy, and increased medication adherence. We feel this information validates the effectiveness of CHWs and the success of the Bridge/EI Puente Program.

C. Role of Consortium Partners

The Bridge/EI Puente Community Health Worker (CHW) Program is the project funded by the Consortium's Rural Health Services Outreach Grants, has been in existence for over 12 years, and has provided medical, dental and mental health visits to the nearly 1,300 people enrolled. Consortium members have continued to be involved with the target population in program planning. Members regularly attend Consortium and Medical Advisory Board meetings. Consortium members have recognized the importance of having members of the target population involved in needs assessment and program planning. Consortium members keep regular contact with the Outreach Coordinator and CHWs to address barriers and find solutions to challenges that arise. At the end of each program year, staff survey participants in the program, local providers and other stakeholders to gather information that could be used in sustainability efforts. We estimate that 10 percent of the target population has been involved in assessment and program planning. In addition to members of the target population, several community partners, as well as state and national organizations have been involved in the planning and implementation of this project. The partners have a long history of supporting each other and working together to accomplish projects that benefit the community.

One of the problems the Consortium has routinely encountered is the cost of care when clients are found to have various chronic conditions. While it was anticipated that primary care costs would be the larger portion of expenses for the program, the reality is that the costs for dental care far outpaced the cost of providing primary care. To help combat this problem, Sterling Health Solutions (SHS), the local FQHC, is now providing primary dental care as of May 2017. They have two fulltime dentists on staff in addition to hygienists and 7 bays to provide service. We feel that just as SHS's primary care was a sustainability factor for our programs, the dental clinic will be as equally valuable. While there is still unmet need in the areas of primary care, dental care, and mental health care, we have partnerships and networking to be vital to problem solving the patient's care.

Part V: Outcomes

A. Outcomes and Evaluation Findings

The evaluation is ongoing and is being conducted by an external evaluator, CHES Solutions Group, Inc. This evaluation utilizes a longitudinal, quasi-experimental design in order to provide a formative and summative evaluation of the CHW Model and the CHW programs, the Bridge/EI Puente. Thus far, five CHWs have been hired to carry out the CHW responsibilities and administer the data collection tools. Potential clients are enrolled in the programs if they have a chronic condition or are at risk for a chronic condition. The CHWs visit the clients on a monthly basis and provide the clients with health education and navigation related to chronic disease. 304 clients have been enrolled in the CHW programs since April 2013 (prior to this funding period). All data points appear to be moving in the ideal direction and many have reached statistical significance. Below is a summary of evaluation results as of December 2017 (percentages are rounded down to the nearest whole number).

Baseline Data

Social Determinants

- 58% are unemployed or not looking for employment.
- 50% have less than a high school diploma or GED.
- 51% stated they do not have enough money to pay the bills every month.
- 42% are utilizing SNAP or food stamps.
- 169% do not have reliable transportation to and from healthcare appointments.
- 41% have difficulty accessing or providing housing, food, clothing, or utilities for themselves and their family.

Health and Lifestyle

- 54% have high blood pressure or hypertension
- 37% have mental health issues.
- 26% have diabetes, type II.
- 37% stated they used tobacco products on a regular basis.
- 34% stated they do not engage in any physical activities or exercise.
- 46% do not have medical insurance or coverage. *This is down from 84% reported in the 2016 NCC progress report and 54% reported in the 2017 NCC progress report.*
- 31% do not have a primary care provider.

Key Findings

- 5% gained medical coverage
- 16% gained a primary care provider
- 9% obtained reliable transportation
- 20% overcame difficulties accessing or providing housing, food, clothing or utilities
- Increase in appointment compliance
- Increase in medication adherence
- Statistically significant decrease in ER visits
- Statistically significant increase in self-efficacy
- Statistically significant increase in perceived health status
- Statistically significant decrease in A1c scores
- 23% met care plan goals
- 41% referred to CHW by family, friends, or word-of-mouth

The CHWs provide patient navigation, care coordination, chronic disease self-management and health education. The CHWs not only help clients navigate the healthcare system, but they also help navigate the social services world. The social determinants listed earlier can impede how and when a client seeks treatment or assistance for their health conditions. Helping clients counteract these challenges will improve their focus on their health conditions and what they need to do in order to lead a healthier lifestyle. The CHWs have assisted clients in coordinating their care and provided links to primary care providers and the healthcare coverage. They educate their clients on the importance of keeping healthcare appointments and adhering to their medication. The CHWs also provide education on numerous chronic diseases and how to manage those diseases.

B. Recognition

The Montgomery County Health Department Project Director and program staff have made numerous presentations at both the national and state levels on the benefits of utilizing the CHW-model in rural Appalachian Kentucky toward improving health access and as a result improving health outcomes. Listed below are a few examples of presentations that have been made because of the long-standing success of this program:

- *Using Community Health Worker Model to Improve Outreach Services and Access to Health Care Among Rural Residents in Western Appalachian Kentucky.* Gina Brien, Jan Chamness, Rashmi Brown, Kay Hoffman, Melissa Wilkinson. Community Development Society Poster Presentation, Lexington, KY, July 2015;
- *Patient Navigation in Community Health Workers.* Gina Brien, and Keisha Cornett. Gateway Regional Lung Cancer Roundtable. Morehead, KY, May 9, 2016.
- *Kentucky Association of Community Health Workers.* Gina Brien and Mace Baker. Kentucky Office of Rural Health Clinic Summit. Richmond, KY, June 10, 2016.
- *Kentucky Association of Community Health Workers.* Gina Brien. Kentucky Heart Disease and Stroke Prevention Task Force. Frankfort, KY, July 13, 2016.
- *Importance of Evaluation for Expansion and Sustainability.* Gina Brien and Rashmi Brown. Kentucky Heart Disease and Stroke Prevention Task Force. Frankfort, KY, August 16, 2017.
- *Supporting and Promoting Community Health Workers in Western Appalachia Kentucky: A Network Collaboration and Analysis.* Gina Brien, Jan Chamness, Rashmi Brown, Kay Hoffman. American Public Health Association National Conference. Atlanta, GA, November 8, 2017.
- *Supporting and Promoting Community Health Workers in Western Appalachia Kentucky: A Network Collaboration and Analysis.* Gina Brien, Jan Chamness, Rashmi Brown, Kay Hoffman. HRSA Community Based Division All Grantees Meeting, Rockville, MD, February 28, 2018.

- *Supporting and Promoting Community Health Workers in Western Appalachia Kentucky: A Network Collaboration and Analysis.* Gina Brien, Jan Chamness, Rashmi Brown, Kay Hoffman. Kentucky Public Health Association State Conference. Covington, KY, April 26, 2018.

MCHD has also submitted an abstract for the 2018 American Public Health Association Conference in November 2018. They will know in June 2018 if their abstract has been accepted.

Part VI: Challenges & Innovative Solutions

The consortium previously listed two challenges to the CHW programs in 2016. The first was addressing potential clients who were approaching CHWs for dental assistance only. These potential clients are now being enrolled in the program and are benefiting from the full benefits of engaging in the program. The second challenge was the merger between St. Joseph's Mt. Sterling (SJMS) Hospital and Kentucky One Health and its effect on the hiring process of one full-time CHW in this hospital's emergency department. MCHD worked with the hospital and a full-time CHW was hired in September 2016.

Another challenge that came about in 2017 is due to some recent changes to the Affordable Care Act in Kentucky. Because of these changes, CHWs are no longer able to easily assist clients with enrollment in health insurance and Medicaid through KYNECT. All of the CHWs were trained as "Kynectors" and were able to use a dashboard on KYNECT to access a client's application, look at any communication from KYNECT, contact KYNECT on a client's behalf, and act as an advocate for clients to help them understand their new coverage. Now, clients will need to enroll in health insurance by using the national website: <http://www.healthcare.gov>. If the client is eligible for Medicaid, he or she will be redirected to a system called, Benefind, which is currently still working out a lot of issues and kinks. Since a majority of the clients qualify for Medicaid, our CHWs have not needed to work with <http://www.healthcare.gov>. Moreover, those trained as "Kynectors" do not have any special access to Benefind, and training on this new process or system isn't available yet. Most recently Kentucky has developed the 1115 Medicaid waiver in which they will need to receive education on in order to help clients understand the changes and requirements of their new Medicaid coverage.

Part VII: Sustainability

A. Structure

The following partners will continue as part of the Consortium:

- Sterling Health Solutions, local FOHC
- CHES Solutions Group, Inc.
- St. Joseph's Mt. Sterling Hospital (SJMS)
- Saint Claire Regional Medical Center (SCR)
- Private dental and vision providers
- Private 340B pharmacies
- Industrial Authority
- Pathways Community Mental Health Center
- Kentucky Department for Public Health
- Northeast Kentucky Rural Health Information Center (NeKY RHIO)
- Northeast Area Health Education Center (AHEC)

We have been fortunate to work with outstanding partners to carry out the services and grant work in our service area. The FOHC helped establish a medical home for many who could not afford an office visit prior to the ACA. CHES Solutions Group, Inc. has been instrumental in developing our evaluation plan and data collection tools, advising on program design and development, and providing assistance for reporting requirements. SJMS, the dental providers, and the vision providers have contracted with us to provide medical services to clients who wouldn't receive these services without our assistance. SJMS and SCR have both worked with us on MOA's to establish Community Health Worker (CHW) roles within their Emergency Departments and creating another referral source for our CHWs in addition to referrals from other hospital departments like home health and primary care clinics. The industrial authority, specifically the chamber of commerce, has helped us identify possible community partners through local businesses and has also provided information on local demographics. Pathways Community Mental Health Center has provided mental health services, as identifying mental health issues could lead to the mismanagement of chronic diseases and is a need of the populations we serve. The KDPH and the state have developed the CHW workgroup, which will be informed by existing CHWs from across the state, including our programs' CHWs. With the initiation of the ACA, organizations like the NeKY RHIO are funded to assist providers in the use of technology and connectivity (specifically electronic medical records or EMR) and how its use can

improve the health of our communities. As CHWs gain more popularity and are used more frequently throughout healthcare systems, it will be more important for them to have access to the EMR of their clients in order to accurately report on the clients' clinical outcomes. Moreover, we want CHWs to become a part of the patient-centered medical home (PCMH). FQHCs receive significant amounts of federal funding when they reach PCMH status (enough funding to pay for CHWs) and this is accomplished through their EMR documentation. And finally, AHEC is assisting us in identifying curriculum and training modules for CHWs in Kentucky.

New or Potential Partners

- *Montgomery County Regional Jail*
With the increase in the opioid epidemic in our service region, the potential exists to reach out to the justice –served population to provide CHW services upon their re-entry into the community to ensure a safe and healthy transition to the workforce, health care delivery system, and their family and social support.
- *Shepherd's Shelter/Ross Rehab*
Shepherd's Shelter/Ross Rehab is a drug and alcohol treatment facility in our service region where CHWs would refer clients in need of those services.

B. On-going Projects and Activities/Services To Be Provided

i) Will all, some or none of the elements of the program be sustainable once Outreach grant funding has ended? Please check the appropriate selection.

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained (i.e. the program will completely end after the grant period)

ii) Identify the projects and activities that will be sustained beyond Outreach grant period.

Thus far in the CHW programs, we have seen our demographic results mirror that of the target population needs assessment that was completed in 2015 for the project narrative. Here is a summary of the demographics and other descriptors that describe our current clients at enrollment into the CHW programs:

Social Determinants

- 58% are unemployed or not looking for employment.
- 50% have less than a high school diploma or GED.
- 51% stated they do not have enough money to pay the bills every month.
- 42% are utilizing SNAP or food stamps.
- 169% do not have reliable transportation to and from healthcare appointments.
- 41% have difficulty accessing or providing housing, food, clothing, or utilities for themselves and their family.

Health and Lifestyle

- 54% have high blood pressure or hypertension
- 37% have mental health issues.
- 26% have diabetes, type II.
- 37% stated they used tobacco products on a regular basis.
- 34% stated they do not engage in any physical activities or exercise.
- 46% do not have medical insurance or coverage. *This is down from 84% reported in the 2016 NCC progress report and 54% reported in the 2017 NCC progress report.*
- 31% do not have a primary care provider.

Given these numbers and the information provided in the needs assessment, it is vital that the CHW programs continue their current program activities. The CHWs provide patient navigation, care coordination, and chronic disease and health education. The CHWs not only help clients navigate the healthcare world, but they also help navigate the social services world. The social determinants listed above, among others, can impede how and when a client seeks treatment or assistance for their health conditions. Helping clients counteract these will improve their focus on their health conditions and what they need to do in order to lead a healthier lifestyle. The CHWs also help clients coordinate their care and provide links to primary care providers. They educate their clients on the importance

of keeping healthcare appointments and adherence to their medication. The CHWs also provide education on numerous chronic diseases and how to manage those diseases.

The Rural Health Outreach Services Grant has also helped the MCHD integrate all chronic disease programming into the CHW programming, including colon cancer screening, healthy homes assessments, care collaborative (blood pressure education and monitoring), diabetes education, heart disease and stroke education, obesity education, and coordinated school health efforts. The MCHD has been able to expand its partnerships and network through relevant referrals to address the clients' identified needs and fund a formative evaluation of the CHW programs with the help of CHES Solutions Group, Inc. The Consortium will continue all of these outreach and program activities from our Rural Health Outreach Services grant.

C. Sustained Impact

Because these programs use innovative outreach and care coordination components employing CHWs, we have seen health care access and the overall health status of our clients living in the Consortium service area improve significantly. Aside from the outcomes outlined in Part V Section A, the CHWs have become advocates and leaders for their communities and are known as connectors between their clients and the healthcare system. This is evident in that 41% of all referrals to the CHWs come from family, friends, or word-of-mouth. Moreover, there has been a large impact on the Latino population as a bilingual CHW has been relocated to the FOHC, part-time, in order to assist with outreach and other services. This has increased the visibility of the CHWs among the Latino population and has strengthened the partnership between the Consortium, and the local FOHC.

Economic Impact and Other Impacts

As more clients enroll in the CHW programs, CHWs have more opportunities to provide healthcare education. With more education on appropriate utilization of healthcare facilities, we are seeing a decrease in unnecessary ER visits, which decreases the amount of charity care given by local providers and facilities. This strengthens the partnership between these local providers and the CHWs, which in the long-term will create more jobs and more openings for CHWs within the local facilities. In conjunction with MCHD's Network Development grant, CHES Solutions Group conducted a return on investment study and found that for every \$1 invested into a CHW program, \$1.84 was saved or returned.

Part VIII: Implications for Other Communities

We believe a CHW program utilizing a chronic disease model is replicable in most communities, particularly those in the Appalachia and other rural regions of Kentucky where disease rates, economic standards, health disparities, and ability to access care mirror those of our Consortium service area. As CHWs are employed to connect those underserved population with the resources and tools available to them, giving clients the self-efficacy to manage those barriers and diseases, a long term change in health outcomes is likely to occur. We feel so confident this model works, that we have been using our two Network Development grants to do just that, train CHWs and spread them throughout the 102 counties of Kentucky with rural designation as defined by HRSA.

Communities with FOHCs, especially those applying for Patient Centered Medical (PCMH), would benefit from having an CHW on staff to meet the requirements of focusing on the whole client. The CHW can facilitate the discussion between the client and PCMH staff, helping to find answers to questions, scheduling appointments, and connecting with the client's specialists and pharmacists. CHW's work to coordinate the care of individual clients in order for other providers and members of the health care delivery team to work at the top of their skill set in providing the most efficient care.

Communities implementing a CHW program should consider the following: data on population demographics and health disparities, knowledge and awareness of CHWs by local providers, community resources for both healthcare and social services, and healthcare delivery systems in the region. It is important for CHWs to make contact with all individuals and agencies involved in the continuum of care of a client to build that relationship and trust. It is very important that the CHW is of the community being served in order to build and sustain those relationships sooner and be knowledgeable about the community.

Part IX: Success, Increased Capacity, and Contributions to Change

A. Defining Success

- i) How do you define "success" for your grant program? Please check the appropriate selection(s). You may choose more than one option. If other, please describe.
- Access to a new or expanded health service
 - Increased number of people receiving direct services

- Improved quality of health services
- Operational efficiencies or reduced costs
- Integration of process improvement into daily workflow
- Continuation of program activities after grant funding
- Continuation of network or consortium after grant funding
- Health improvement of an individual
- Health improvement among your program participants
- Health improvement among your community
- Enhanced staff capacity, new skills, or education received
- Improved capacity to adapt to changes in healthcare

ii) Do you believe that your program has achieved success? If so, how?

B. Organizational Capacity

How has the federal funding of your grant program increased local capacity at your organization, within your network, and/or in your community? Please check the appropriate selection. If other, please describe.

- Formalized networks or coalition
- Developed new partnerships or relationships
- Enhanced skills, education, or training of workforce
- Enhanced data collection and analysis

C. Contributions to Change

Change in individuals' lives, your organization, consortium, or community:

A male client signed up June 2017 for our program after his wife was referred and joined. They work as a team and are each other's biggest fan. Both have HBP, Type II Diabetes, and Arthritis. He has several other conditions and is on oxygen 24/7. He and his wife signed up for and completed a Gentle Yoga/ Nutritional class and our Diabetes Self-Management Program (DSMP) with an accredited AADP instructor. His A1C was 10.2 when he came to the program and after making lifestyle changes and completing DSMP, his latest A1C is 6.4!!!!!! Client and his wife continue with The Bridge Program and are looking forward to our next round of available classes.

When client 9039 enrolled in the program, she had "very little" knowledge regarding her type 2 diabetes diagnosis. She faithfully keeps her appointments and has attended a community diabetes support group meeting for 12 weeks now. She brings her two adult children, which also have diabetes diagnoses, so that they can learn together about their condition. When she began the program 4 months ago her A1C was 12.8%, her most recent A1C is 10.5%! Her children have since enrolled in the Bridge Program as well, ready to see what a difference learning can make. All three have also registered for the health department's upcoming DSMP classes.

Change in policies, systems, and environment:

As a result of many years of collaboration and the success of our program, there have been many indirect contributions to the current status of the Community Health Worker profession in KY. The Project Director and Project Coordinator were on steering committees during the formation of the KY State CHW Workgroup and the KY Association of Community Health Workers (KYACHW). A certification process has been drafted is awaiting approval by the KY Dept. of Public Health's Commissioner. Discussions have been and are underway with the state Medicaid office and KYDPH to pilot CHW programs to explore the possibility of reimbursement for CHW services.

The program has directly contributed to two hospital systems creating the new position within their organizations of Community Health Worker.

Kentucky

Part I: Organizational Information	
Grant Number	D04RH28406
Lead Grantee Organization	Mountain Comprehensive Care Center, Inc.
Lead Organization Type	FQHC
Address	104 South Front Avenue Prestonsburg, KY 41653
Grantee organization website	
Outreach grant project title	Rural Health Care Services Outreach Grant Program
Project Director	Name: Rachel Willoughby
	Title: Project Director
	Phone number: 606-886-4319
	Fax number: 606-886-4431
	Email address: Rachel.Willoughby@mtcomp.org
Project Period	2015 – 2018
Funding level for each budget period	May 2015 to April 2016: \$200,000
	May 2016 to April 2017: \$200,000
	May 2017 to April 2018: \$

Part II: Network Partners		
* Indicates those partners who have signed a Memorandum of Understanding/Agreement		
Partner Organization	Location (town/county/state)	Organizational Type
Big Sandy Healthcare	Regional (Floyd, Pike, Martin, Magoffin, Johnson)	FQHC
Highlands Regional Medical Center	Prestonsburg, Floyd, KY	Hospital

Part III: Community Characteristics

A. Area

The project is located in Floyd County, Kentucky which is within the Community Mental Health Centers (CMHC) Mountain Region / Big Sandy Area Development District (Floyd, Johnson, Magoffin, Martin and Pike Counties). Cities/Communities served by the Outreach grant program include: Allen, Auxier, Betsy Lane, Dwale, Martin, Maytown, McDowell, Prestonsburg, Wayland, and Wheelwright.

B. Community Description

The most significant factor that influences life in this community is economic. This disparity has culminated into pervasive regional poverty with the targeted service area not only among the poorest in Kentucky but also among the poorest in the nation. Unemployment, lack of income, and overall poverty lead to diminished access to affordable health care. Many former workers who once had insurance through their employer are now uninsured. With high rates of uninsured and unaffordable health care, use of emergency rooms has skyrocketed for the region including higher rates of hospitalization, often for preventable conditions. Kentucky has shown to have the highest smoking rate, highest number of cancer deaths, highest rate of poor physical health days, and is 47th for drug related deaths and 45th for premature deaths. Even still, rates within Floyd County are more severe than overall state rates.

C. Need

Mountain Comprehensive Care's HomePlace Clinic (MCCC) HomePlace Clinic was designed to target the homeless and very low income population (150% of the Federal Poverty Level and below) in Floyd County, Kentucky with a total county population of 39,221 of which 54.01% is considered low income and only 25.93% is currently served by health centers according to UDS Mapper data, providing integrated preventative and primary medical care, behavioral health care, case management and enabling services to provide a holistic healthcare system for homeless and very low income persons of all ages.

Part IV: Program Services

A. Evidence-based and/or Promising Practice Model(s)

Mountain Comprehensive Cares HomePlace Clinic utilized evidence-based practices of the Chronic Care Model (CCM). The CCM has been applied to a variety of chronic illnesses, health care settings and target populations which is crucial to address the varied needs of the targeted rural, homeless and very low income population who experience a host of health disparities.

B. Description of Activities

Project staff have been involved in several community events and meetings to reach out to those who come in contact with people in need of our services. They have set up tables at local businesses, community events, business staff and local meetings, local churches and food pantries. HomePlace Clinic advertised on local radio and TV stations to increase awareness of our services.

C. Role of Consortium Partners

The role of Big Sandy Health Care (BSHC) in the (RHO) project is to provide primary health care outside the scope of MCCC's expertise such as pediatrics, OB/GYN care, x-ray services and dental care through its Mud Creek Clinic also in Floyd County as well as access to health promotion/disease prevention events. BCHS also makes referrals of homeless patients to MCCC as MCCC offers extensive behavioral health care, case management and enabling services not available through BSHC.

The role of Highlands Health Systems (HHS) operates the Highlands Regional Medical Center, a 184 bed, licensed community owned, not-for-profit hospital located in Prestonsburg, Kentucky and also provides After Hours Care through regional facilities including Harold Primary Care in southern Floyd County. As a key partner in the proposed project, HHS will accept referrals for services outside the scope of MCCC's project including but not limited to: imaging services, specialty care (cardiac, obstetrics, gynecological, cancer), hospitalization, surgical care, emergency room service, home health, and health promotion events as available. HHS will also make referrals for homeless patients to MCCC's services as appropriate.

Part V: Outcomes

A. Outcomes and Evaluation Findings (do not submit your Evaluation Report in lieu of completing this section)

As a result of MCCC HomePlace Clinic, not only have patients had an ongoing, affordable source of care, but the community has also realized saving by decreasing unnecessary ER and hospital visits for preventable and /or treatable conditions.

B. Recognition

MCCC HomePlace Clinic staff has been interviewed by a local TV station while being set up at a couple different outreach events. One specific was while attending a Celebrate Recovery event being held at Archer Park in Prestonsburg. The interview focused on our help to the program and in the community expressing all the services that we provide. HomePlace Clinic was also featured in the local newspaper for the services that had been given to a local homeless couple. Just recently MCCC HomePlace Clinic was awarded Health Center Quality Leader for 2017 by HRSA.

Part VI: Challenges & Innovative Solutions

In eastern Kentucky, several factors effectively create challenges to needed services including geographic isolation, cultural factors, educational levels, and a lack of healthcare knowledge and service providers. First, poor health in the targeted service area is greatly affected by its rural nature. Floyd County is situated in a mountainous and forested area of eastern Kentucky and the Central Appalachian Region. Moreover, according to the Census Bureau 12.7% of households had no vehicle (although this number is likely higher among the homeless population) and 37.8% had only one vehicle which is often shared between competing household priorities. There is also limited public transportation with Sandy Valley Transportation Services (SVTS) serving as the areas only public transportation system. As transportation is a critical barrier to health care access, the MCCC Case Manager will coordinate with SVTS staff to help patients with Medicaid access vouchers to pay for transportation to the clinic and ancillary services. The Case Manager will also assess uninsured patients for Medicaid, Medicare, and reduced-cost insurance eligibility and assist with enrollment. To supplement SVTS' hours (typically M-F, 9:00 am – 3:00 p.m. or by appointment) and to provide transportation for those who do not have Medicaid. MCCC has a vehicle for use by the clinic as well as budgeted mileage for staff to assist patients with their transportation needs when no other options are available (this will typically be coordinated with existing MCCC staff such as Peer Support Specialists as clinic capacity increases).

Part VII: Sustainability

A. Structure

The members in the project's consortium will remain unchanged and they include the Big Sandy Health Care (BSHC) group and Highlands Health Systems (HHS).

B. On-going Projects and Activities/Services To Be Provided

i) Will all, some or none of the elements of the program be sustainable once Outreach grant funding has ended? Please check the appropriate selection.

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained (i.e. the program will completely end after the grant period)

ii) Identify the projects and activities that will be sustained beyond Outreach grant period.

MCCC HomePlace Clinic will continue to offer enabling services to help patients receive health care services. These services include case management, assisting patients with exploring health insurance options on the ACA, as well as KCIP, Medicaid, and Medicare. Other enabling services that will be continued include working with Sandy Valley Transportation Services (SVTS) to coordinate transportation to the clinic for those who need it and the clinic's case manager providing transportation if SVTS is not available.

C. Sustained Impact

MCCC HomePlace Clinic's goal has always been to improve access to quality, culturally competent and appropriate integrated primary and behavioral health care as well as health promotion/disease prevention. As a result, not only will patients have ongoing, affordable source of care, but the community will also realize saving by decreasing unnecessary ER and hospital visits for preventable and /or treatable conditions. HomePlace Clinic staff will continue to provide health care and services to the homeless and very low income-population of all ages which has made a very positive impact within our grant service-area.

Part VIII: Implications for Other Communities

This Outreach Grant Project has been an absolute blessing to those HomePlace Clinic has served, to people and businesses that have helped us to find those in need and to those of us that worked this project first hand. The needs for these services are in every community big and small. Communities just have to find people in their community with the heart and willingness to work together to help others in need.

Part IX: Success, Increased Capacity, and Contributions to Change

A. Defining Success

i) How do you define "success" for your grant program? Please check the appropriate selection(s). You may choose more than one option. If other, please describe.

Access to a new or expanded health service

Increased number of people receiving direct services

Improved quality of health services

Operational efficiencies or reduced costs

Integration of process improvement into daily workflow

Continuation of program activities after grant funding

Continuation of network or consortium after grant funding

Health improvement of an individual

Health improvement among your program participants

Health improvement among your community

Enhanced staff capacity, new skills, or education received

Improved capacity to adapt to changes in healthcare

ii) Do you believe that your program has achieved success? If so, how?

MCCC HomePlace Clinic has achieved success. By virtue of the fact that it continues to give comprehensive healthcare services for free or a reduced cost and provides patients help with food, clothing, housing and insurance all while providing a holistic approach to healthcare and behavioral care.

B. Organizational Capacity

How has the federal funding of your grant program increased local capacity at your organization, within your network, and/or in your community? Please check the appropriate selection. If other, please describe.

- Formalized networks or coalition
- Developed new partnerships or relationships
- Enhanced skills, education, or training of workforce
- Enhanced data collection and analysis

C. Contributions to Change

The case that stands out the most for the biggest difference having our Outreach Grant has made in someone's life is, when a widowed mother who had just lost a son and had a surviving disabled son came into to HomePlace Clinic for help. She, at the time, didn't even know what services could be provided for her she was just looking for any help she could get. She was very low income and needed help with food, clothing, gas getting her disabled son back and forth to his specialty doctor's appointments but most of all they both needed a primary care provider. HomePlace Clinic and staff was able to establish her and her son as patients, help them with copays on some of their most expensive medication, provide them with some food until they became set up with food stamp, clothing voucher and a gas card to help get her son to his next specialty appointment. They have since become more financially stable with only minimal assistance needed and continues to be standing patients at HomePlace Clinic.

Please provide an example of how your grant program may have directly or indirectly contributed to policy changes, systems changes, or environmental changes? Examples may include passing school nutrition policies, implementing Lean process improvements within your organization, or enhancing walkable spaces in your community.

One of the main changes that our clinic has made in the community is that we have decreased the number of ER visits. Being here we have educated patients on the importance of keeping their appointments, following the providers order and taking medication as prescribed. In our patient surveys 29% of patients said that if HomePlace Clinic did not exist they would go to urgent care or after hours for healthcare. There was 26% that said they would go to the emergency room. This is over 50% of patients surveyed, that's a big impact. During this grant program we have attended many outreach events and educated and handed out our clinics information. All in hopes to educate and bring more patients in need of our services to our clinic.

Kentucky

Part I: Organizational Information

Grant Number	D04RH28407
Grantee Organization	Northeast Kentucky Regional Health Information Organization
Organization Type	Non-profit network
Address	151 University Dr. West Liberty, KY 41472-2146
Grantee organization website	https://krhio.org/
Outreach grant project title	Rural Health Care Services Outreach Grant Program
Project Director	Name: Julie Stephens
	Title: Project Director
	Phone number: 855-385-2089
	Fax number:
	Email address: j.stephens@nekyrhio.org
Project Period	May 1, 2015 – April 30, 2018
Funding level for each budget period	May 2015 to April 2016: \$200,000
	May 2016 to April 2017: \$200,000
	May 2017 to April 2018: \$200,000

Part II: Consortium Partners

* Indicates consortium partners who have signed a Memorandum of Understanding/Agreement

Partner Organization	Location (town/county/state)	Organizational Type
Morgan County ARH Hospital*	West Liberty, Morgan County, Kentucky	Family Health Clinic
Montgomery County Health Department*	Mt. Sterling, Montgomery County, Kentucky	Health Department
Bon Secours Kentucky – Bellefonte Physician Services*	Ashland, Boyd County, Kentucky	Primary Care Clinics
Pathways, Inc.*	Ashland, Boyd County, Kentucky	Behavioral Health
PrimaryPlus*	Vanceburg, Lewis County, Kentucky	Primary Care Clinics
St. Claire Regional Family Medicine*	Morehead, Rowan County, Kentucky	Primary Care Clinics
Sterling Health Solutions*	Mt. Sterling, Montgomery County, Kentucky	Primary Care Clinic
Community Family Clinic, PLLC*	Owingsville, Bath County, Kentucky	Primary Care Clinics
Kentucky Rural Health Information Technology Network*	London, Laurel County, Kentucky	Data Analytics Services

Part III: Community Characteristics

A. Area

Our outreach grant program served a thirteen county region in northeastern Kentucky. The counties we served included Bath, Boyd, Bracken, Carter, Elliott, Fleming, Greenup, Lawrence, Lewis, Mason, Montgomery, Morgan, Rowan. Every county we served is designated as a rural area, and all are designated a health professional shortage area for primary care or mental health services. There are two micropolitan areas (defined as having a population between 10,000 and 50,000 people) within our serve area: Mt. Sterling in Bath and Montgomery counties, and Maysville in Mason County. Boyd and Greenup counties are near Ashland KY-Huntington WV metropolitan area, and Bracken County is near the Cincinnati, OH metro area.

B. Community description

The community we serve faces many socio-economic barriers to care, which create health disparities for our region compared to state and national statistics. More than one in four residents (21.9%) have incomes below the Federal Poverty Level (FPL)

compared to 18.8% across the state and 15.1% nationally and 45.7% of the population is low income in the service area compared to 39.1% across the state and 22.6% nationally. The unemployment rate is 6.3% compared to 4.2% across the state and 4.5% nationally. The population we serve has lower levels of educational attainment than state and national rates. In the service area, 18.1% of the population does not have a high school diploma or equivalent compared to 15.4% across the state and 13.0% nationally. In the service area, 11.3% of the population is uninsured and 30.5% of the population receives Medicaid. The majority of our service area is designated as a medically underserved area or population, and there are primary care provider shortages in the majority of the counties we serve. Nearly one-fifth of the population lacks access to a consistent source of primary care. Socio-economic barriers and limited health care providers affect the population's ability to access health care, prevent health conditions, and manage chronic illnesses. There are high rates of physical inactivity (30%), smoking (29.1%) and obesity (36.4%). There are also high rates of diabetes (12.6%), high blood pressure (34.3%), and high cholesterol (44.3%). Barriers to access care and high rates of chronic conditions lead to a high premature death rate. In the service area, there are 9,485 years of potential life lost per 100,000 compared to 6,588 per 100,000 nationally. The health care system is overburdened and has economic limitations.

C. Need

The Northeast Kentucky Regional Health Information Organization (NeKY RHIO) outreach program was designed to address the needs of health care providers as they work to meet the health needs of service area residents. The healthcare system is overburdened by very high demand for comprehensive health services, patients with complex health needs, a high uninsured rate, a high rate of those insured by Medicaid, and healthcare provider shortages. The healthcare landscape is changing quickly and requires providers to upgrade to electronic health records, implement quality improvement programs, and report quality measures. The demands of a changing healthcare environment pose a strain on resources for small rural practices. The providers we serve have economic limitations that make technology upgrades and accessing technical assistance difficult. They can get caught in a cycle of addressing immediate needs, rather than changing their processes and systems to maximize their capacity. Our program was designed to enhance existing services with a priority on enhancing care coordination among service providers.

Part IV: Program Services

A. Evidence-based and/or promising practice model(s)

NeKY RHIO adopted the Patient-Centered Medical Home (PCMH) model from the National Committee on Quality Assurance (NCQA). This model is an evidence-based practice that supports culturally sensitive, comprehensive and continuous medical care to patients with the goal of obtaining maximized health outcomes. The focus on culturally sensitive and appropriate care is most particularly significant in rural Appalachia where cultural factors have a major impact on health. Care coordination is the basis for the medical home concept. PCMH emphasizes continuity and consistency with patients selecting providers and having confidence that they will see the selected provider on a consistent basis when visiting the clinic. It uses additional resources such as health information technology and team-based staffing to achieve high quality outcomes. This model yields an excellent return on investment, increases access to care and improves the quality of care – all factors that contribute to improved health outcomes. The 2014 NCQA's PCMH standards not only emphasize care coordination but also require integrated care with behavioral health to meet PCMH criteria.

B. Description of Activities

Through this grant project, NeKY RHIO provided consultation, training, and technical assistance to each network member with the goal of achieving Patient Centered Medical Home recognition. Through grant activities, we have assessed practice readiness for PCMH, developed individual implementation plans, and submitted for PCMH recognition. As part of our technical assistance protocol, we brought together practices that already had PCMH recognition (consulting network members) and practices that are working towards PCMH recognition (transformation network members) in a series of round table meetings. These round tables provided a platform for peer-to-peer learning, sharing resources, discussing best practices, and strategizing to overcome obstacles. Health care clinics are often siloed from other clinics and the round table meetings allowed clinic staff to develop a network of support across organizations. In addition to the round tables, NeKY RHIO provided on site meetings, quality improvement instruction, assistance pulling reports, work flow redesign and a wide variety of other services that helped practices to meet PCMH requirements and attest for PCMH.

C. Role of Consortium Partners

Our network partners were actively involved in all steps of the grant program. Their contribution to the development of this project includes community needs assessment data. Utilizing these identified needs combined with the demands of the changing healthcare environment, the planning team identified the Patient Centered Medical Home model as an effective strategy for addressing health needs systemically. During the project period, network members were involved in assessing practice readiness, developing a PCMH implementation plan, reporting quality measures, and providing feedback on newly created technical

assistance strategies or resources. Consulting network members provided guidance and peer-to-peer learning to transformation members as the transformation members attested for meaningful use. Each network member served on the NeKY RHIO Board of Directors and attended quarterly board meetings. During Board meetings, project leadership presented progress on the grant program, evaluation results, and program finances.

Part V: Outcomes

Outcomes and Evaluation Findings

Our goals for the program were to:

- Enhance primary care services in rural, northeast Kentucky through practice transformation using the Patient Centered Medical Home model at 16 clinics as indicated by the number of clinics who achieve PCMH recognition status by April 30, 2018.
- Strengthen the healthcare delivery system through a strong consortium in which all members are actively engaged in planning and delivery of services as evidenced by the number and type of members and their participation in project activities.
- Improve population health through demonstrated health outcomes by tracking health metrics on an annual basis.
- Sustain project activities beyond the grant period.

The consortium has made steady progress toward each of these goals, and we anticipate that the effects of the grant activity will be magnified as we continue grant activities. While we have not yet achieved our first goal for 16 clinics to achieve PCMH, we have made steady progress towards this goal. When a consortium member with multiple clinics achieved PCMH status prior to the grant award, we added Community Family Clinic and worked with them to achieve PCMH at all three of their clinics. We will also continue to work with Morgan County ARH to achieve PCMH. During the project period, the practice underwent many leadership changes, which delayed PCMH submission. We anticipate that Morgan County ARH will achieve PCMH recognition following the grant period.

Through grant activities, we have assessed practice readiness for PCMH, developed individual implementation plans, and submitted for PCMH recognition. Our project partners have continued to be engaged. Each member has representation on the NeKY RHIO Board of Directors and attends quarterly board meetings. They also signed and annually review the project MOA to ensure that the MOA reflects the level of engagement.

During the project period we developed the following tools that we will continue to use after the grant period:

- PCMH 2014 Staff Education Presentation
- PCMH 2014 Success Chart
- Care Coordinator Job Description Template
- PCMH 2014 Plan of action chart (Customized for each practice)
- PCMH 2014 Pricing Guide (Customized for each practice)
- PCMH 2014 Gap Analysis
- PCMH 2014 Single-Site Process Guide
- PCMH 2014 Multi-Site Process Guide
- PCMH 2014 "Language Needed for Policies" guide
- PCMH 2014 "Reports, Materials, Screen Shots Needed" guide
- PCMH 2014 Examples
- PCMH 2014 Care Management Support & Status Form Template
- PCMH 2014 Record Review Workbook guide

Key accomplishments include:

- The consortium had 141 meetings with a 95% attendance rate.
- Consortium has four consulting members (those who have already gone through the PCMH Transformation process and received recognition). Consulting members share best practices, developed strategies, shared resources, and helped to develop buy-in.
 - Consulting members include: Our Lady of Bellefonte Hospital, Pathways, Primary Plus, and Mt. Sterling Health Department.
- Consortium has three transformation members (those who have not gone through PCMH Transformation and are still striving to receive PCMH recognition). Transformation members received training and technical assistance and worked towards PCMH recognition during the project period.
 - Transformation members include Morgan County ARH, St. Claire Regional Medical Center, and Community Family Clinic.

- Held PCMH Round Table Meetings to bring consulting and transformation members together to discuss best practices and share information about PCMH.
- Eight clinics gained 2014 PCMH Recognition.
 - Three gained Level 3 recognition
 - Five gained Level 2 Recognition
- 88 policies and protocols were written and implemented to support transformation.
- All members report improvement in health care outcomes.
 - Of note, one partner reported an average reduction in A1c level from 12.1 to 5.8.
- Implemented same day medical and urgent triage spots that created additional same day access to care.
- Members report improved communication between clinical support staff and providers, increased job satisfaction among scheduling staff, and an improvement in care.
- Interventions to fill care gaps have increased early detection of breast and colon cancer.
- Network member maintained or improved clinical measures, and the majority of members reported improvement over baseline measures.

The impacts of this grant program will be sustained in the three ways 1) the positive impact of PCMH recognition on current partners and 2) the positive impact of PCMH on new partners and 3) impact on the target population. PCMH recognition has a positive impact on organizations and has been shown to save money, reduce hospitalization and emergency department visits, reduce disparities, and improve patient outcomes. Studies have also found that PCMH has high levels of patient satisfaction and a recognition that the PCMH model helps to meet their needs and improve their health. The target population benefits from improved access to care and improved health outcomes on clinical health measures. Patients' are satisfied with services as wait times for appointments and during visits have been reduced as practices change their policies and procedures to be more patient-centered.

A. Recognition

Eight partner clinics earned 2014 PCMH National Recognition. Three were recognized as Level 3 patient centered medical homes and five were recognized as Level 2 patient centered medical homes. The Project Director presented at the Kentucky Primary Care Association Annual Conference, the Kentucky Office of Rural Health regional meeting, and the Health Solutions Coding monthly meeting. One program we worked with was featured in "The Bridge" magazine, which is run by the University of Kentucky Center of Excellence in Rural Health and the Kentucky Office of Rural Health. The article described the practice's PCMH transformation as well as the services they received through the grant program.

Part VI: Challenges & Innovative Solutions

Our first challenge came as we received grant funding. Sterling Health Solutions achieved PCMH recognition prior to the grant-funding announcement and no longer participated in grant activities. To account for this change, we added Community Family Clinic as a consortium member as a transformation member.

Another challenge surfaced when one of the Consortium Member's clinics found that the staff time constraints associated with PCMH implementation were a big issue. In order to help alleviate these stressors, we researched and studied evidenced based practices to best implement PCMH in an organization that had time constraints. We found that the employees had limited understanding of PCMH and quality improvement measures. They at times did not understand what they were implementing, which added to their frustration. By providing additional education, NeKY RHIO increased knowledge and made staff more efficient at incorporating new workflows. These changes created more staff buy-in for the program and continued to ongoing success.

Our third challenge came when one of our consortium members had a team champion terminate employment (staffing issue) that delayed the process of PCMH recognition. After several meetings between the clinic and NeKY RHIO and with new staffing changes, this consortium member decided to lower their level of recognition achievement (NCQA recognition status from a Level 3 to Level 1) in order to meet the goals of implementing PCMH within this project period. Still with the change in staff the Consortium member was not able to complete the required criteria and agreed to wait until the clinic was more established and go with the new 2017 PCMH Standards and Guidelines. This would not meet the goals of implementing PCMH within this project period but agreed to continue providing support and services until PCMH Recognition is accomplished.

NCQA announced their new program that would dramatically change the program and impose deadlines for all clinics working on completing the current NCQA PCMH program recognition. This impacted every clinic's timeline as they no longer had deadlines for this HRSA funded project, but deadlines from NCQA that required changes to deliverables for recognition. After changing some consortium

members' syllabus to make it more manageable all clinics were able to stay on track with the guidance of the NeKY RHIO staff ensuring all timelines matched deadlines for NCOA requirements.

Part VII: Sustainability

A. Structure

NeKY RHIO will continue our consortium and consortium activities. We are beginning to contract with state groups, agencies, clinics, and other systems to provide PCMH training and technical assistance. We have also integrated PCMH services into our membership model and as a fee-for-service offering. As time goes on, we anticipate changes in our consortium members. As more clinics gain PCMH status, they may move from transformation membership (members not recognized but working to transform their clinic into a PCMH Recognized practice) to consultation membership (members' clinics currently working as a PCMH Recognized practice). We will recruit new clinics to join as transformation members, and some consultation members may no longer participate in project activities. We have chosen to continue our network services because there is still a high demand for PCMH Technical Assistance. We are able to expand our reach to include new rural clinics and test new technical assistance strategies, and also adapting our services to meet new NCOA PCMH requirements.

B. On-going Projects and Activities/Services To Be Provided

i) Will all, some or none of the elements of the program be sustainable once Outreach grant funding has ended? Please check the appropriate selection.

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained (i.e. the program will completely end after the grant period)

ii) Identify the projects and activities that will be sustained beyond Outreach grant period.

The consortium will continue all major activities of this grant including ongoing training, technical assistance and consultation as well as working towards expanding incentive programs with issuers. NeKY RHIO has developed a PCMH service line that is available as part of our membership model, which will help to ensure sustainability. The first cohort of members has received PCMH recognition and will need little-to-no ongoing consultation. While they will not be as involved in activities, NeKY RHIO will continue the program with new network members statewide. Our work to expand incentives for PMCH assistance continues with Kentucky issuers. We have partnered with the Kentucky Primary Care Association who runs an IPA to improve incentives for PCMH and quality improvement.

Some specific activities that we will continue are:

- Clinic "Success Charts" that help monitor PCMH recognition, identify upcoming tasks, and communicate about PCMH activities.
- Mr. Potato Head Quality Improvement Activity: Figurines were used as a tool to show what quality improvement items were needed for the clinic, how to measure, document, show improvement, identify areas for growth, and work as a team. This activity was simple but put into perspective to help clinic staff understand Quality Improvement.
- Speaking engagements and trainings across rural areas to advertise PCMH services and keep rural practices up-to-date with changes in PCMH recognition.
- Write monthly blogs to engage practices in different aspects of PCMH.
- PCMH Round Table meetings with a variety of partners at different stages of recognition. This activity encouraged inter-organizational information sharing.

The activities listed above have been selected to continue due to their success during the project period. We will expand partners and may expand services based on the needs of our members.

C. Sustained Impact

Impacts of this grant program will be sustained in the three ways 1) the positive impact of PCMH recognition on current partners and 2) the positive impact of PCMH on new partners and 3) impact on the target population. PCMH recognition has a positive impact on organizations and has been shown to save money, reduce hospitalization and emergency department visits, reduce disparities, and improve patient outcomes. Studies have also found that PCMH has high levels of patient satisfaction and a recognition that the PCMH model helps to meet their needs and improve their health. The target population benefits from improved access to care and improved health outcomes on clinical health measures. Patients' are satisfied with services as wait times for

appointments and during visits have been reduced as practices change their policies and procedures to be more patient-centered. Other impacts include enhanced clinic staff capacity to collect and report clinical measures. This capability will help them with future quality measure reporting. The relationships developed during our round-table discussions will continue after the grant period. Prior to the program, clinics largely operated as completely separate entities and had little cross-organizational communications. While there are groups that bring the FQHCs together, there are no such similar groups for RHCs or other small healthcare providers. Our round tables developed peer learning for PCMH as well as other clinic operations.

Our members reported have truly undergone complete transformations in their clinics. They have re-worked processes, implemented and implemented new policies that will have a sustained positive impact on the community and clinic operations. Prior to the grant program, no clinic had implemented same day appointments and now they all have. Same day appointments are important because they ensure consistency for patients who are able to see their designated provider when they need a same day appointment. The relationship develops between the provider and patient develops with regular appointments, which leads in greater patient engagement.

The clinics prior to transformation did not pull disease specific reports as part of a quality improvement program for quality care management. Adding these reports positively impact patients. They are prompted by the care facility for the services they need and fill care gaps. The patients have a clinic champion and guide who help keep the patient engaged in their care. Another positive transformation is in adding team huddles. The care team can discuss individual patients, what care gaps they have, and develop a coordinated approach to the patients' care. Team huddles lead to better communication between staff members, which then improves patient experience. The team huddles also improve communication with outside practices (specialists etc.) because the care team ensures that patients have their necessary follow-up information from any other providers. The primary care providers and other providers can collaborate to provide the best care to their patients. These are just a few examples of the transformation in each clinic that is supported by formalized process and procedure changes that will help to sustain the change.

Part VIII: Implications for Other Communities

We believe that the technical assistance program we developed will be highly replicable in both rural and urban settings. Many of our tools can be easily adapted to meet the needs of clinics in a variety of areas, serving diverse patient populations. The measures we collected are easily replicated in other settings. In particular, we recommend that other programs collect qualitative data in addition to quantitative data. By collecting the qualitative experiences of the clinics, we were able to capture some less tangible measures such as the improvement in staff morale and the effects of developing a peer-to-peer network. Other areas to collect information include improved communication and positive effects of workflow changes. While we did not collect patient satisfaction data to compare results before and after PCMH implementation, this would be a valuable measure for future programs to use to demonstrate the positive impact of PCMH.

Part IX: Success, Increased Capacity, and Contributions to Change

A. Defining Success

- i) How do you define "success" for your grant program? Please check the appropriate selection(s). You may choose more than one option. If other, please describe.
- Access to a new or expanded health service
 - Increased number of people receiving direct services
 - Improved quality of health services
 - Operational efficiencies or reduced costs
 - Integration of process improvement into daily workflow
 - Continuation of program activities after grant funding
 - Continuation of network or consortium after grant funding
 - Health improvement of an individual
 - Health improvement among your program participants
 - Health improvement among your community
 - Enhanced staff capacity, new skills, or education received
 - Improved capacity to adapt to changes in healthcare
- ii) Do you believe that your program has achieved success? If so, how?

Our program has achieved success. Because of our services, eight clinics achieved PCMH recognition. We also developed a sustainable structure for ongoing services. Our services increased access to health services by adjusting scheduling practices, which allowed patients to access services in a timely manner. Members reported an increase in quality measures. The program also developed internal capacity to use electronic health records, which will help them adapt to changes in the health care landscape.

B. Organizational Capacity

How has the federal funding of your grant program increased local capacity at your organization, within your network, and/or in your community? Please check the appropriate selection. If other, please describe.

- Formalized networks or coalition
- Developed new partnerships or relationships
- Enhanced skills, education, or training of workforce
- Enhanced data collection and analysis

C. Contributions to Change

A Clinic Coordinator used a preventive method in the clinic due to new policies from PCMH implementation. Diabetes is a chronic disease that affects the majority of their patient population. She had a Diabetic patient come to the clinic for a Retinal Myopathy screening. The screening is the only way to detect Retinal Myopathy and is treatable if caught early. The patient was screened, and the test showed minimal signs but was caught early enough to treat. The diabetic patient's eyesight was saved due to preventive measures.

Access has greatly benefited within a clinic by adding same day medical and urgent triage spots, creating same day opportunities that were scarce at their base line measurement. With their typical day having 709 providers, each provider having these two slots creates 14-18 same day appointments. Also, creating hospital follow-up appointments has become a scheduling relief. Previously, next day hospital follow-ups lead to double booking. Now, each provider has one of these slots. When not used, they become additional same day slots. "The changes to our practice by implementing PCMH have benefited our patients greatly. Patients are now receiving much more pro-active care. Communication between clinical support staff and providers has also improved."

Job satisfaction of the scheduling staff has been a huge benefit since implementing the PCMH model. Policy and Procedure changes to comply with PCMH criteria requirements, access to see a provider within a week was difficult at times. Since implementing PCMH and numerous policy changes, there are now reserved slots (urgent/med triage, hospital/Emergency Department follow ups), the schedulers have reported a large weight off their shoulders, and they can offer the appointments that the patients are requesting. Through the grant program, we implemented 88 new policies or procedures in the clinics to change processes and workflows. While this change is not wide scale, the system level change provided benefits to the clinic and expanded access for patients.

Louisiana

Part I: Organizational Information	
Grant Number	D04RH28380
Grantee Organization	Innis Community Health Center, Inc.
Organization Type	Federally-Qualified Health Center
Address	6450 LA Highway 1, Suite B, Innis, LA 70747
Grantee organization website	www.inchc.org
Outreach grant project title	Building Tomorrow's Smiles Too (with School Based Dental Outreach)
Project Director	Name: Linda Matessino, RN, MPH
	Title: Grants Program Director
	Phone number: 225-921-5196
	Fax number: 225-492-3782
	Email address: Linda@inchc.org
Project Period	2015 – 2018
Funding level for each budget period	May 2015 to April 2016: \$200,000
	May 2016 to April 2017: \$200,000
	May 2017 to April 2018: \$200,000

Part II: Consortium Partners		
* Indicates those consortium partners who have signed a Memorandum of Understanding/Agreement		
Partner Organization	Location (town/county/state)	Organizational Type
*Morehouse Community Medical Center	Bastrop , Morehouse Parish , LA	Community Health Center with School-Based Health center
*Teche Action Clinic	Franklin , St. Mary Parish , LA	Community Health Center with School-Based Health center
*Central LA Area Health Education Center	Alexandria, Rapids Parish, LA	Area Health Education Center
*Catahoula Parish Hospital Service District 2	Sicily Island , Catahoula Parish, LA	Community Health Center with School-Based Health Center
*Winn Community Health Center	Winnfield , Winn Parish, LA	Community Health Center with School-Based Health Center
*Innis Community Health Center Inc.	Innis , Pointe Coupee Parish, LA	Community Health Center with School-Based Health Center

Part III: Community Characteristics

A. Area

The project served the following parishes and their school-based populations in Louisiana: Pointe Coupee, Catahoula, Morehouse, Winn, Rapids, and St. Mary.

B. Community description

Communities served in this grant are rural and have significant geographic barriers to access primary (medical) care and more especially primary dental care. In Louisiana oral health disparities exist in access to regular sources of oral health care and utilization of these services especially in rural areas. A disparity in dental caries exists across socioeconomic and geographic sub-groups in the population. In Louisiana, children's oral health scored a "D" in the 2011 Pew Center Report "which indicated that the state also suffered a dramatic decline in the percent of residents receiving fluoridated water between 2006 and 2008. Additionally, in 2010, only 40% of children on LA Medicaid received dental services. According to the CDC National Oral Health Surveillance System, Louisiana has the sixth highest percentage of 3rd grade students in the nation with caries experience (treated or untreated tooth decay) at 65.7% and the second highest percentage for untreated tooth decay at 41.9%.

Louisiana reports that 83% of LA parishes suffer from Dental HPSA's thus contributing to the access barrier. Even though these parishes all report a high enrollment rate for children in the Medicaid program there is a lack of dentists enrolled as Medicaid providers to care for these children. Coupled with parish poverty rates which are higher than the LA overall rate as well as the US rate in these rural parishes a child's oral health status is affected by this economic barrier. The percentage of students eligible for the federally subsidized free or reduced lunch program is often used as an indicator of family economics. Areas served by this grant report statistics ranging from 77% to 84% of children eligible for this benefit. Low educational attainment is another negative issue among residents in the target areas and has important implications for health such that those with these lower rates experience higher levels of health problems. The burden of oral health disease is high in these areas and this represents a challenge to get preventive services such as oral health exams integrated into primary care, preventive interventions such as the application of fluoride varnish to prevent oral caries and oral health education completed on children in these rural settings.

C. Need

The American Academy of Pediatric Dentistry recommends oral health screening of children by a primary care provider during medical visits and referral of children identified at risk for poor oral health to establish a dental home by 12 months of age. Health professionals are in a position to improve the oral health of children throughout the lifespan, especially if they can implement measures to prevent oral disease. Schools are an excellent place to reach children who may not otherwise get the dental care they need and School Based Health Centers (SBHCs) are a sound approach to creating more access. Incorporating oral health exams within the comprehensive physical exam in SBHCs places oral health screening as a priority system just as vision and hearing and other body system assessments. This is a logical approach but needs to be strongly reinforced in practice. Medical providers such as Nurse practitioners especially in SBHC's agree that oral cavity assessment is essential to evaluate overall health status of a child.

In Louisiana, oral health disparities exist in access to regular sources of oral health and utilization of these services especially in rural areas. A disparity in dental caries exists across socioeconomic and geographic sub-groups in the target population. In the 2010 report by LA DHH by region, the consortium members regions reported the % of children with untreated cavities to be higher in these areas than the state average. In the 2010 report by LA DHH by region, the consortium members regions reported the % of children with untreated cavities to be higher in these 5 areas than the state average. Other significant findings in the 2010 LA DHH report indicated that Black children have greater untreated cavities, more caries experience, fewer dental sealants and a greater need for treatment for oral problems. In the consortium partner areas the % of black children remains very significant greater than 50% of their school based clinic enrolled population.

The need is also exemplified in the fact that the grant's focus is in the rural areas of Louisiana where children's access to dental care is a significant challenge, especially considering that many of the dental providers in these areas do not accept the LA Medicaid child enrollees into their practice, further diminishing access to preventive care as well as intervention care. Louisiana was included in the report "Most Children with Medicaid in Four States Are Not Receiving Required Dental Services" [DHHS, Office of Inspector General, January 2016]. The study focused on three required dental services—biannual oral exams, dental cleanings, and fluoride treatments—for children continuously enrolled in Medicaid for two years. Three out of four children did not receive all required dental services, with one in four children failing to see a dentist at all. Louisiana reported that they do not routinely track whether children are receiving all the required services. In addition, the report indicated that Louisiana has policies that do not allow payment for particular services in accordance with their periodicity schedules. Finally, the state continues to report facing shortages of participating dental providers and challenges in educating families about the importance of regular dental care. The need for our evidenced-based practice (application of fluoride varnish) was evident in the areas served since fluoridated water is not present in any of these consortium partner rural areas. In addition Louisiana reports only 44% of areas with CWF and ranks 45th in the nation for Community Water fluoridation (CWF).

Part IV: Program Services

A. Evidence-based and/or promising practice model(s) :

Fluoride Varnish

Evidence based dental medicine clearly demonstrates that fluoride varnish, a primary intervention, is an effective and safe preventive technique in the battle against childhood caries. Fluoride concentrated in plaque and saliva interrupts the caries process by inhibiting the demineralization and enhancing the remineralization of enamel. The American Academy of Pediatrics reports that the use of fluoride varnish leads to a 33% reduction in decayed, missing, and filled tooth surfaces in the primary teeth and a 46% reduction in the permanent teeth. This is the evidenced based practice model serving as the under-pining to the grant.

Integration of oral health assessment into clinical practice

The grant project focused on children & adolescents living in underserved rural areas of Louisiana who are enrolled students in school based health centers. School-Based Health Centers (SBHCs) have been proven as effective entry portals that eliminate barriers to primary care access for vulnerable children & youth. Integration of oral health services into SBHC's can influence access to care positively and oral health. Institutionalization of the oral health assessment into clinical practice acknowledges that the oral health system is one component of the total body system and is therefore deserving of assessment equally as important as other body systems. Training of primary care medical providers through the American Academy of Pediatrics Smiles for Life curriculum is a sound educational tool to increase proficiency in the provider's oral health assessment skills. In addition further training primary care providers in these SBHCs in the evidence-based practice of fluoride varnish application is consistent with HRSA's recommendations for the integration of oral health and primary care practice.

Dental Case Management

Dental Case management activities address the reality that life is complex and that individualized care is the most direct method to influence behavior and outcomes. Dental Case management as defined by the "Building Tomorrow's Smiles Program" is a collaborative process of assessment, planning, facilitation, and care coordination to meet the child's oral comprehensive health needs through communication and linkage to available resources. Case management activities will support the individual elements of achieving a dental home and will assist families in overcoming barriers to engagement in that dental home. Ongoing periodic appointments provide time-critical opportunities to implement preventive health practices and reduce the child's risk of preventable dental/oral disease. Early engagement in a dental home can significantly reduce the cost of care.

In this 3 year grant cycle the Innis Community Health Center and its Consortium partners have achieved a higher penetration rate into more rural school based health center communities with its strategic grant objectives to prevent dental caries, educate and improve oral health in children, integrate oral health assessment into a primary care setting and coordinate referral follow-up in school based health centers.

B. Description of Activities

The Building Tomorrow's Smiles program had its beginning in 2009 with the implementation of a oral health assessment and fluoride varnish application project in community health center well child clinic settings with the goal of reducing dental caries. Through lessons learned in Year 1 of that project, the Consortium members changed the primary portal of entry from in-house well child clinics to school-based health centers in order to reach more children with the same objectives. This proved significantly successful in terms of numbers of children reached. As the program moved into a second three-year grant project (2012-2015), the program expanded into additional SBHCS in more parishes with additional partners reaching more children. Again success of performing oral health assessments in the SBHC setting was evident. However it was soon recognized through the evaluation process that when referrals to dental homes were made, the follow up was not occurring to determine if the child was ever seen by that provider.

This current grant project was designed to continue and expand the integration oral health assessment into the school-based primary care settings through the comprehensive physical, decrease dental caries through the fluoride varnish applications, educate the child on good oral health hygiene practices and couple this with sound evidence- based dental case management in order to get more appropriate coordination of oral care thus improving the child's oral health status. Utilizing each agency's school based health center as the portal of access to reach children in a primary care setting, the centers used the comprehensive physical exam time to perform the following over the life of the grant period:

- Integrating oral health assessment in a primary care setting (SBHC) evidenced by documentation of findings (normal or abnormal) in the EMR. Referrals for interventions upon abnormal findings or preventive visits for routine oral care were initiated.
- Increasing the proficiency of the provider's oral health assessment skills through education and training (Smiles for Life Curriculum) thus embedding this change of practice into the clinical assessment of body systems.
- Implementing the application of fluoride varnish during the comprehensive physical exam on students enrolled in the school based health center for the prevention of dental caries.
- Complete oral health education with the students in order to influence the student's oral health hygiene with a focus on prevention
- Utilization of dental case managers in SBHC's for follow-up on all referrals (problematic or preventive) in order to increase the "closure rate" on referrals to completion.
- Continue to build upon consortium partnerships in order that change in clinical practice will become sustainable as well as institutionalized in practice post grant award period.

C. Role of Consortium Partners

The Consortium represented in this grant has been an effective leadership group to implement the grant's objectives. Since this is the 3rd grant with the Innis organization at the helm their prior experience has certainly carried an advantage in being able to implement the grant program. In addition 2 others members (Morehouse, Teche) were participants in prior oral health grants where Innis was the grantee. This is viewed as a definite plus. Therefore the learning curve was minimized. The consortium was able to start up rather quickly and hit the ground running for this grant. In reference to the service areas represented in the grant during this 3 year grant period there were no changes. This fact has a positive effect on sustainability. In addition there were no changes in senior leadership personnel in the consortium members during the grant period. The stability of the nurse practitioners as mid-level providers within the school based health centers has not changed therefore the ability to remain consistent in clinical practice implementing the grant objectives was also a significant plus for achievement. The ability to interact with the same providers at the time of annual site visits by the Grant Coordinator also is positive factor. The ability to share progress that was being achieved at each school based health center in implementing grant objectives was also a positive measure as well as identifying challenges that seem to be similar across the board.

Each Consortium member played a role as leadership to their organization regarding this grant. The collaboration was enhanced with regularly schedule quarterly conference calls in year 2 and 3. In addition a planning session was held at the end of Year 1 going into Year 2 to evaluate performance, reinforce learning on grant objectives, and do any course corrections needed to meet the objectives and work plan. Site visits occurred each grant year by the Innis Project Director using this 1 to 1 time as training. The Project Director remained available to the consortium player at all times during the grant period.

Part V: Outcomes

A. Outcomes and Evaluation Findings

Provider Training, Year 1

100% of primary care providers in the school based health clinics completed the on line training module for continuing medical education credit.

Clinical Performance, Years 1 and 2

In Year 1, there were 1,401 complete physical exams performed that incorporated an oral health assessment. In 938 of these, fluoride varnish was applied. In Year 2, there were 2,582 physicals that included 2,235 fluoride varnish applications.

Dental Case Management Performance, Years 1 and 2

Implementing dental case management in a formal organized approach has been a learning experience for the agencies participating in the grant. The learning curve of how to implement case management in the dental world is a challenge, even more than was anticipated going into this grant.

However, even with the challenges faced in implementing dental case management, the Consortium agencies collectively performed 1,401 oral health assessments resulting in 456 referrals for follow-up care in Year 1. Of these, case managers confirmed 277 cases were seen by a dentist, representing 61% follow-up rate. In year 2, the 2,528 oral health assessments resulted in 1,055 referrals. Of these, case managers confirmed 719 cases were seen by a dentist, representing a 68% follow-up rate. Year 3 is anticipated to report an even higher closure rate.

In Year 3 the emphasis is on sustainability of the practice change, data collection, and formulating a plan for expansion of the current initiatives into other school based health centers, and these evaluation efforts are still underway. It is anticipated that Year 3 performance statistics will demonstrate that the grant performed according to plan for volume.

B. Recognition

The grantee, Innis Community Health Center, is a member of the Louisiana Oral health Coalition and presented on the performance of this project at its recent quarterly meeting in January, 2018. In addition, the Project Director presented specific data on fluoride varnish applications in children to the *Engaged Partners Subcommittee* of the *Louisiana Water Fluoridation Advisory Board* in March, 2018.

The Project Director has highlighting the program's accomplishments as a presentation panelist at the FORHP's Outreach Grantees Peer Learning Seminar in Atlanta in 2017, and as a panelist in an FORHP webinar on rural health disparities in 2018.

Innis Community Health Center has been featured in the RHI-HUB publication, "School-Based Health Center Dental Outreach Grants 2011 through 2018," regarding the performance of its grant projects and recognized and a three-time Outreach grantee.

Part VI: Challenges & Innovative Solutions

Challenges experienced in this grant project were minimal since the grantee had experience with the fluoride varnish evidenced-based practice in a previous grant projects. The expansion of the program into two additional school based health centers in other parishes made travel and scheduling somewhat of more challenging, particularly during Year 1 as the new grant project started-up.

The most challenging aspect of this grant was the implementation of dental case management. Implementation was a learning process and adjustments had to be made all along the way. Each SBHC was unique in size and the definition of case management had to be adjusted for that fact. After Year 1, the definition of referral type had to be further stratified into "problematic" and "preventive" referrals so as to adjust for the immediacy of action needed on the referral tracking. Problematic cases are given priority of effort so the closure rate goal is targeted at 90% for these cases. Achieving this goal continues to be a challenge.

Additional insights include:

- Dental case managers must do try a lot of "work arounds" to get kids seen by a dentist, with multiple efforts required to eliminate the roadblocks along the way.
- There is no single set method of managing the dental referral nor does one size fit all. This was initially "sensed" during Year 1, with further confirmation seen during Year 2 requiring adaption of case management protocol.
- SBHCs continue to be "an efficient portal" for this dental program, yet not all SBHCs are the same. Each SBHC is unique in size as well as in how the referral process is handled.
- The measurement of effort on referral tracking is a challenge to document because it is so unique to each child and their family situation.

Part VII: Sustainability

A. Structure

Looking forward, the five FQHC's with school based health centers included in the Consortium for the current grant project will comprise the lead group in an ongoing school based Oral health Coalition. These include Innis Community Health Center, Catahoula Parish Hospital District 2, Morehouse Community Medical Center, Teche Action Clinic, and Winn Community Health Center.

That coalition can be instrumental in spreading the evidenced-based practice of fluoride varnish to prevent dental caries. In addition the coalition can be the "spokes group" for promoting the integration of oral health assessments into clinical practices, particularly within the physical health exam of children enrolled in school based health centers in our parishes. The structure of the group could rotate the leadership position within the coalition starting with Innis as the Founder then spreading to others to serve in the lead capacity for a school year. Collection of data will be essential in order that this data been feed into a larger system namely the LA Oral Health Coalition.

B. On-going Projects and Activities/Services To Be Provided

i) Will all, some or none of the elements of the program be sustainable once Outreach grant funding has ended? Please check the appropriate selection.

- All elements of the program will be sustained
- Some parts of the program will be sustained
- None of the elements of the program will be sustained (i.e. the program will completely end after the grant period)

ii) Identify the projects and activities that will be sustained beyond Outreach grant period.
The key elements of the grant project, namely the integration of oral health assessments into primary care settings and the fluoride application to reduce dental caries will be sustained initiatives. As the new coalition matures, the introduction of dental case management can be initiated along with data collected from that perspective. School based health centers will continue to be the access portals for this initiative.

The cost of fluoride varnish will be absorbed by each school based health center. The economic cost of administration of the application of fluoride varnish is viewed as inexpensive given the long term benefits of its application.

Innis Community Health Center is working collaboratively with the Louisiana Primary Care Association to establish a SBHC Oral Health Coalition and introduce these initiatives into other FQHC's that are willing to participate.

C. Sustained Impact

The sustained impact of this Outreach grant project includes the integration of oral health into a primary health care delivery setting. More specifically it is the incorporation of a thorough oral health assessment by the primary care provider into the comprehensive physical exam on the child enrolled in the school based health center. Documentation of this assessment along with findings is completed in the child's EMR.

In addition, the clinical practice of the application of fluoride varnish on the child's teeth is performed at the time of the physical exam as an evidenced based preventive practice for dental caries. The institutionalization of this expanded assessment practice into the comprehensive physical has definitely changed practice in a primary care setting. This change is now a systemic change in that it is being practiced routinely in all the settings of the agencies participating in this grant. The impact has a direct link to improving a child's oral health status.

The impact can also be identified in that this thorough oral health assessment identifies other health issues that need to be addressed on site with treatment or through referral to the dentist. Such clinical conditions can then be treated more timely in order to prevent further health deterioration. Evidence of oral abscesses, vitamin D level deficiencies, oral mouth ulcers are examples of observed findings in this assessment process. It is believed this model can be easily reproduced in other clinics and demonstrate practice change as well as enhance the oral health status of the child.

The long term affects in our communities with these embedded changes is that oral health is improving in our school aged children. They now can play a CEO role in their own oral health status. Owning their oral health and also having a mindset of what prevention does over the long haul can have a lasting effect. When a student's oral health is performing solidly this can contribute to their learning in school and ability to perform better in their academics. This also has the potential to influence behavior in the home with their siblings as well as their parents. Children in rural areas are already at risk for issues with their health and this model contributes to reducing that risk by improving access to assessments, oral health education, and prevention and treatment services. Ultimately over time this approach could reduce the amount of restorative services needed for the child by promoting preventive visits on a regular basis.

Another long term benefit in the sustained impact is the relationships that agencies (SBHC's) develop with their school systems and school boards. Providing them with data on performance especially when they promote the factors that contribute to positive academic performance can be very useful. Relationships and linkages to other community resources or vendors of in-kind resources may be more plausible when data is provided on performance of this integration and change in practice.

The long term benefit of continuing these initiatives for the current consortium members is that strengthening an agency's dental program in school based health centers connects the student with resources to address oral health needs. It creates an opportunity to attach the student to the clinic as their primary medical and dental home of care. Focusing on prevention appointments as well as intervention appointments can increase dental visits for the agency and therefore generate revenue for its dental program. The experience of five FQHC's with this focus can create synergy to move forward into other school based health centers. We believe this effort has the potential to improve the oral health status of children in our schools.

Part VIII: Implications for Other Communities

The grant program that has been conducted over the past 3 years is highly replicable in School Based Health Centers and primary care facilities throughout the United States. Dentists or other trained professionals can easily teach health care professionals to conduct basic oral assessments and to apply fluoride varnish applications. However, laws vary across states concerning what types of professionals are allowed to apply fluoride varnish. Therefore, the specific job classifications allowed to apply fluoride varnish in Louisiana is likely to vary from the specific job classifications allowed to apply the varnish in other states.

The experiences gained in this grant period can benefit other school based health centers willing to place oral health assessment as a priority within their delivery of care system. Toolkits have been created and published on the RHI-HUB which allows others to learn from the "experienced". In the Building Tomorrows smile –School based oral health outreach the data tracking forms have been developed and the lead grantee is very willing to share with others interested. The data collection uses the Excel spreadsheet tool to capture specific performance indicators. In addition the definition of dental case management and referrals can

be made accessible to others interested. Job description for dental coordinators and case managers have also been developed and available for sharing.

Gaining buy-in from the local school system in which the school based health center is located is essential in this this initiative. This collaboration can be the fuel that enhances future grant funding to support the initiative whether it is seeking funding from the private or governmental agencies. Data on performance can be impressive to these funders.

Part IX: Success, Increased Capacity, and Contributions to Change

A. Defining Success

i) How do you define "success" for your grant program? Please check the appropriate selection(s). You may choose more than one option. If other, please describe.

- Access to a new or expanded health service
- Increased number of people receiving direct services
- Improved quality of health services
- Operational efficiencies or reduced costs
- Integration of process improvement into daily workflow
- Continuation of program activities after grant funding
- Continuation of network or consortium after grant funding
- Health improvement of an individual
- Health improvement among your program participants
- Health improvement among your community
- Enhanced staff capacity, new skills, or education received
- Improved capacity to adapt to changes in healthcare

ii) Do you believe that your program has achieved success? If so, how?

Yes, definitely! The impact at the Innis clinic as well as at 4 other FQHC SBHC's demonstrates that the clinical practice change is not dependent on grant funds nor the grant project Director and is now the norm of practice. It has become valued by the provider as a requirement in the practice of providing sound effective comprehensive physicals to children in school based health clinics. An additional sustained impact is the opportunity to capitalize on the "teaching moments" focusing on oral health practices with the student during the comp physical exam. This talk time becomes critical as students are constantly exposed to other students who may be practicing more negative behaviors such as smoking, tongue piercing, consuming more soda drinks etc. Being able to emphasize good oral health habits and compliment their current positive practice of oral hygiene can make the difference in the life of a student.

The impact of dental case management does identify that when the child is seen for the referral condition the practice of using their dental home has the potential to become routine in their life. Having regular cleanings performed that are preventive in nature allows the child to identify this cleaning is part of overall health for prevention. Learning to use their dental home not just for problems but for other necessary preventive care issues becomes more substantiated. This value has the potential to change their attitude as they grow in years to value dental care on a routine basis.

B. Organizational Capacity

How has the federal funding of your grant program increased local capacity at your organization, within your network, and/or in your community? Please check the appropriate selection. If other, please describe.

- Formalized networks or coalition
- Developed new partnerships or relationships
- Enhanced skills, education, or training of workforce
- Enhanced data collection and analysis

C. Contributions to Change

Changes in individuals' lives, your organization, consortium, or community:

The Innis Community Health Center saw an 8-year boy in its school based health center for a comprehensive physical. Upon exam of the body systems and the oral cavity, the nurse practitioner saw evidence of a dental abscess that was quite obvious. However, the boy was definitely asymptomatic and did not complain of any pain in the area. The nurse practitioner immediately

placed the child on a regimen of antibiotics to clear up the infection and made a referral to the dental clinic for further treatment once abscess was cleared. The boy did follow through on the referral to the dentist and the tooth was treated for dental caries. Since the boy was asymptomatic, this could have gone undetected until such time that it could have led to other infections in the body. This is a prime example of early intervention by the primary care provider performing a thorough oral health exam within the comprehensive physical exam.

A student was seen in the school based health center for a comprehensive physical. Upon oral examination the provider noticed a protrusion of what appeared as a tooth outside of the gum area above the current tooth. She immediately referred the student to the dental clinic at the Innis Community Health Center. There, after examining the child, the dentist referred the child to an external oral surgeon for intervention and treatment. Referral of Louisiana Medicaid children to oral surgeons is a challenge due to many providers who do not accept Medicaid. However, because the Innis dentist had previous referrals to this oral surgeon, that provider took the case and performed the restorative work. This was a winning outcome for everyone involved, especially the child.

Change in policies, systems, and environment:

Over the three years of this grant project, the policy guiding clinical practice at the two Innis school based health centers changed dramatically with the integration of a thorough oral health assessment into the comprehensive physical examination. Fluoride varnish application is another policy change that will create improvement in the reduction of oral caries of children seen in school based health centers in Pointe Coupee Parish.

Maine

Part I: Organizational Information	
Grant Number	D04RH28394
Grantee Organization	Aroostook County Action Program
Organization Type	Community Action Program Agency
Address	771 Main Street, Presque Isle, ME 04769-1116
Grantee organization website	https://www.acap-me.org/
Outreach grant project title	Wabanaki Teleophthalmology Consortium Project
Project Director	Name: Susan Deschene
	Title: Project Director
	Phone number: 207-768-3056
	Fax number: 207-768-3022
	Email address: sdeschene@acap-me.org
Project Period	2015 – 2018
Funding level for each budget period	May 2015 to April 2016: \$129,316
	May 2016 to April 2017: \$132,833
	May 2017 to April 2018: \$183,907

Part II: Consortium Partners		
* Indicates consortium partners who have signed a Memorandum of Understanding/Agreement		
Partner Organization	Location (town/county/state)	Organizational Type
Penobscot Nation	Indian Island, Penobscot, Maine	Tribal ambulatory health clinic
Passamaquoddy at Township	Princeton, Washington, Maine	Tribal ambulatory health clinic
Passamaquoddy at Pleasant Point	Pleasant Point, Washington, Maine	Tribal ambulatory health clinic
Maliseet	Houlton, Aroostook, Maine	Tribal ambulatory health clinic
Micmac	Presque Isle, Aroostook, Maine	Federally run health center
Saint Regis Mohawk	Akwesasne, Franklin, New York	Tribal ambulatory health clinic
Wampanoag at Aquinnah	Aquinnah, Duke's County, Massachusetts	Tribal ambulatory health clinic
Penobscot Nation	Indian Island, Penobscot, Maine	Tribal ambulatory health clinic

Part III: Community Characteristics

A. Area

The Wabanaki Teleophthalmology Consortium Program (WTCP) provided services to the five Native American tribes across the state of Maine. In the third year of funding, other neighboring tribes in the New England area became interested in the program, and hence, services were expanded (though only to rural tribes eligible for grant-delivered services).

Geographically, the five Maine Tribes are spread across very rural parts of Maine, specifically the northern and "Downeast" portions of Maine. Two tribes are located in Aroostook County (Micmac and Maliseet), the two Passamaquoddy clinics are in Washington County, and the Penobscot is in Penobscot County. Our New England tribal partners include the Saint Regis Mohawk Tribe (located in Akwesasne of Franklin County in New York) and the Wampanoag Tribe of Gay Head (located in Aquinnah of Duke's County in on the island of Martha's Vineyard in Massachusetts).

B. Community description

American Indians suffer disproportionately from diabetes; data suggest that from 2000 to 2009, American Indian and Alaska Native (AI/AN) adults had age-adjusted diabetes mortality rates 2.5 to 3.5 times higher than non-Hispanic whites; in 2009, the rate was 89.6 for AI/AN compared with 25.0 for Whites. The most recent tribal community assessment (titled *Waponahki Community Health Needs Assessment*) showed the Maine tribes are economically less advantaged than the non-native inhabitants that reside in the

same county. Poverty rates and rates of chronic disease (including diabetes) are higher in tribal communities than in the surrounding communities, and wages and life expectancy are lower.

C. Need

Prior to project implementation, the average baseline diabetic eye examination rate among tribes was 50.7% leaving almost half of the population failing standards of care for diabetic retinopathy (DR) annual examinations. Diabetes disproportionately affects Native Americans, and it is a costly disease. The average annual cost of caring for individuals with diabetes are approximately 2.3 times higher than other patients without diabetes (ADA 2013). Since 2007, the cost of diabetes in the U.S. has risen by 41% and is estimated to cost \$245 billion in 2012. Diabetes can lead to multiple costly complications, for example, diabetes induced end-stage renal disease are estimated to cost \$71,714 per event, and a hypoglycemic event requiring hospitalization, which is estimated to cost \$16,478 per event (Ward et al., 2014). Another complication, diabetic retinopathy, can cost up to \$10,000 per case, but it is largely preventable with routine eye screenings. Based on a systematic review of 10 years of literature on the economic evidence of diabetic retinopathy screening, reviewers determined that systematic screening for diabetic retinopathy is cost-effective in terms of sight years preserved compared with no screening (Jones & Edwards 2010). Given the high cost and devastating complications of the disease, the burden placed on the AI/AN population, with its increased diabetes prevalence rates, is even greater.

We proposed that the eye exam rates would markedly increase through the implementation of JVN, an evidence-based program, thereby decreasing avoidable vision loss due to DR by timely diagnosis and treatment (Healthy People 2020 Objective V.2). In addition to the preservation of vision, this would also decrease the overall cost of care by avoiding the costly treatment of DR complications, and indirect saving from managing the chronic complications of diabetes in a sighted versus sight-impaired patient. We expected that the JVN program would provide an economically sound, long term solution for the diagnosis and treatment of diabetic retinopathy in the Indian Country of Maine.

Part IV: Program Services

A. Evidence-based and/or promising practice model(s)

We used a mobile configuration of the Indian Health Services (IHS) Joslin Vision Network (JVN) program (IHS-JVN program). As stated in *The Indian Health Service's Joslin Vision Network Teleophthalmology Program* fact sheet, "This innovative technology uses a digital camera with special computer software to transmit special photographs of a patient's eye to the National Indian Health Services-JVN Reading Center located in Phoenix. Indian Health Service (IHS) eye doctors, specially trained by the Joslin Diabetes Center, interpret the images and send a report to the patient and primary care physician. The report includes the level of diabetic retinopathy, presence of any non-diabetic eye disease, and a recommended course of treatment."

B. Description of Activities

The mission of the WTCP, now referred to as Joslin Vision Network (JVN) Consortium, has been, and is to provide diabetic eye examinations directly to patients at each of the Tribal Health Clinics via a mobile tele-medicine program. The ultimate goal of the Project is expressed in Healthy People 2020's Objective V-5.2., "Reduce visual impairment due to diabetic retinopathy."

We used the IHS-JVN to conduct retinal imaging at each tribal clinic (except Micmac and Aquinnah), according to the needs of the tribal clinic. Individual patient imaging sessions were each 15 -30 minutes in length. Retinal photos were analyzed by JVN doctors via tele-medicine, who then sent diagnostic consultation reports back to the primary care physician at each respective clinic.

The JVN Consortium operates by having one shared imaging technician, or "imager," who travels around to each tribal site. At each tribal site, health clinic staff are utilized to perform many of essential functions of the program, including patient selection, recruitment, scheduling, and care coordination.

Each health clinic has a designated diabetes liaison (which had long been in place before the JVN Consortium) who works with the imager and performs the aforementioned duties. Each site also has a health director who provides insight and direction for how the IHS-JVN clinic operates at their site. The liaisons typically coordinate dates with the Project Coordinator, and then commence into their critical role of scheduling patients. The imager then visits the clinic on the agreed upon day(s) and screens patients using the IHS-JVN program. The diabetes liaisons most often use that appointment time with the patients to go over other important aspects of diabetes management and control. Some have included a nutritionist on the day of the IHS-JVN screenings; and most include HgA1C screenings.

C. Role of Consortium Partners

The plan for the concept and the implementation of the IHS-JVN program was well established among the consortium partners from the start of the program. All consortium members were clear and committed to the initiatives of the program right from the start.

The Consortium partners have each participated in the implementation of the grant funded project. Each member appointed a diabetes liaison at their site. The liaisons were allowed to participate in the IHS-JVN program by coordinating their work flow, scheduling imaging dates, recruiting patients, report acquisition, patient result dissemination, and providing follow-up coordination for care and services.

The Consortium partners also participated in sustainability planning. We interviewed them using the Sustainability Formative Self-Assessment Tool recommended by the Georgia Health Policy Center (December 2017 – January 2018), and we supplemented the Tool by interviewing the staff involved about the views of the program overall, the Consortium, and the operation of the JVN clinic at their health clinic. All interviewed participants reported high esteem for the JVN clinic and are hopeful to have the program continue. All tribes that have had the JVN program for one full year have had increased eye examination rates and improved diabetes health outcomes based on the tribal IHS Diabetes Care and Outcomes Audit Report.

Part V: Outcomes

A. Outcomes and Evaluation Findings (do not submit your Evaluation Report in lieu of completing this section)

During our first year of complete operation (2016), a total of 272 patients were screened; among those screened at Maliseet (n=41), 5 new cases of diabetic retinopathy (DR) were identified with one emergency vitrectomy performed. Among Penobscot (n=96), 7 new cases of DR were identified with one non-surgical intervention. Among Pleasant Point (n=88), 3 new cases of DR were identified. Among Township (n=69), new cases of DR were identified. Prior to JVN implementation, the average baseline diabetic eye examination rate among tribes was 50.7%. After the implementation of the JVN program, eye examination rates increased by an average of 34% with the average diabetic eye examination rate being 85.5%. The imaging technician had 40 ungradable images for an ungradable rate of 15% which the JVN doctors consider "highly proficient."

Soon, the rates will be available for 2017, and will be reported in our final evaluation report.

B. Recognition

Upon award, a press-release went out in one of the state two largest newspapers, the Bangor Daily News (<https://bangordailynews.com/bdn-maine/community/tele-health-brings-vision-screening-to-the-wabanaki/>).

Over the course of the program, the Project Coordinator has presented the success and accomplishments at many conferences in Indian Country. In September of 2017, Abbey McCarthy presented information about the Wabanaki / JVN Consortium at the Nashville Area Indian Health Services Diabetes Conference, and then again in June of 2017 in Anchorage, Alaska at a diabetes conference for the National Indian Health Board.

Part VI: Challenges & Innovative Solutions

The biggest challenge was staff turnover at some of our tribal partners (particularly of health care providers and health directors). However, the IHS-JVN program was able to continue seamlessly since it was already in place and operating fluidly. One of the great benefits of the Consortium is that it largely operates in an insular fashion provided that there is one liaison at each facility that is willing and capable of promoting the program, scheduling patients, and retrieving and processing the reports per their clinic's IHS-JVN policy. As backed by evidence, a program champion is pivotal; and in this case, available at every clinic in the form of the diabetic liaison.

Another small challenge, at times, has been the weather. On rare occasions, we had to cancel a clinic due to weather, maybe only twice during our three-year period. If a storm is imminent before the imager makes the journey to the tribal site, the IHS-JVN clinic is canceled and rescheduled. This has not been an issue for the diabetes liaisons or the patients, as both parties accept winter cancellations as part of the reality of living in New England.

Part VII: Sustainability

A. Structure

At this point, most tribal partners have indicated that they would like to continue with the program after the grant has ended, and are motivated by the improvement in their clinical care and their patients' health status. Consortium members that indicated that they would like to continue the IHS-JVN program said that they might cut back on the number of times that they hold imaging clinics to reduce costs. They also commented that they also might consider reducing appointment times from 30 minutes down to 15 or 20 minutes. Maine tribes have been pleased with the amounts of reimbursement generated through Medicaid, and have found that costs are largely offset by Medicaid reimbursement. Though Medicare and private insurance reimbursement continues to be poor, the reimbursement offered by Medicaid is good enough to offset the majority of the cost. The benefits of the program and potential cost reductions of treatment are cost beneficial as well.

B. On-going Projects and Activities/Services To Be Provided

i) Will all, some or none of the elements of the program be sustainable once Outreach grant funding has ended? Please check the appropriate selection.

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained (i.e. the program will completely end after the grant period)

ii) Identify the projects and activities that will be sustained beyond Outreach grant period.

We anticipate that the program will continue much as it operates now, but that one or two tribes may not choose to continue. The JVN consortium will have one shared "imager" that will travel around to each tribal site that is willing to pay for the services at cost. At each tribal site, health clinic staff will be utilized to perform many of essential functions of the program, including patient selection, recruitment, scheduling, and care coordination.

We also have plans to grow the consortium and open these services up to our local non-rural tribes in New England. Over the course of the program, the Project Coordinator had presented the success and accomplishments of the consortium at several conferences in Indian Country for the purposing of recruiting additional outside tribes to participate. After presenting the success of the Consortium, three additional tribes were interested in joining: Narraganset, Mashpee Service Unit, and the Mashantucket Pequot Tribal Nation. Since these nations were not classified as rural, we were unable to recruit them for participating in the HRSA-funded project. But going forward, they have expressed potential interested in considering purchasing the services offered by the JVN program. There are also a few other tribes in the New England we may try to contact as well: the Mohegan Tribe of Indians of Connecticut, Oneida Indian Nation of New York, Shinnecook of New York, Seneca Nation of New York, and Cayuga Indian Nation of New York.

C. Sustained Impact

Long term impacts are often very difficult to measure in the realm of health care. Proving cost reductions or cost mitigation of something that hasn't happened but could have happened is difficult to show. It is evidenced based, however, that increased eye examinations are linked with early increased rates of eye disease (and early treatment) which results in long term cost reductions and is likely to reduce the severity of complications. Hence, our program has likely succeeded in reducing costs through cost avoidance via early treatment and diagnosis of a common diabetes complication, diabetic retinopathy.

All participating tribes have found that the IHS-JVN is a viable program that is effective in delivering systematic, routine, quality retinal examinations to diabetes patients. All tribes that have offered the IHS-JVN program have had increased eye examination rates and improved diabetes health outcomes based on the tribal Indian Health Service's Diabetes Care and Outcomes Audit Report.

Although improved eye examinations was the main objective of the program, there was a secondary, unexpected side benefit. Tribes that had this program also had improvements in other standards of care as well. Our tribal partners used the IHS-JVN program as a pivotal, central component of their diabetes care. Most clinics used the JVN program as an opportunity to also provide direct diabetes or nutrition education, HgA1c and blood glucose interpretations, individual case management, and referrals. In this multi-tier approach to health care, each tribal health clinic has found the program to be a boon to their diabetes program and has been highly effectively in helping patients to reach all the standards of car for diabetes management, not just eye examinations.

One of the most beneficial sustained impacts of the program has been the success of the inter-tribal partnerships and proof that collaboration is indeed a great asset to all communities involved. The Maine tribal health directors have long worked together before the start of the JVN Consortium for health promotion and disease prevention but had never before engaged in a cost

sharing program that relied on the sharing on common personnel, equipment, and assets. The Consortium has been a springboard for all the tribal clinics and has proven that effective inter-tribal collaboration is possible for providing health care and reducing costs. The Consortium members have worked well together and have explored other areas of potential partnership as a result of the success of this program. The health clinics have engaged in an inter-tribal substance abuse rehabilitation program. The health clinics continue to think about the idea of shared pharmacy services, an inter-tribal insulin pump program, and broad-reach tele-medicine in terms of primary care given the shortage of permanent health professional staffing.

Part VIII: Implications for Other Communities

Our program could be helpful for other native communities as they could certainly duplicate the effort. This project is a great example of the power and opportunities that arise from a collaborative partnership using the free telehealth resources offered through IHS. It is a testament, that by working together we can reduce programmatic costs, and get all the benefits that comes from excellent health care. IHS offers this telemedicine tool to tribal health centers in rural and urban medical facilities. However, they will only provide this service if the facility can manage the telehealth equipment and meet the eligibility requirement of having at least 250 diabetes patients. The requirement for a tribal clinic to have 250 patients is often prohibitive for clinics, as many tribes, particularly eastern tribes, are very small. This mandate is in place because the imager needs sufficient imaging experience to stay proficient at running the equipment and taking images that are of high enough quality to get an accurate reading. Thus, in order for the imager to stay proficient and take good images that allow effective screening for DR, the imager must not go more than six weeks without taking images, and the imager must take enough images to stay proficient with the equipment and software. Hence, for many tribes this program could only be effective with intertribal partnerships.

Part IX: Success, Increased Capacity, and Contributions to Change

A. Defining Success

i) How do you define "success" for your grant program? Please check the appropriate selection(s). You may choose more than one option. If other, please describe.

- Access to a new or expanded health service
- Increased number of people receiving direct services
- Improved quality of health services
- Operational efficiencies or reduced costs
- Integration of process improvement into daily workflow
- Continuation of program activities after grant funding
- Continuation of network or consortium after grant funding
- Health improvement of an individual
- Health improvement among your program participants
- Health improvement among your community
- Enhanced staff capacity, new skills, or education received
- Improved capacity to adapt to changes in healthcare

ii) Do you believe that your program has achieved success? If so, how?

One of the primary objectives for our project was realized: we increased the rate of annual eye examinations for those with diabetes. This was true across each of the tribes that were engaged in the Consortium. Indeed, diabetes care is important across Indian Country, and the IHS has a Special Diabetes Program for Indians (SDPI) which helps fund diabetes care and measure its effect by tracking key indicators of diabetes standards of care. Not only was the rate of eye exams increased by our program, but other measures on the SDPI audit improved as well (data available to Tribes).

A second aim of our program was to "Sustain the Consortium" and since forming, to be eligible to submit the original proposal, the Consortium was able to secure a second, unrelated HRSA FORHP award to combat opioid overdose. During the one-year ROOR (rural opioid overdose reversal) program, the same original five health directors of the same clinics came together to get their staff trained on using naloxone, including their behavioral health staff, and their first responders. The external evaluator was the same for both HRSA FORHP awards, though the PD and PC differed.

B. Organizational Capacity

How has the federal funding of your grant program increased local capacity at your organization, within your network, and/or in your community? Please check the appropriate selection. If other, please describe.

- Formalized networks or coalition
- Developed new partnerships or relationships
- Enhanced skills, education, or training of workforce
- Enhanced data collection and analysis

C. Contributions to Change

Change in individuals' lives, your organization, consortium, or community:

During our three years of the grant-funded program, we identified one very urgent case that required an emergency vitrectomy. A young diabetic man came in for a IHS-JVN eye exam (after "no-showing" to his off-site eye doctor's appointments for several years). He had some atypical symptoms upon initial presentation. He described the feeling of oil inside one of his eyes and also of some visual field changes. Upon having his eye examined, the imager identified some overt retinopathy and sent a "stat" read request to the doctors at the reading center in Phoenix where they identified that he need to have emergency surgery. The patient was in surgery two days later and because of this program, he is still able to see.

Change in policies, systems, and environment:

As a result of the IHS-JVN program, many tribal clinics have changed the way that they deliver diabetes care. Because of the success and high show rates of the program, tribal clinics have used the IHS-JVN program as a framework to add other elements of diabetes care into this highly functional program. Our tribal partners use the IHS-JVN visits as a pivotal, central component of their diabetes care. Most clinics use the IHS-JVN program to provide direct diabetes care or to provide nutrition education, HgA1c and blood glucose interpretations, individual case management, and referrals. In this way, each tribal clinic has experienced a system-level change related to the new approach to diabetes health care delivery.

Maine

Part I: Organizational Information

Grant Number	D04RH28404
Grantee Organization	Healthy Acadia
Organization Type	501(c)3 Non-profit Community Health Organization
Address	140 State St. Suite 1, Ellsworth, ME 04605
Grantee organization website	www.HealthyAcadia.org
Outreach grant project title	Rural Health Care Services Outreach Grant Program
Project Director	Name: Sandie J Dubay
	Title: Special Projects Director
	Phone number: 207-667-7171
	Fax number: 207-667-7173
	Email address: sandie@healthvacadia.org
Project Period	2015 – 2018
Funding level for each budget period	May 2015 to April 2016: \$200,000
	May 2016 to April 2017: \$200,000
	May 2017 to April 2018: \$200,000

Part II: Consortium Partners

* Indicates consortium partners who have signed a Memorandum of Understanding/Agreement

Partner Organization	Location (town/county/state)	Organizational Type
Blue Hill Memorial Hospital*	Blue Hill, Hancock County, ME	Hospital
Maine Coast Memorial Hospital*	Ellsworth, Hancock County, ME	Hospital
Mount Desert Island Hospital*	Bar Harbor, Hancock County, ME	Hospital
Bucksport Regional Health Center*	Bucksport, Hancock County, ME	Federally Qualified Health Center
Eastport Healthcare Inc.*	Eastport, Washington County, ME	Federally Qualified Health Center
St. Croix Regional Family Health Center*	St. Croix, Washington County, ME	Health Center
Mill Pond Health Center Swan's Island*	Swan's Island, Hancock County, ME	Health Center
Healthy Acadia*	Ellsworth, Hancock County, ME	Non-profit Community Health Organization
Regional Medical Center Lubec*	Lubec, Washington County, ME	Federally Qualified Health Center
East Grand Health Center*	Danforth, Washington County, ME	Federally Qualified Health Center
Mano en Mano*	Milbridge, Washington County, ME	Health Organization
Public Health Research Institute*	Stonington, Hancock County, ME	Evaluation Provider
Downeast Public Health District	Washington County, ME	Maine Department of Health and Human Services
University of Maine Cooperative Extension	Machias, ME	University

Community Characteristics

A. Area

The Rural Health Care Services Outreach Grant Program served communities in Washington (pop. 31,450) and Hancock (pop. 54,419) counties, Maine. This region has a total population of 85,869. (2016 census.gov) Washington County is Maine's most racially diverse county (having the highest non-white population), with approximately 8% of its population non-white. Washington County is home to two of Maine's Native American Reservations - the Passamaquoddy reservations at Sipayik and Indian Township. The two counties cover expansive region with over 5,600 square miles.

B. Community Description

This project was implemented in the Downeast Health District, Maine – an area that encompasses the two counties of Hancock and Washington. The target population for the chronic disease prevention and management initiatives is rural, mostly adult residents at risk for developing type-2 diabetes and/or currently diagnosed with a chronic medical condition such as hypertension or with chronic pain.

This region has an estimated population of 70,747 adults with 19,527 having one or more chronic diseases based on 2014 data from census.gov. The Downeast District is also characterized by significant socioeconomic factors affecting health status including poverty. Washington County has a greater proportion (20%) of residents living below 100% of the Federal Poverty Line than Maine (13%) or the U.S. (15%).

While Maine has the oldest population in the U.S. (a very high proportion of elderly (65+) compared to the U.S.), Washington and Hancock counties have an even higher proportion of elderly per the 2010 Census (19.9% and 18.9%, respectively; this compares with 13.3% nationally). And, 19% of Downeast District residents are disabled compared with 16% in Maine and 12% nationally (U.S. Census, 2010). Behavioral Risk Factors & Chronic Disease: Behavioral health risk factors that contribute to diabetes and other chronic health conditions are much higher in the Downeast region in comparison to Maine and the U.S. Prevalence of obesity in Washington County [36%] is especially high, and well above the state rate [28%]; Hancock County follows closely with 27%. Sedentary lifestyle – characterized as reporting no leisure time exercise – is also prevalent in Washington County [32%] and Hancock County [24%], again compared with Maine [22%] (ME SHA, 2012). Overall diabetes prevalence is high in the Downeast District, especially in Washington County [WC=13%, HC=8%, ME=10%], that has the highest county diabetes prevalence rate in Maine. Age-adjusted hospital discharge rates [WC=154 per 100,000; HC=116; ME=118] and Emergency Department visit rates for diabetes [WC=379; HC=250; ME=250] correlate with prevalence and risk factors. Washington County also has the highest age-adjusted diabetes mortality rates of any Maine county [WC=38, ME=21] (ME SHA, 2012). Medical risk factors associated with poor cardiovascular health are also high in the Downeast District of Maine. The prevalence of diagnosed high blood pressure is high in both Washington County and Hancock County [WC=40%, HC=31%, ME=30%] (OneMaine, 2010), as are stroke hospital admission rates [WC=199 per 100,000, HC= 183, ME=149], congestive heart failure hospital admission rates [WC= 379 per 100,000, HC=348, ME=283] and heart attack hospital discharge rates [WC=461 per 100,000, HC=349, ME=261]. Elevated rates of hyperlipidemia (high cholesterol) [WC=40%, HC=43%, ME=39%, US=37.5%], and heart attack mortality (AMI) rates [WC=60 per 100,000, HC= 45, ME=34] are also observed in both counties (ME SHA, 2012).

C. Need

The Downeast Maine Health Consortium came together to address the significant priority health issues as identified by local community health needs assessments, and continues to build upon some chronic disease risk prevention and care management strategies that Consortium partners have undertaken over the last several years to reduce the prevalence and economic burden of diabetes mellitus, other chronic diseases and chronic pain, and to improve the health and quality of life for all people who have, or are at risk for, these conditions. As mentioned earlier, over 25% of adults in this region have one or more chronic conditions. Our efforts have reached extensively throughout Downeast Maine to help people prevent the onset of diabetes, manage chronic diseases and chronic pain and lead healthier lives. Over five hundred unique individuals have received direct services to date with this grant.

Program Services

A. Evidence-based and/or promising practice model(s)

The partners have worked to expand and/or implement three evidence-based programs: 1) The CDC's National Diabetes Prevention Program (NDPP)-lifestyle change program, 2) The Chronic Disease Self-Management Program (CDSMP) and 3) The Chronic Pain Self-Management Program (CPSMP). These programs have strict fidelity requirements, which do not allow for modifications of the content or the delivery. Because our CDSMP and CPSMP programs serve a rural area, we received permission to decrease the minimum number of participants from 12 to 8.

The CDC-led National Diabetes Prevention Program is an evidence-based lifestyle change program for preventing or delaying type 2 diabetes. The year-long program helps participants make real lifestyle changes such as eating healthier, including physical activity into their daily lives, and improving problem-solving and coping skills. Participants meet with a trained lifestyle coach and a small group of people who are making lifestyle changes to prevent diabetes. Sessions are weekly for 6 months and then monthly for 6 months. This proven program can help people with prediabetes and/or at risk for type 2 diabetes make achievable and realistic lifestyle changes and cut their risk of developing type 2 diabetes by 58 percent. Since reaching the required NDPP physical activity goals is a challenge in rural areas, especially in the long winter season, the Healthy Acadia program in

Washington County worked with the University of Maine in Machias to provide an indoor walking program for participants in the NDPP.

The Chronic Disease Self-Management Program, developed by Stanford, is a two and a half hour workshop, once a week, for six weeks, in community settings such as senior centers, churches, libraries and hospitals. People with different chronic health problems attend together. Two trained leaders facilitate workshops, one or both of whom are non-health professionals with chronic diseases themselves. Subjects covered include: 1) techniques to deal with problems such as frustration, fatigue, pain and isolation, 2) appropriate exercise for maintaining and improving strength, flexibility, and endurance, 3) appropriate use of medications, 4) communicating effectively with family, friends, and health professionals, 5) nutrition, 6) decision making, and, 7) how to evaluate new treatments. Each participant in the workshop receives a copy of the companion book, *“Living a Healthy Life With Chronic Conditions”* and an audio relaxation CD, *“Relaxation for Mind and Body”*.

The Chronic Pain Self-Management Program, developed by Stanford, is a workshop given two and a half hours, once a week, for six weeks, in community settings such as senior centers, churches, libraries and hospitals. Two trained leaders facilitate workshops, one or both of whom are peers with chronic pain themselves. Subjects covered include: 1) techniques to deal with problems such as frustration, fatigue, isolation, and poor sleep 2) appropriate exercise for maintaining and improving strength, flexibility, and endurance, 3) appropriate use of medications, 4) communicating effectively with family, friends, and health professionals, 5) nutrition, 6) pacing activity and rest, and, 7) how to evaluate new treatments. Each participant in the workshop receives a copy of the companion books, *“Living a Healthy Life With Chronic Pain”*, *an audio of the “Moving Easy Program”* and an audio relaxation CD, *“Relaxation for Mind and Body”*. It is the process in which these self-management programs are taught that makes them effective. Classes are highly participative, where mutual support and success build the participants' confidence in their ability to manage their health and maintain active and fulfilling lives.

B. Description of Activities

Fifty-one staff members of the Consortium partners and other organizations have attended one or more workshops to be master and/or leader trainers in the three evidence-based programs: the CDC's National Diabetes Prevention Program, the Chronic Disease Self-Management Program and the Chronic Pain Self-Management Program. At this time, we have trained one Master Trainer in National Diabetes Prevention Program and 31 Consortium Partners and community members who are trained to be Lifestyle Coaches in the National Diabetes Prevention Program. We have also trained four Chronic Disease Self Management Master Trainers and 22 Program leaders for the Chronic Disease Self-Management program. We have trained three Chronic Pain Self Management Master Trainers, who have trained eight Consortium partners and one community member to lead the Chronic Pain Self-Management Programs.

We have provided 51 programs of the three evidence-based programs as of March 15, 2018, reaching 457 community members. The Consortium partners have provided direct service to 306 participants in 34 National Diabetes Prevention Programs. This is a year-long program with a minimum of 22 workshops. We have held 14 Chronic Disease Self Management Programs reaching 132 community members. We have held three Chronic Pain Self Management Programs in which 19 community members have participated. The CDSMP and the CPSMP are two and a half hour workshops that run for 6-weeks. Two leaders are required for these programs.

C. Role of Consortium Partners

Healthy Acadia- coordinated Consortium meetings and activities. Provided technical assistance and leader trainings to partners in the implementation and delivery of the National Diabetes Prevention Program (NDPP), Chronic Disease Self-Management Program (CDSMP), and/or Chronic Pain Self-Management Program (CPSMP) programs. Provided contracts and support for Consortium Members to implement Consortium goals. Coordinated regular meetings of the Consortium. Provided administrative and programmatic leadership and management over grant-funded activities. Provided trainings to health professionals and community members throughout Hancock and Washington counties in the delivery of the NDPP, CDSMP, and/or CPSMP programs. Provided materials to support delivery of classes. Provided technical assistance to partners in the NDPP recognition process as needed. Provided education and resources to help partners best integrate the programs into their institutions, such as through their referral and outreach processes. Coordinated a media campaign and public forum to increase health awareness and awareness of this project throughout the region.

Blue Hill Memorial Hospital - participated in meetings of the Downeast Maine Health Consortium to develop and/or revise the work plan, strategic plan, governance plan and sustainability plan. Had staff trained and coordinated the effective delivery of the National Diabetes Prevention Program and Chronic Disease Self-Management Program in their service area, maintaining fidelity to the evidence-based curriculum. Provided data from NDPP and CDSMP programs for the purpose of project evaluation.

Maine Coast Memorial Hospital- participated in meetings of the Downeast Maine Health Consortium to develop and/or revise the work plan, strategic plan, governance plan and sustainability plan. Had staff coordinate and lead the effective delivery of the National Diabetes Prevention Program in their service area, maintaining fidelity to the evidence-based curriculum. They provided data from their NDPP programs for the purpose of project evaluation.

Mount Desert Island Hospital- participated in meetings of the Downeast Maine Health Consortium to develop and/or revise the work plan, strategic plan, governance plan and sustainability plan. Had staff trained and coordinated the effective delivery of the National Diabetes Prevention Program, Chronic Disease Self-Management Program, and/or Chronic Pain Self-Management Program in their service area, maintaining fidelity to the evidence-based curriculum. They provided data from NDPP, CDSMP and/or CPSMP courses for the purpose of project evaluation.

Bucksport Regional Health Center- participated in meetings of the Downeast Maine Health Consortium to develop and/or revise the work plan, strategic plan, governance plan and sustainability plan. Had staff trained and coordinated the effective delivery of the National Diabetes Prevention Program, Chronic Disease Self-Management Program, and supported the delivery of a Chronic Pain Self-Management Program in their service area. They provided data from NDPP and CDSMP programs for the purpose of project evaluation.

Eastport Healthcare Inc- participated in the Downeast Maine Health Consortium and assisted in the development of the sustainability plan. Had staff trained and coordinated the effective delivery of the National Diabetes Prevention Program in their service area, maintaining fidelity to the evidence-based curriculum. They provided data from NDPP for the purpose of project evaluation.

St. Croix Regional Family Health Center- participated in meetings of the Downeast Maine Health Consortium to develop and/or revise the work plan, strategic plan, governance plan and sustainability plan. Had staff trained and coordinated the effective delivery of the National Diabetes Prevention Program, Chronic Disease Self-Management Program, and/or Chronic Pain Self-Management Program (CPSMP) in their service area, maintaining fidelity to the evidence-based curriculum. They provided data from NDPP, CDSMP and/or CPSMP courses for the purpose of project evaluation.

Mill Pond Health Center Swan's Island- participated in the Downeast Maine Health Consortium and assisted in the development to develop of the Sustainability plan. Had staff trained and coordinated the effective delivery of the Chronic Disease Self-Management Program in their service area, maintaining fidelity to the evidence-based curriculum. They provided data from the CDSMP programs for the purpose of project evaluation.

Regional Medical Center in Lubec- participated in meetings of the Downeast Maine Health Consortium to develop and/or revise the work plan, strategic plan and governance plan and sustainability plan. Had staff trained and coordinated referrals to the National Diabetes Prevention Program and Chronic Disease Self-Management Program in the region.

East Grand Health Center- participated in meetings of the Downeast Maine Health Consortium to develop and/or revise the work plan, strategic plan, governance plan and sustainability plan. EGHC had staff trained in the National Diabetes Prevention Program.

Maine Migrant Mobile Health- participated in meetings of the Downeast Maine Health Consortium to develop and/or revise the work plan, strategic plan and governance plan. Had staff trained and coordinated the effective delivery of the National Diabetes Prevention Program in their service area, maintaining fidelity to the evidence-based curriculum. MMH also had a staff member trained in Chronic Disease Self-Management Program. Provided data from NDPP for the purpose of project evaluation.

Public Health Research Institute- participated in meetings of the Downeast Maine Health Consortium to develop and/or revise the work plan, strategic plan and governance plan and sustainability plan. They are the lead evaluation team using multiple procedures for gathering, analyzing, and interpreting data.

Downeast Public Health District liaison- participated in meetings of the Downeast Maine Health Consortium to develop and/or revise the work plan, strategic plan, governance plan and provide input into the sustainability plan.

University of Maine Cooperative Extension- participated in meetings of the Downeast Maine Health Consortium to develop and/or revise the work plan, strategic plan, governance plan and provided input into the implementation and sustainability of the project.

A. Outcomes and Evaluation Findings (do not submit your Evaluation Report in lieu of completing this section)

Healthy Acadia has enrolled 306 participants in 34 National Diabetes Prevention Program classes over the course of the grant. Based on the sample of participants for whom baseline and follow-up information is available, we estimate that between 49% and 67% have reduced body weight by at least 5%. On average, participants have lost 14.4 pounds during their participation in the classes, and have increased weekly physical activity by over 100 minutes. This information shows that the NDPP classes are reaching a large number of people at risk for developing diabetes, and having a meaningful impact on helping them reduce their risk and lead healthier lifestyles.

A total of 132 participants have enrolled in 14 Chronic Disease Self-Management Programs throughout Washington and Hancock counties. Feedback from participants was highly positive, and of those who were asked, 100% said that they would recommend the program to a friend. On average, 50% of participants showed a reduction in number of days of poor health, 47% decreased the number of poor mental health days, and 50% decreased the number of days in which their conditions prevented them from doing usual activities. Between 61% and 73% have shown a significant improvement in self-efficacy to manage their chronic disease.

To date, 3 Chronic Pain Self-Management classes have been initiated – at Healthy Acadia, Hancock County, and Bucksport. A total of 19 participants have been enrolled in these classes. Follow-up assessments have not yet been completed, but the enrolled participants have an average baseline SEMCD6 score of 4.7 – below the estimated average for the general population of 5.2. Based on baseline quality of life questions, they have also experienced an average of 23.1 days of poor health (77%), 15.7 days of poor mental health (52%), and 17.8 days in which their condition has prevented them from doing usual activities (59%) in the in the 30 days prior to starting the class. Based on this baseline data, participants recruited to these CPSMP classes stand to benefit from this type of community-based opportunity. The impact of these classes and additional CPSMP classes as they are implemented, will be assessed once classes conclude and follow-up assessments are conducted.

B. Recognition

We work regularly with over 10 newspaper media outlets in the region. Over 100 press releases, media postings and articles about the Outreach Grant Program and the 3 evidence-based chronic disease management programs have been published over the past 3 years. We have also had over 50 postings in our Healthy Acadia newsletter, which reaches over 2,700 people. 6 partner organizations regularly post our program information. Our National Diabetes Prevention Programming has been promoted on both WABI television with a broadcast audience of over 30,000, on the WABI website with a reach of over 30,000 people. NDPP has also been broadcast on the WQDY radio station with a reach of over 15,000 people.

As part of the Outreach Grant Program, we have implemented the National Diabetes Prevention Program and met the requirements to achieve “Full Recognition” from the Diabetes Prevention Recognition Program (DPRP). Healthy Acadia staff have also trained and met the requirements to become Master Trainers for the National Diabetes Prevention Program, the Chronic Disease Self Management Program (developed by Stanford) and the Chronic Pain Self Management Program (developed by Stanford).

Challenges & Innovative Solutions

Several challenges occurred throughout the course of implementing this project, and the Consortium worked creatively and collaboratively to address these challenges. Staff turnover and community recruitment in the NDPP, CDSMP and CPSMP programs proved to be two challenges in reaching our project goals. Healthy Acadia staff and Consortium partners addressed each challenge by adapting to unforeseen events and applying readiness to change efforts, resulting in our ability to obtain significant gains in reaching our goals.

Establishing the trained staff needed to execute this project also created logistical challenges. As mentioned previously, we were counting on utilizing Consortium partner staff who were trained or were in the position to be trained in the evidence based programs, so we could immediately have the leader base needed to hold community programs. When these staff left the organizations and were no longer available to offer the leader trainings, we needed to train additional staff as Master trainers to train other leaders. This process involves meeting the sequence of requirements necessary to be a Master Trainer and takes an extended period of time (to become a NDPP Master trainer takes almost 2 years). The fidelity of the CDSMP/CPSMP programs also requires two certified facilitators to hold community and leader training workshops. Fortunately, we were able to train Healthy Acadia staff to achieve Master Trainer status in all 3 evidence based programs and offer subsequent leader trainings. Due to these delays and staff turnover within the Consortium partners, our region has ongoing needs for additional leader trainings. Our plan for use of a no-cost extension focuses on additional

leader trainings as well as TA to the new trainees so they are able to promote and implement the programs in their areas. We hope to have to opportunity to utilize the no-cost extension as requested as an additional way to address this challenge of the delays in trainings.

Another challenge involved engaging and recruiting participants for the 3 programs. Press releases and partner outreach, which normally produce robust enrollment in established Healthy Acadia programs, did not immediately prove successful in recruiting NDPP, CDSMP and CPSMP participants. A number of unique approaches increased our success in this very challenging rural region.

First, we found that making short presentations about the course offerings at other Healthy Acadia programs (for example: Tai Chi classes, nutrition education classes, substance use recovery services, our Healthy Aging Task Force, as well as the other NDPP, CDSMP and CPSMP classes) helped achieve our enrollment goals and the requirements for program fidelity. Now, after three years of repeatedly announcing and holding workshops, and creatively raising awareness about the opportunities in multiple venues, we have overcome these challenges to the point that we receive regular inquiries about the programs from community members.

Second, we established an innovative solution for referrals to the National Diabetes Prevention Program in Washington County. We worked with a local primary care practitioner champion to create an algorithm for identification of patients at risk for diabetes and intervention through the evidence-based lifestyle change program. It was pilot tested within his practice. In addition, we used the same referral program with several local Federal Qualified Health Centers throughout the county to link the lifestyle change program and providers.

The referral system includes:

- At-risk patients are identified through electronic medical record (EMR) data or individual screening (A1c, BMI, risk assessment, family history)
- Patients are informed of their risk and the evidence-based lifestyle change program by the medical practice or lifestyle change program coach
- Referral forms are returned to lifestyle change program coach and patients provided a copy of the referral
- Lifestyle change program coach meets with patients for a one-on-one intake assessment for readiness and enrollment into the program

In addition, a service agreement was established, outlining a partnership between the medical practice and Healthy Acadia. The responsibilities of each partner were outlined, with the goal being for at-risk patients to receive the care they need and have that information bring back to the medical provider. Forms are used created for referral and quarterly review of progress notes.

Factors for success included:

- Formed partnerships between medical providers and Consortium partners providing NDPP
- Incorporating referral to the evidence-based lifestyle change program into medical practice and health centers' existing delivery systems
- Utilizing and reworking a well-known and reputable referral system
- Tailoring existing CDC NDPP awareness materials for the audience and using them to promote diabetes prevention awareness
- Maintaining close contact with all partners involved to troubleshoot any issues
- Outstanding support and guidance for the project from medical champions

"With strong partnerships with Mrs. Fochesato (Healthy Acadia staff), we were able to develop a sustainable referral system for the evidence based lifestyle change program in Washington County. It wasn't always easy, but having a shared vision, endurance, and funding made it work," ~ Primary Care Physician

"Mrs. Fochesato's infectious enthusiasm for the prevention of diabetes through evidence based lifestyle changes is the driving force of the success of this project. It has been proven that lifestyle changes are more effective than medications in preventing prediabetic patients from developing diabetes and Mrs. Fochesato is this region's champion." ~ Primary Care Physician

"We have more energy! We feel a lot better! We are both in the National Diabetes Prevention Program referred by our physician Dr. Rioux and have each lost 34 +/- pounds! We love it!" ~ NDPP participants

"I am eating more vegetables and fruits than I ever have. I exercise now, and I never did. I eat smaller portions. I still have times that I fall off... but the tools this class has given me help me pick myself up and continue to try....I am so grateful for this class, my team members and my lifestyle coaches." ~ NDPP participant

A final challenge that partners experienced was in helping NDPP participants to meet their physical activity goals. Our region is very rural, and many parts of our region do not offer many opportunities or facilities for exercise. In many places, our road systems are not conducive or safe for walking/running/biking/etc. In order to address this challenge, a walking program was developed to be used with participants that complemented the NDPP program curriculum. Healthy Acadia developed a shared use agreement with a local University for their gymnasium, and we worked with primary care providers to conduct "Walk and Talks," whereby the providers joined the walks to provide education and encouragement, based on the NDPP curriculum. It was an excellent success. The community got involved; it brought awareness to the NDPP not only to the community members but also to the medical community.

Sustainability

A. Structure

The Consortium will continue to work collaboratively together, and Healthy Acadia will continue to provide technical assistance as the Consortium partners continue to implement and institutionalize these programs. We will continue to build upon the strong relationships and partnerships formed, and together we will explore the most effective ways in which to continue to convene and collaborate into the future. All Consortium partners are interested in continuing to partner together on this and other initiatives.

B. On-going Projects and Activities/Services To Be Provided

i) Will all, some or none of the elements of the program be sustainable once Outreach grant funding has ended? Please check the appropriate selection.

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained (i.e. the program will completely end after the grant period)

ii) Identify the projects and activities that will be sustained beyond Outreach grant period.

The Consortium Partnership represents most major hospitals and health centers in our two-county region. We are very grateful and pleased that the partners feel strongly about the community need for these preventive programs and that eight of the Consortium partners plan to continue these 3 evidence-based programs in the future. Blue Hill Memorial Hospital, Mount Desert Island Hospital, St. Croix Regional Family Health Center and Healthy Acadia plan to continue to offer programs in the NDPP, CDSMP and CPSMP.

Bucksport Regional Health Center will offer the NDPP and CDSMP, Eastport Healthcare Inc. and Maine Coast Memorial Hospital will offer the NDPP, Mill Pond Health Center on Swan's Island will offer the CDSMP and CPSMP. Consortium partners are planning a variety of ways to continue this programming. Many partners are looking to grants, funding, foundation support and third party payers. Some partners are looking to include this programming in their broader organizational budget. Donations and participation fees are a possibility, but prohibitive for most participants. Medical insurance reimbursement is another fruitful prospect, and partners are exploring leveraging this opportunity. The State of Maine has recently included NDPP as a reimbursable program in their health insurance for state employees. The recently approved Medicare reimbursement is a critical element for the sustainability for the NDPP. Reimbursement requires that partners have Diabetes Prevention Recognition Program (DPRP) status and leaders have their own personal identifier numbers. Some partners have recognition, or they are pending recognition. Others will be investigating this in the future. This will allow for reimbursement for Medicare participants, if the participant achieves the goals established by the program. Consortium partners also plan to sustain the programs utilizing staff that they have had trained for this purpose. Most have planned for this work and allocated staff time and funding.

C. Sustained Impact

Fifty-one staff members from 20 organizations have participated in one or more trainings for the National Diabetes Prevention Program, the Chronic Disease Self Management Program and/or the Chronic Pain Self Management Program across Hancock and Washington Counties. This includes staff from three hospitals, 6 health centers and 1 migrant mobile health unit, as well as Healthy Acadia, a non-profit community health organization with offices in both counties. These Consortium partners have plans to continue offering these evidence-based programs. We have also trained a few community members who will support the trainings

as lay volunteers. This capacity to provide health education programs, as well as the strengthened partnership among local organizations, will remain in the community beyond the grant period. The health benefits of the NDPP, CDSMP and CPSMP evidence-based programs will have a positive ongoing impact in the community. Based on published findings on the reduction in healthcare costs associated with decreases in BMI, we estimate that, on average, annual healthcare costs have been reduced by \$624 per NDPP participant.

Implications for Other Communities

These programs have had significant impacts in our communities and could benefit communities across the country. The experience of working with a Consortium of partners was key to implementing these 3 evidence-based programs in region, which covers over 5,600 square miles. They have been engaged from the initial grant proposal through work plan development, strategic planning, governance planning, sustainability planning, and program promotion and implementation. Partners in all corners of the region participated by having staff trained and offering these programs to patients and community members. The programs have been well received and valued by participants who have spread the word and shared their positive experiences with friends, family and their healthcare providers. This has resulted in additional referrals for participation. When planning, pay special attention to the potential impact of staff turnover, for such an intensive community education program, would be one area that should be addressed in the implementation planning and would help the process in the long run.

Another important consideration for implementing evidence-based programs is the establishment of peer support groups that would provide continued support for the participants. Peer support is critical to the success during the program course and peer support is equally important for the continued success of the participants in order to maintain and even increase their healthful activities. There is also a great need for an ongoing curriculum for the National Diabetes Prevention Program to provide continued education and inspiration to participants in a peer support setting.

Linking the medical providers, to the evidence based programs, was another element that contributed to the success of the project. In Washington County, our staff worked directly with a number of medical providers who were extremely interested in diabetes prevention. This led to many referrals and the program was also strengthened by progress reports that were sent to the participant's medical provider. Doctors even took the time to participate in the walking programs and supported the educational messages of the NDPP. More recently, we have worked closely to provide NDPP to the Department of Health and Human Services (DHHS) staff. DHHS helped us reach out to offer NDPP to their clients (which is an important demographic to reach for diabetes prevention) and the response has been very positive. These alliances have helped the NDPP expand and grow.

The benefits to community members have been measurable with improved health and empowerment to feel better and manage their own health conditions.

Patient feedback has been positive. Participants in the National Diabetes Prevention Program have demonstrated lifestyle changes that resulted in significant weight loss and increased their physical activity. The Chronic Pain Self Management Program and the Chronic Disease Self Management Program have empowered participants to better manage their chronic diseases. Almost 70% of participants have said they feel they have more skills and tools to better manage their health conditions. The following are a sampling of quotes from participants in response to:

“What is the most significant change that has resulted from your involvement in the program and why is this significant to you”:

- Participant A: “Concentrating more on my health and doing some changes to help myself more. Have gotten involved in exercise programs and walking etc. I believe I am taking some steps to help myself, physically and mentally.”
- Participant B: “Greater self-awareness of possible changes. Greater self-awareness of my control over them. Greater water consumption. Feeling better starts with small things (water consumption).”
- Participant C: “Better outlook on my future, more understanding of others' issues. We all helped each other. I have always been a doer- not being able to do as much has affected my whole being. I feel better now.”
- Participant D: “Mindfulness and motivation. Flexibility to adapt to plans, situations. Skills to manage pain. Skills to set and take action on goals - exercise, sleep hygiene, pain management, and physical therapy. Great insight into making changes in my life, setting goals and making action plans. Camaraderie was nice! Excited to share info w/family.”

The Chronic Disease Self Management Program and the Chronic Pain Self Management Program have empowered individuals to be active managers of their health conditions. These programs offer extensive health benefits beyond the confines of the program for community members who have the opportunity, through grants such as this, to partake in these lifestyle and self-empowerment programs.

A. Defining Success

i) How do you define “success” for your grant program? Please check the appropriate selection(s). You may choose more than one option. If other, please describe.

- Access to a new or expanded health service
- Increased number of people receiving direct services
- Improved quality of health services
- Operational efficiencies or reduced costs
- Integration of process improvement into daily workflow
- Continuation of program activities after grant funding
- Continuation of network or consortium after grant funding
- Health improvement of an individual
- Health improvement among your program participants
- Health improvement among your community
- Enhanced staff capacity, new skills, or education received
- Improved capacity to adapt to changes in healthcare

ii) Do you believe that your program has achieved success? If so, how?

We have experienced growing success for the Downeast Maine Health Consortium outreach program, with the implementation of many chronic disease prevention and self-management programs, with many consortium partners trained, and with extensive work accomplished by the Consortium. These activities included the following evidence-based programs: the National Diabetes Prevention Program, the Chronic Disease Self-Management Program, and the Chronic Pain Self-Management Program. Through this opportunity, we have built strong working relationships with the Consortium partner organizations and worked together to offer these programs in this region. As part of this project, fifty-one staff of the Consortium partners and other organizations have attended one or more workshops to be master and/or leader trainers in these programs and we have provided 51 of the three evidence-based programs to date. We have worked to improve and refine strategies for trainings, recruitment and retention of these community-based programs. Ultimately, through this project, we have reduced the development and economic burden of diabetes mellitus, other chronic diseases and chronic pain, and worked to improve the health and quality of life for the community members in the Downeast region.

B. Organizational Capacity

How has the federal funding of your grant program increased local capacity at your organization, within your network, and/or in your community? Please check the appropriate selection. If other, please describe.

- Formalized networks or coalition
- Developed new partnerships or relationships
- Enhanced skills, education, or training of workforce
- Enhanced data collection and analysis

C. Contributions to Change

Here is an example of how the National Diabetes Prevention Program has changed one participant’s life. (Written by and posted with the permission of the participant.)

“I have struggled with maintaining a healthy weight for most of my adult life. Over the years, I've joined many weight loss programs, tried losing on my own and eventually just came to the conclusion it is what it is. Until, I was introduced to this program. On October 24, 2017, a friend mentioned that she was going, I said what the heck, I would give it a try. I am so thankful that I did. I have made many positive changes in my lifestyle since this day, such as, during the workday instead of sitting in the break room during my breaks and lunch; I take a walk, which has also improved my productivity in my job. I recently had blood work done at an annual check up, my total cholesterol has dropped from 214 to 160. Since joining, I have lost a total of 44 lbs. and feel fantastic both physically and mentally. I have finally realized that maintaining a healthy lifestyle is a journey not a destination, thank you Angela, my lifestyle coach for giving me the tools necessary, the positive support and above all guiding me to be mindful in living a healthy life. Sincerely, Rebecca”

Here is an example of how one participant, who wanted to share the benefits she experienced through the Chronic Disease Self-Management and Chronic Pain Self- Management Programs, trained to be a leader in the Chronic Pain Self- Management Program. (Documented with permission of the participant by a Healthy Acadia staff member.)

Robin is woman in her late fifties, who has experienced severe rheumatoid arthritis since her early teenage years. Her participation in Healthy Acadia's programming exemplifies how creating an interconnected web of community health offerings builds individual and community strengths.

Robin became engaged in Healthy Acadia's programs as a participant of a free eight-week Tai Chi for Health course in June of 2017, a program offered in partnership with Bucksport Regional Health Center, a HRSA Consortium partner. During those classes, participants were encouraged to consider participation in Healthy Acadia's Chronic Disease Self-Management Program. Subsequent enrollment from that class allowed an immediate scheduling of a Chronic Disease Self- Management Program in which Robin was an active member. Despite having experienced a severe bout of arthritis, which prevented her from attending all of the meetings, Robin utilized and reaped significant benefits from practicing the self-management tools introduced in the program. She said she experienced less pain and increased activity through practicing action planning, decision making and pacing her activities. Her successes enticed her to learn more, and in the fall she enrolled in a Chronic Pain Self- Management Program. Through her participation in these workshops, Robin discovered how much these programs helped her manage her health and how good it felt to exchange ideas and stories with others. Her desire to help others inspired her to enroll in Healthy Acadia's November 2017 Chronic Pain Self Management Program leader training. As a lay-person and as a certified Chronic Pain Self- Management Program leader, Robin is well poised to help build community health as she builds upon her own accomplishments.

The most significant systems and environmental changes that have occurred as a result of this grant, is the Consortium partnership and how the partner organizations plan to continue these evidence-based prevention and health programs in the region. They have committed to the project by having staff trained in one or more of these three programs. They are allocating staff time and funding in their budgets, as well as applying for grants/funding, to continue to provide these programs for their patients and the community in the future. There is also an increased community awareness of the value of preventive programs and self-management and self-empowerment education for individuals affected by chronic diseases.

Maine

Organizational Information	
Grant Number	DO4RH28377
Grantee Organization	Mount Desert Island Hospital
Organization Type	Hospital
Address	10 Wayman Lane, Bar Harbor, ME 04609
Grantee organization website	www.mdihospital.org
Outreach grant project title	Integrated Community Care Model Supported by Telehealth Technology
Project Director	Name: Lynn Leighton, RN
	Title: Director of the Integrated Care Department
	Phone number: 207-288-5082 ext. 7801
	Fax number: 207-288-8438
	Email address: lynn.leighton@mdihospital.org
Project Period	2015 – 2018
Funding level for each budget period	May 2015 to April 2016: \$200,000
	May 2016 to April 2017: \$200,000
	May 2017 to April 2018: \$200,000

Part II: Consortium Partners		
* Indicates consortium partners who have signed a Memorandum of Understanding/Agreement		
Partner Organization	Location (town/county/state)	Organizational Type
*Community Health & Counseling Services	Ellsworth, ME	Home Health
*Visiting Nurses Association Home Health & Hospice	Ellsworth, ME	Home Health
*Eastern Maine Medical Center Clinical Research Center	Bangor, ME	Hospital

Community Characteristics

A. Area

This project served residents of Hancock County, Maine.

B. Community description

Hancock County is characterized by small towns, and there is little or no public transportation. Some of the off-shore islands with year round populations are accessible only by ferry. Maine has a long winter season, and geographic isolation is an issue from November through March, especially for the elderly and low-income residents without transportation. All of Hancock County is HRSA-designated Medically Underserved Areas/Medically Underserved Populations ((MUA/ MUP). Disparities due to lack of access to medical care include one primary care physician for every 691 residents, one dentist for every 2021 residents and one mental health provider for every 455 residents. The gaps in healthcare are exacerbated by lack of insurance and inability to pay for care, out of pocket expense, and lack of transportation. Socio economic disparities include low income residents, and those without housing or experiencing food insecurity. Fourteen percent of the population is below the poverty line with many families hovering just above it. Hancock County has a high percentage of elderly (over age 65), a correspondingly high number of people with one or more chronic conditions resulting in high costs of care, and a high percentage of dual diagnosed residents with mental/behavioral health/needs. Those most likely to experience barriers to good health include low income residents, uninsured, mentally ill, older adults/elderly and individuals who are socially isolated. This can be seen in the high hospital admission rates for the elderly, high hospitalization rates for all cardiovascular diseases, and high percentage of non-elderly uninsured (Hancock 20% compared to Maine 16% in 2010.)

C. Need

Access to regular, high-quality, timely and appropriate healthcare is imperative to maintaining good health and/or managing chronic disease. Many of the chronically ill residents of Hancock County experience barriers to this healthcare due to unemployment, poverty and diminished finances needed for transportation to medical facilities for care. Additionally, these patients often lack the knowledge and/or access to a variety of community resources that could support their physical, mental, and emotional health. Many of these patients are diagnosed with two or more chronic illness and may also have mental/behavioral health needs. Due to the variety of conditions resulting in these patients not seeking or being able to access routine, preventative healthcare, they often experience disease escalation and have high cost/high rates of hospital readmissions or emergency room visits. Often these visits are avoidable with better disease self-management, self-advocacy and health literacy. In addition, the first 14 and 30 days after a hospitalization is a critical period yet Medicaid and Medicare does not cover the cost of telehealth monitors for patients who are non-homebound during this precarious time. The program addresses the gap in services for non-homebound patients that could benefit from telemonitoring and home nurse visits.

Telehealth nursing is a great option to provide versatile, inexpensive access to lifesaving healthcare and preventative care to distant, rural areas. The addition of telemonitoring will improve the delivery of community-based care by keeping patients at home during periods of transition, or when their health conditions warrant the care. Daily monitoring by a registered nurse (RN) will catch concerns that will prevent patient decline. The use of in-home monitors not only allows the RN monitoring these patients remotely to serve a larger population but also is one step in teaching the patient disease self-management and self-awareness. In addition, weekly visits from the telehealth nurse to provide disease education gives patients better disease self-management and self-advocacy. This in turn results in reduced in-patient admissions and ER visits. Through the use of health coaches, social workers, and behavioral health counselors, patients on the program also receive wrap around care to provide or coordinate access to community resources and services that result in a better quality of life.

Program Services

A. Evidence-based and/or promising practice model(s)

Two evidence-based models and one promising practice were tailored, or blended, to provide community-based integration of primary and mental/behavioral healthcare services and the use of Home Health Technology for in-home monitoring of high risk patients.

- Community Health Worker Model (Care Delivery Team); United States Department of Health and Human Services (US DHHS), Health Resources and Services Administration (HRSA)
- Telehealth: Applications for Complex Care (McKnight, 2012)
- Integrated care programs blended physical and behavioral health services in some way; US DHHS, HRSA Office of Rural Health Policy

The Community Health Worker Model was modified to be a hybrid of the six Community Health Worker models to meet the specific needs of the Hancock County residents served. The Telehealth program utilized the established Integrated Care Team, formerly known as the Coastal Care Team to provide health coaching and social work to the patients. In addition, one of the partnering agencies provided access to a behavioral health counselor; this is in addition to the care received from the Telehealth RN.

Telehealth: Applications for Complex Care model is applicable for telehome monitoring of patients with complex health issues, including those dual-diagnosed mental/healthcare needs. The care plan utilized in this model focused on improving care for patients with chronic illness that may be also be dual-diagnosed with mental/healthcare needs.

B. Description of Activities

The overarching goal of this project was to improve population health through community based care that integrated primary and mental/behavioral health care, utilizing available technology to expand access to services.

Those specifically targeted for the telehealth project included non-homebound residents of Hancock County, diagnosed with congestive heart failure (CHF), chronic obstructive pulmonary disease (COPD) or any cardiac condition that could benefit from daily monitoring of vitals and weekly RN visits for disease education. Potential participants were identified through a variety of means. MDIH currently has an Integrated Care Team (ICT) program that was utilized for this program that included 2 health coaches, a social worker and an RN. A letter explaining the telehealth program was sent to all ICT patients and in addition, the ICT staff often made recommendations of ICT patients that might benefit from telehealth. Care coordinators and PCPs also identified potential patients from their patient load. Census and ED admissions reports were used as well to identify potential

participants. Regardless of how a patient was identified, admission into the program was based on a referral from the patient's PCP with parameters set for their vitals.

Upon receipt of a referral, the MDIH telehealth nurse conducted an initial home visit to determine appropriateness of the patient for the program, obtain patient consent, and administer a self-efficacy survey. The survey captures quality of life measures and was re-administered at the end of the program with differences in the scores analyzed by our evaluation team. In addition, a patient satisfaction survey was administered after the program to assess overall satisfaction and effectiveness of the program.

The referral was sent to one of two partnering home health agencies, Community Health and Counseling Services (CHCS) or Visiting Nurses Association (VNA). The home health agency was responsible the telehealth portion of this program, i.e., installation and removal of telehealth monitors, education on equipment use, and daily monitoring of transmitted vitals. The MDIH telehealth nurse performed weekly visits to each patient and patients remained on the program for 30 days or longer if deemed appropriate by the telehealth nurse and/or primary care provider. During these weekly visits, the nurse provided disease education, medication reconciliation and overall support. She assessed each patient for any health coaching, social work or behavioral health needs and helped coordinate these referrals. Each visit lasted anywhere between an hour and two hours depending on the needs of the patient. Due to the geographic area covered by this grant, the nurse often travelled an hour one way to see a patient and had an average weekly patient load of 15 telehealth and ICT patients. Our nurse tried to schedule her weekly visits in geographic clusters while also accommodating the schedules of the patients, even trying to coordinate when other family members or caregivers could be present. Upon graduation from the telehealth program, MDIH provided weight scales, finger pulse oximeters and blood pressure cuffs to any participants that did not own this equipment. Health coaching and social work help was available post telehealth graduation for any MDIH patients as well as continued weekly nurse visits without the telehealth monitoring equipment.

Statistical analysis of survey results was conducted by the EMMC Clinical Research Center. In addition to this information, data was collected on ED visits and hospitalizations for a year pre and post telehealth enrollment for every patient that did not opt out of this evaluation.

Outreach activities also focused on raising awareness among providers and patients of the home health and telemonitoring services being provided under this grant. These activities have consisted of mainly on-site informational sessions conducted at local primary care practices, distribution of brochures outlining the services and which patients are eligible, and letters sent directly to patients who meet eligibility criteria. As of February 2018, a total of 1479 brochures have been delivered to local organizations and primary care practices, and 314 letters have been mailed directly to patients.

C. Role of Consortium Partners

This project utilized three local partners, two provided the telemonitoring service and one provided the data analysis. The two home health agencies responsible for telemonitoring were already established within the community and provide telehealth to homebound patients. MDIH consistently refers patients to their care outside the scope of this project.

Community Health and Counseling Services (CHCS), Ellsworth, is a home health agency that works with many homebound patients in Hancock County. They were responsible for the installation and removal of telemonitoring equipment (telemonitor, blood pressure cuff, scale, and finger pulse oximeter) in the patients' homes. The home health aide that set up the equipment was also responsible for educating the patient on how to use the equipment. Their RN's were responsible for monitoring the daily transmitted vitals and doing a wellness call to patients that did not transmit their vitals or whose vitals were outside the established parameters. In addition, the RN was responsible for notifying the MDIH project coordinator or Telehealth RN of any patients that showed alarming trends or were regularly not taking their vitals. In addition, CHCS provided a behavioral health counselor to any participants that were interested.

VNA Home Health Hospice, Ellsworth also provided the same services as CHCS in terms of equipment installation and monitoring of transmitted vitals. They were not responsible for providing a behavioral health counselor.

Eastern Maine Medical Center (EMMC) Clinical Research Center, Bangor provided the data analysis portion of this program. The MDIH program coordinator was responsible for gathering the appropriate data and submitting it in a timely manner to EMMC CRC for analysis. They provided us with analysis to be used at our quarterly meetings as well as presented posters at various health conferences. This analysis was also used to provide information, statistics and results for the various reports due to HRSA as well as evidence to present to the MDIH senior management when discussing sustainability.

A. Outcomes and Evaluation Findings

Outreach efforts have led to 129 referrals with a total of 103 patients enrolled in the program and 87 of these completed the program with 2 currently enrolled. Early discharge from the program after enrollment was usually due to the patient deciding they did not want to participate or from non-compliance of taking daily vitals. Data from 51 patients for whom 12 months of follow-up data are available indicate that 39% of patients have experienced a reduction in ER visits in the year following enrollment, compared to the year prior to enrollment, and 41% have experienced a decrease in inpatient hospitalizations.

Additionally, use of a measure of patient self-efficacy to manage their chronic conditions has demonstrated a significant increase in self-efficacy among participants. Changes in self-efficacy of patients during their participation in the program are being measured using the Self-Efficacy for Monitoring Chronic Disease 6-Item Scale (SEMCD6); a validated tool which was developed at the Stanford Patient Education Research Center. Patients respond to the SEMCD6 questionnaire upon enrollment in the program, and again upon completion. Patients who provided both pre- and post-enrollment responses (n=22) improved by 1.5 points (95% CI 0.86 to 2.14), on average, on the SEMCD6 scale. A change of at least 0.5 points is considered clinically meaningful. A total 18 out of the 22 patients (82%) in the sample met this threshold.

Lastly, patients report an overall high degree with satisfaction – both with the ease-of-use of the monitors and their experience with the visiting nurse. Feedback about the helpfulness of the visiting nurse has been overwhelmingly positive. Patients have verbalized that they feel more educated and involved in their healthcare. Many patients have indicated that they continue to monitor their vitals daily, made possible through giving blood pressure cuffs, weight scales and finger pulse oximeters to those who did not own this equipment. Their continued monitoring efforts along with increased disease self-management skills indicate that the educational component of the program has been successful. Our health coaches have been able to help a number of patients work on fitness, dietary, and/or lifestyle changes. Our social worker has been able to connect many patients to necessary resources or services. While the number of patients willing to take advantage of behavioral health counseling was lower than we hoped, those that did take advantage received a valuable service.

B. Recognition

On an individual level, the patient satisfaction surveys indicate overwhelmingly that patients have been pleased with the level of care and overall experience of participation in the telehealth program. Community recognition is ongoing through local service providers and program participants. Program staff was also invited to present a poster at the 2017 Maine Quality Counts Conference as well as at the 2016 HRSA conference.

Challenges & Innovative Solutions

When this project was designed, ICT was available as a county wide resource. On December 31, 2016 the CMS Multi-payer Advanced Primary Care Practice (MAPCP) Demonstration Project ended and the ICT no longer received Medicare payment for services. Due to this change, they decreased their service area to provide care for patients seen by MDIH providers. Ellsworth, Blue Hill, Gouldsboro, Belfast and Searsport practices no longer would receive services unless contracted with the Integrated Care Team. Despite our education efforts to inform practices that the Telehealth Program was still available to all practices in Hancock County, telehealth referrals from non MDHI practices stopped in 2017.

There has been significant and ongoing staff and provider turnover at the various MDIH health centers. This has resulted in a need for a constant reeducation about the telehealth program. In addition, telehealth is one of many services offered to patients and it has been difficult to keep the program in the forefront of providers' attention. The project coordinator has attended multiple health center staff meetings to facilitate this education but it remains an ongoing issue. One of the complaints from some providers was that the referral process was time consuming because a personalized set of parameters for the patient's vitals was required. To facilitate a smoother referral process, an option for the provider to insert standard parameters was added.

Staff turnover within the telehealth team has also resulted in a loss of momentum in gaining telehealth patients. This coupled with staff turnover hospital wide has made regaining the momentum difficult. In addition, staff turnover or shortages at our partnering home health agencies has resulted in longer wait times for equipment installation as well as less consistent communication between partners.

Another challenge we faced was patient consent to the program. We had a number of eligible and referred patients that declined for reasons such as anxiety about having the nurse in their home, not wanting to take their daily vitals, too many other appointments, failure to see the purpose in the program, embarrassment about their health condition, to name a few. In some

cases, the telehealth nurse or provider was able to address and overcome these barriers but there are still a number of people that refused to participate in the program.

One problem we encountered and solved was in how we administered the post program self-efficacy and patient satisfaction surveys. Our original strategy was to leave a stamped, addressed envelope and survey with the patient to be completed at their leisure. The return rate of these surveys was low. To solve this problem, the MDIH telehealth RN administers the post self-efficacy survey on her last visit. The data coordinator calls the patients after program completion to administer the patient satisfaction survey. Other than the difficulty in contacting a few patients via telephone for the patient satisfaction survey, this method has been highly successful and yielded invaluable data about the success of the program in terms of improving quality of life as well as overall satisfaction with the program.

Sustainability

A. Structure

The consortium will not continue after the grant period. While our partners have been an invaluable asset to this project, MDIH feels that the continuation of the program will be more streamlined if incorporated into the spectrum of services currently offered under the Integrated Care Department.

There were a few issues that arose during the grant period with our partners due to some staffing changes, scheduling and geographic issues. Our main concern was that at times the wait for equipment installation was two weeks or longer. Additionally, with one agency responsible for the equipment and telemonitoring portion and MDIH responsible for weekly nursing visits, along with the possibility of phone calls or visits from a health coach, social workers and behavioral health counselor, patients were sometimes confused about who to contact when they had an issue. MDIH believes that there will be a better continuity of care if our telehealth nurse is doing both the daily monitoring as well as the educational visits and will be the key contact point for the patient.

As for continuing with EMMC Clinical Research Center, while we would love to be able to continue to utilize their services for data analysis as we move the program into its sustainable format, unfortunately the costs of their services are not within our budget.

B. On-going Projects and Activities/Services To Be Provided

i) Will all, some or none of the elements of the program be sustainable once Outreach grant funding has ended? Please check the appropriate selection.

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained (i.e. the program will completely end after the grant period)

ii) Identify the projects and activities that will be sustained beyond Outreach grant period.

The telehealth program will continue with few overall changes. The service area will be reduced from countywide to only MDIH patients. Telehealth will still be focused on non-homebound patients with a diagnosis COPD, CHF, or any cardiac condition that could benefit from daily monitoring of vitals and a require a referral from their PCP. The program may expand to include chronic conditions such as diabetes. Patients will be monitored for 30 days, or longer if deemed necessary by the RN or provider, they will receive weekly nursing visits to provide disease management education and medication reconciliation. They will be eligible for health coaching and social work if needed. Access to home visits from a behavioral health counselor will be discontinued outside of the grant funding period though referrals will still be made for outpatient counseling. The goal is to integrate telehealth into the spectrum of services offered through the Integrated Care Department and continue to streamline and integrate the referral process.

C. Sustained Impact

The education provided on self-management of chronic disease is a significant long-term effect for those who have participated as well as their families and/or caregivers. Many of the participants have seen increased quality of life due to this education and an increased skill in symptom recognition and management as well as self-advocacy. This program provided care for people who often fall through the cracks, not being eligible for home healthcare but in need of a higher level of care. The innovative service model used has proven successful and is able to provide wrap around care for patients and has allowed the hospital to expand its patient load by expanding into the home. This has not only permitted a service to become available to a subset of people that was not eligible through insurance but is also addressing some barriers to healthcare. The use of grant funds to purchase weight

scales, finger pulse oximeters and blood pressures cuffs to give to telehealth patients in need has proven to increase the patient's level of on-going commitment to maintaining their overall health and disease self-awareness.

Implications for Other Communities

The experience of the Hancock County Telehealth Consortium program could be relevant to other rural communities seeking to expand their delivery of healthcare services utilizing community based care. In partnering with home health agencies that were already offering telemonitoring services allowed for an easier implementation of the program. Communication between partners and education to providers or others that make referrals was a key component to the success of the program. Education to providers, practice managers and care coordinators was necessary on an ongoing basis as well as continual promotion of the program. We learned the importance of streamlining the referral process to remove any burden on the providers or others involved.

Success, Increased Capacity, and Contributions to Change

A. Defining Success

i) How do you define "success" for your grant program? Please check the appropriate selection(s). You may choose more than one option. If other, please describe.

- Access to a new or expanded health service
- Increased number of people receiving direct services
- Improved quality of health services
- Operational efficiencies or reduced costs
- Integration of process improvement into daily workflow
- Continuation of program activities after grant funding
- Continuation of network or consortium after grant funding
- Health improvement of an individual
- Health improvement among your program participants
- Health improvement among your community
- Enhanced staff capacity, new skills, or education received
- Improved capacity to adapt to changes in healthcare

ii) Do you believe that your program has achieved success? If so, how?

While we are still improving upon the program it has achieved success on several levels. Most importantly, the self-efficacy surveys have shown many patients to have an improved quality of life through participation in this program. Patients have communicated to our telehealth nurse an increased self-confidence in their disease management skills due to the education component of this program. The patient satisfaction surveys have also shown high levels of satisfaction with the program.

The service model utilized in this program is innovative and forward thinking as healthcare is changing. It allows a larger group of people to be seen and removes some financial and transportation barriers of access to healthcare by seeing patients in their homes. Additionally, the program is providing a level of care to patients in need that do not qualify for this type of care under the current reimbursement models. The use of telemedicine will only grow as it allows providers to serve a larger patient load, can reduce costly ED visits and hospital admissions, reduces the financial burden on patients and is becoming easier to utilize as technology continues to expand. Through the implementation of this telehealth program, MDIH is positioning itself to be able to adapt to these changes in the landscape of healthcare as well as adapt to the needs of a rural community.

B. Organizational Capacity

How has the federal funding of your grant program increased local capacity at your organization, within your network, and/or in your community? Please check the appropriate selection. If other, please describe.

- Formalized networks or coalition
- Developed new partnerships or relationships
- Enhanced skills, education, or training of workforce
- Enhanced data collection and analysis

C. Contributions to Change

One patient told our Telehealth nurse that the Telehealth program has empowered her to be her own advocate in knowing her vital signs and when she should contact her PCP. Through the chronic disease management education she received for CHF she was able to discuss issues of increased peripheral edema, slowly climbing weights and increased fatigue. She was able to advocate for adjustments to her Lasix which resulted in the prevention of two different hospitalizations. She stated that because of this program, she contacts her PCP much sooner than she normally would have to discuss her symptoms and discuss treatment options she can try at home before going to the ED. She shared that she has also learned when she truly needs to be evaluated in the ED and has actually gone twice with both visits resulting in short stay hospitalizations. She stated she is no longer fearful staying at home and feels comfortable having conversations with her PCP about managing her condition at home.

While research is ongoing regarding ED visits and hospital admissions pre and post participation in the telehealth program, it is the hope that evidence of reduced ED visits and hospital admissions will result in Medicare and Medicaid recognizing the value of telehealth for non-homebound patients and make this service reimbursable.

Maryland

Part I: Organizational Information

Grant Number	D04RH28402
Grantee Organization	Garrett County Memorial Hospital <i>DBA</i> Garrett Regional Medical Center
Organization Type	Hospital
Address	251 N. Fourth Street, Oakland, MD 21550
Grantee organization website	www.grmc-wvmedicine.org
Outreach grant project title	
Project Director	Name: Kimi-Scott McGreevy
	Title: Assistant Vice President, Marketing & Development
	Phone number: 301-533-4356
	Fax number:
	Email address: kmcgreevy@gcmh.com
Project Period	2015 – 2018
Funding level for each budget period	May 2015 to April 2016: \$200,000
	May 2016 to April 2017: \$200,000
	May 2017 to April 2018: \$200,000

Part II: Consortium Partners

* Indicates consortium partners who have signed a Memorandum of Understanding/Agreement

Partner Organization	Location (town/county/state)	Organizational Type
Garrett County Memorial Hospital* <i>DBA</i> Garrett Regional Medical Center (GRMC)	Oakland, Garrett County, MD	Hospital
Garrett County Health Department*	Oakland, Garrett County, MD	Health Department
Garrett County Community Action Committee*	Oakland, Garrett County, MD	Non-profit
West Virginia University Medical Center*	Morgantown, Monongalia County, WV	University teaching hospital
American Cancer Society*	Oakland, Garrett County, MD)	Non-profit

Part III: Community Characteristics

A. Area

Maryland: Garrett County, western Allegany County

West Virginia: Preston County, Tucker County, Grant County, Mineral County

Pennsylvania: Fayette County, Somerset County

B. Community description

All of the counties comprising the GRMC service area are part of what is known as Appalachia, an area defined geographically by the Appalachian Mountain range and defined culturally by high poverty rates, low rates of educational attainment, and high rates of smoking, obesity, teen pregnancy, and overall poor health outcomes. It is a geographically isolated region, and its sparse population (Garrett County has a total population of 29,425, spread out over 647 square miles) makes it impossible to finance a public transportation system. The ability of patients to travel to appointments is an ongoing challenge. Another challenge in serving the people of the area is the fact that Medicaid varies so greatly from state to state. GRMC services people from 8 counties in 3 states; what Medicaid covers, and whether it covers out-of-state providers, differs greatly from Maryland to Pennsylvania to West Virginia. This can create difficulties in referring patients for specialty services.

C. Need

Cancer is the second leading cause of death in Garrett County, as is the case in Maryland overall and West Virginia and Pennsylvania. When the grant was written, the death rates from colorectal and breast cancers in Garrett County were each 25% higher than such rates in Maryland, or the U.S. The challenge for patients in Garrett County as well as the rest of the GRMC service area was the fact that prior to the HRSA grant and GRMC's clinical affiliation with WVU Medicine, there were no cancer care services within the GRMC service area. People had to travel at least an hour from their homes, or sometimes longer, to receive chemotherapy, radiation, or other cancer care services. For many low-income people, a cancer diagnosis was effectively a death sentence. Travelling for treatment was often not possible. The opening of the Cancer Center at GRMC, and the advent of the Cancer Navigation Program, brought new hope to the people of the region. The only common service not available at the GRMC Cancer Center is radiation. To solve that dilemma, Cancer Navigation staff approached HRSA about purchasing an SUV to transport patients to WVU Medicine. That SUV now makes runs to WVU Medicine five days per week. Again, patients are receiving care who previously would have gone without.

Part IV: Program Services

A. Evidence-based and/or promising practice model(s)

The model we used was the Cancer Patient Navigation Tool Kit, from the Kansas Comprehensive Cancer Control & Prevention's Kansas Cancer Partnership.

B. Description of Activities

The grant has enabled GRMC's Cancer Center to hire two Nurse Navigators who work directly with patients to assist them in finding their way through their treatment and the impact of that treatment on both them and their family members. The Navigators help patients make their way through their insurance options (Navigators spend countless hours advocating that an insurance cover a particular treatment or need), help them feel better about themselves as they go through treatment via the Look Good, Feel Better Program (meetings held monthly to help patients through the rigors of chemo, radiation, and surgery), help them nutritionally by supplying them with dietary supplements such as Ensure, and help them with financial support for the cost of travelling to GRMC for care by supplying them with gas cards. The Navigators help patients make and keep appointments with physicians, specialists, and other medical care providers. They're also a sounding board for both the patient and the family, providing solace and counseling throughout the ordeal of diagnosis and treatment. Finally, they also educate patients and families about various treatment options, including palliative care when further treatment will not change the course of the patient's life. Staff also advocated for and orchestrated the purchase of an SUV to transport patients to radiation treatments at WVU Medicine, an hour's drive from Garrett County. Travelling for daily radiation treatments was a huge burden for many patients and their families. Having a ride to and from treatment meant family members don't have to take time off work. People are receiving treatment who otherwise may have opted to forgo radiation.

C. Role of Consortium Partners

- GRMC – main provider of Cancer Navigation services.
- Health Department – provides home care services for patients in need of additional help. They also refer patients screened through their cancer screening programs (colorectal, breast, oral, and skin), and help with community outreach.
- Community Action Committee – CAC helps cancer patients in need of transportation to and from treatments within Garrett County's borders, and also helps provide patient support through their Home Delivered Meals program and Respite for Caregivers program. They also help with community outreach.
- WVU Medical Center – the oncologist at the program is a WVU Medicine physician. WVU Medical Center also provides radiation treatments and other specialty services to GRMC patients referred to the teaching hospital.
- American Cancer Society – provides the Navigators with evidence-based resources and approaches to dealing with patients. Also supports the Look Good, Feel Better program.

Part V: Outcomes

A. Outcomes and Evaluation Findings

Prior to the opening of the Cancer Center at Garrett Regional Medical Center, and the advent of the Cancer Navigation Program created through the HRSA grant, the incidence of cancer in the GRMC service area was high, but access to cancer care services was minimal and uncoordinated. Residents had to travel at least one hour each way to the nearest regional medical center, to the west in Morgantown, WV at West Virginia University Medical Center (WVU) or to the east in Cumberland, MD at Western Maryland Health System. This was not feasible for a large portion of the area's elderly, disabled, and under-employed population. Often, this population simply went without access to cancer care services entirely. Issues involving transportation, or the ability to have a family member take time from work to ensure travel to and from treatment, often left numerous patients without treatment options.

In order to engage in the daily travel to and from treatment appointments, the family member would have to use vacation time or, lacking that, take a leave of absence from their job. Through its clinical affiliation with WVU Medicine, GRMC was able to contract with an oncologist who oversees the onsite care provided patients at the Cancer Center. This affiliation solved another dilemma often faced by rural hospitals: recruiting specialty physicians.

Over the past 3 years, the Cancer Navigation Program has provided support to 450 cancer patients and their families. This support has included assisting them with follow-up appointments; providing nutrition counseling to help patients maintain a healthy weight throughout treatment; providing support through the American Cancer Society's Look Good, Feel Better program; providing emotional and psychological support through a monthly Support Group meeting; and helping patients navigate insurance policies regarding both treatment and drug coverage.

In advocating for their patients, the Nurse Navigators helped Garrett Regional Medical Center start a Palliative Care Program, a Survivorship Program, and are working with the local Health Department to enhance its cancer screening programs. The Cancer Nurse Navigators also participated in testing patient tracking software being developed by the Centers for Disease Control. The impact of the Cancer Navigation team on patients and their families was significant enough that GRMC actually began Navigation Programs in other departments, including its Well Patient Program, which deals with patients with chronic conditions. Another Nurse Navigation Program is planned for the hospital's Emergency Department, scheduled to start in the spring of 2018.

B. Recognition

Garrett Regional Medical Center's Cancer Navigation Program has been recognized numerous times in local media outlets through news and feature stories as well as photos. The program was a key participant in the Robert Wood Johnson Foundation Culture of Health Prize won by Garrett County in 2017. The prize recognizes progressive communities that approach health from a holistic standpoint.

Part VI: Challenges & Innovative Solutions

A major challenge in providing care to cancer patients in the GRMC service area was the inability to provide radiation onsite. Consequently, patients prescribed radiation as part of their treatment plan still had to travel an hour to receive treatment, then drive an hour back home. The two-hour round trip, coupled with the fact that radiation must be given on consecutive days, sometimes for 6 to 8 weeks, made this a tremendous hardship for patients and their families. The Cancer Navigation team suggested that the hospital purchase an all-wheel drive vehicle and hire a driver to ferry patients to and from their radiation treatments. Working with the hospital's grant writer, the Cancer Navigation team won approval from HRSA to use first year carry-over funds to purchase an 8-seat passenger vehicle. The new car was purchased and now provides transportation to radiation treatments at WVU Medicine in Morgantown, WV, on a daily basis.

Part VII: Sustainability

A. Structure

The Consortium will continue, and will include GRMC, the Garrett County Health Department, WVU Medicine, and the Community Action Committee. The American Cancer Society will continue to be a resource for the Cancer Navigation Team, but as its local office closed, it will not continue as a Consortium member. The Consortium continues to meet on a monthly basis. The Consortium will continue because its members are dedicated to providing the best in care and support to the people of the region. Garrett Regional Medical Center will continue the program, absorbing the costs of the program into the hospital's global budget. The program will be an ongoing part of the hospital's budget because of the value of the program in terms of patient experience and outcomes. The value of the program to a community with such high poverty numbers is immeasurable; patients with little education from low income households are often intimidated by the health care system. They are afraid to ask questions, afraid to tell health care providers that they don't understand a diagnosis, or their treatment options. The role of the Nurse Navigators with such patients is invaluable; they work directly with patients to make sure they understand options, diagnoses, treatment side effects, etc. The Nurse Navigators ensure that patients are receiving the care they want and need, and that they have supports in place to help them through the ordeal that is a cancer diagnosis. Nurse Navigators are a bridge between patients and health care providers who work to create and maintain smooth communications and an open dialogue. This works for both providers and patients.

B. On-going Projects and Activities/Services To Be Provided

- i) Will all, some or none of the elements of the program be sustainable once Outreach grant funding has ended? Please check the appropriate selection.

- All elements of the program will be sustained
- Some parts of the program will be sustained
- None of the elements of the program will be sustained (i.e. the program will completely end after the grant period)

- ii) Identify the projects and activities that will be sustained beyond Outreach grant period.
Staff will continue the Cancer Navigation Program as it has operated since the initial grant funding was received. Staff may increase in size as the number of patients served increases.

C. Sustained Impact

The impact of this program has been significant. Cancer care is now available to people who before would not have received treatment, because they could not travel for care. The Cancer Navigation Program in particular has helped numerous patients get approval from insurance companies for treatment or medications, has helped them feel supported throughout treatment, and has helped families understand the impact of cancer on their loved ones. The impact was such that the hospital instituted Nurse Navigation programs in other departments.

Part VIII: Implications for Other Communities

Implementing a similar program would involve training in navigation. GRMC can help other small rural hospitals start a navigation program, and has done so. A hospital in the WVU Medicine network had a cancer center, but not a navigation program. Their nurse who would be implementing the navigation program travelled to GRMC and shadowed the nurse navigators. Arrangements have been made for her to return for onsite training. GRMC is willing to work with rural hospitals hoping to start a nurse navigation program. The navigators have established working relationships through the HRSA grant activities with navigators all over the United States. Those contacts continue to provide opportunities for sharing resources and gathering information.

Part IX: Success, Increased Capacity, and Contributions to Change

A. Defining Success

- i) How do you define "success" for your grant program? Please check the appropriate selection(s). You may choose more than one option. If other, please describe.
- Access to a new or expanded health service
 - Increased number of people receiving direct services
 - Improved quality of health services
 - Operational efficiencies or reduced costs
 - Integration of process improvement into daily workflow
 - Continuation of program activities after grant funding
 - Continuation of network or consortium after grant funding
 - Health improvement of an individual
 - Health improvement among your program participants
 - Health improvement among your community
 - Enhanced staff capacity, new skills, or education received
 - Improved capacity to adapt to changes in healthcare
- ii) Do you believe that your program has achieved success? If so, how?
Yes! 450 patients have received navigation services, patients who prior to the program may not have received treatment. The SUV which ferries patients to radiation on a daily basis has 30,000 miles on it (since January 2017), and patients have received ongoing support throughout their treatment and beyond.

B. Organizational Capacity

How has the federal funding of your grant program increased local capacity at your organization, within your network, and/or in your community? Please check the appropriate selection. If other, please describe.

- Formalized networks or coalition
- Developed new partnerships or relationships
- Enhanced skills, education, or training of workforce
- Enhanced data collection and analysis

C. Contributions to Change

Change in individuals' lives, your organization, consortium, or community:

GRMC had a 35-year-old male patient diagnosed with acute leukemia who had been refused treatment using the most effective drug possible by another hospital because of the drug's cost. That hospital, in the man's hometown, would only treat with a less effective, cheaper option. The patient had seen media coverage about the GRMC Cancer Navigation Program and called the Cancer Center's Nurse Navigators. He came to GRMC for treatment using the more expensive, more effective drug. He also was provided nutritious meals when at GRMC to ensure holistic care so that the treatments were less impactful on his overall health. Navigation staff also found local housing for him so he would not have to travel from his hometown for treatment. He is now in survivorship and doing well.

Change in policies, systems, and environment:

GRMC is implementing new navigation programs in other departments, including its Well Patient Program that deals with chronic disease patients, and its Emergency Department. In addition, the Consortium members have increased the number of colorectal screenings done in the community by offering alternative screening approaches that are less invasive than traditional testing.

Maryland

Part I: Organizational Information

Grant Number	D04RH28433
Grantee Organization	Somos, Inc.
Organization Type	Non-profit Health Care Organization
Address	4384 Crisfield Highway, Crisfield, MD 21817
Grantee organization website	www.somosinc.org
Outreach grant project title	Crisfield Cares
Project Director	Name: Kerry Palakanis
	Title: Executive Director
	Phone number: 410-968-1800
	Fax number: 410-968-0305
	Email address: kerry@somosinc.org
Project Period	2015 – 2018
Funding level for each budget period	May 2015 to April 2016: \$200,000
	May 2016 to April 2017: \$196,990
	May 2017 to April 2018: \$199,999

Part II: Consortium Partners

* Indicates consortium partners who have signed a Memorandum of Understanding/Agreement

Partner Organization	Location (town/county/state)	Organizational Type
Crisfield Clinic*	Crisfield/Somerset/Maryland	Rural Health Clinic
MAC, Inc.*	Salisbury/Wicomico/Maryland	Area Agency on Aging
Somerset County Health Dept.*	Westover/Somerset/Maryland	Local Health Department
Peninsula Regional Med Center*	Salisbury/Wicomico/Maryland	Hospital

Part III: Community Characteristics

A. Area

Crisfield, Princess Anne, Smith Island (Ewell, Tylerton and Rhodes Point) – Somerset County
 Salisbury – Wicomico County
 Cambridge – Dorchester County
 Denton – Caroline County

B. Community description

The Eastern Shore generally has lower income levels, less access to services, and low education levels compared to the rest of the state of Maryland. Compared to other counties in the state of Maryland, Somerset county ranks dead last - 24th out of 24 counties - for obesity prevalence, heart disease mortality, population percentage living in poverty, and affordability of doctors' visits. Additionally, Somerset ranks 23rd of 24 for life expectancy, hypertension prevalence, high cholesterol, smoking prevalence, diabetes prevalence and 22nd for Asthma Prevalence. The data on the overall health of Somerset County is indisputable. From a mental health stand point, 1 in 5 residents of the county are taking medication or being treated in some way for a mental illness. The statistics on physical health also introduce equal severity for members of the community. Nearly 45% of Somerset County's populations are obese. Furthermore, the presence of hypertension, high blood cholesterol, chronic back pain, arthritis, diabetes, asthma, skin cancer, blindness, lung disease, deafness, cancer, stroke, kidney disease, and heart disease are all excessively prevalent in the Somerset area. Although diseases and ailments are inevitable, it is possible to provide sufficient and effective care in an environment that undoubtedly needs additional services.

C. Need

Crisfield Cares had a simple purpose – to provide primary care and specialty care to the target population through the creation of telemedicine clinics. While many needs have been discussed above, this program sought to provide a high quality and cost-effective solution to two primary challenges: access to primary care for school aged children and access to specialty care for all residents

Part IV: Program Services

A. Evidence-based and/or promising practice model(s)

Crisfield Cares was based on the evidenced-based model of providing care to poor and rural areas through telemedicine. Once considered a novelty, telemedicine is now a mainstream treatment practice and is reimbursable at parity in Maryland. While there was significant research on the use of telemedicine in rural health care – community health center, school-based clinics, chronic disease management, etc. – in the interest of brevity we have chosen a source that mimicked our target population.

Bynum, A., Irwin, C, et al (2011). Impact of School Telehealth on Access to Medical Care, Clinical Outcomes, and Cost Savings Among Children in Rural Arkansas. *Journal of Education Research*. Vol. 5 (2), pp100-117.

B. Description of Activities

The introduction of telemedicine and the mainstreaming of its use in our community has been a great success. Residents on Smith Island and in Crisfield now rely on telemedicine to access primary care as well as specialty services. Patients will now ask if there is telemedicine access to specialty providers outside of our area and will work with our program team to attempt to establish telemedicine follow up care with outside providers.

Our community is the first in our region to have CHWs target to specific focus areas and not sharing services across several counties. We believe that CHWs who are dedicated not to individual patients but to communities have shown to be impactful in changing the community course of access to care and chronic care management. The CHWs continue to go out in the community when our patients need assistance with anything regarding their health and well-being. We have had great patient response from those that have been helped by this program. Many of these residents need someone to assist them when they do not have family in the area. This program allows us to be able to go out in the community to help, not just in an office setting. Our patients are more comfortable in their own surroundings and it makes it easier for them to get to know the CHW and gain their trust. We have seen positive changes in our clients and their health outcomes.

C. Role of Consortium Partners

The Crisfield Clinic was instrumental in providing the primary care access point for our program. They have been active consortium partners from the start and have provided financial resources, equipment and provider access to care. The Crisfield Clinic staff is providing primary care access to Smith Island residents, behavioral health medication management and serve as an originating site for specialty care for primary care patients.

MAC Inc. served as the local area center for educational development of Community Health Workers. They provide ongoing educational support to the CHWs and networking opportunities for learning.

Somerset County Health Department (SCHD) – the health department has taken the lead locally in addressing the opioid epidemic and created a collaborative group of providers including Somos, Inc. to work on local efforts at intervention. The Crisfield Clinic has agreed to partner with SCHD to develop a telemedicine-based response program and expansion of access sites for addiction management.

Peninsula Regional Medical Center (PRMC) - has been instrumental in coordinating efforts on Smith Island. They have agreed to cover the cost of the salaries of the Smith Island CHWs for at least one year beyond the grant period.

Part V: Outcomes

A. Outcomes and Evaluation Findings

Crisfield Cares has established three viable remote access sites in Somerset County Maryland – two on Smith Island and one at the Crisfield Clinic. All three of these sites provide access to primary and specialist care services for residents who reside in a low access community. Residents of Smith Island were able to receive care during inclement weather that would have otherwise

prevented them from obtaining care and may have led to high-cost emergency air transport from the Island to an emergency center.

Our program has demonstrated the effectiveness of Community Health Workers in providing chronic care management to residents in remote rural locations. We have also demonstrated the success of having the CHWs operate telemedicine devices to create access points for primary and specialty care. Over 1500 patients have been served by our program.

The additional focus of behavioral health integration has led to two new consortium partners – J. David Collins and Associates and the Caroline County Health Department. Both partners are now actively participating in collaborative mutually beneficial agreements which provide access to care in three additional counties that were not originally part of our plan. As of this report date, these additional service connections are providing care to approximately 30 patients per week. Expansion of service including providing primary care to behavioral health patients who do not otherwise have care are in the process of being developed because of the program success.

Crisfield Cares has been recognized by the state as a successful telemedicine demonstration project. The Maryland Health Care Commission and representatives from the state department of health refer parties interested in telemedicine to our organization for direction and collaboration. Dr. Palakanis has spoken at a variety of state and national meetings about our program and the integration of CHWs with telehealth to expand access to care in rural areas.

Organizational representatives participated in the development of the Maryland Telehealth Alliance (MTel). MTel, a nonprofit 501c3 organization, was created to foster statewide collaboration on the development and expansion of telemedicine in Maryland.

B. Recognition

Our telemedicine programs continue to be featured on several news stations in our area and have been written about in our local and national papers and magazines. Dr. Palakanis has been asked to speak at state and national telehealth, rural health and health IT conferences and has advocated for the delivery of care through telemedicine services.

Part VI: Challenges & Innovative Solutions

Establishing school-based health programs was the greatest challenge. At the inception of the grant, the state of Maryland did not have regulations in place for school-based telemedicine. Despite meeting with the state officials numerous times over the first two years of the grant and working with the state to develop regulations, we were unable to place telemedicine in our area schools due to the lack required clinical oversight from the local area health department and the inability to provide the required elements to meet the standards of a school-based health clinic. We recognized the unmet needs of the population of Smith Island and were successful in requesting from HRSA to transfer our efforts that were originally targeted to school-based health to the establishment of remote clinics to residents of Smith Island.

Connectivity to provide telemedicine service on Smith Island was a barrier that took a while to overcome. Connectivity issues on Smith Island were resolved with the advent of service provision by Bloosurf to the island residents. After installation it was determined that the Bloosurf connectivity was not sufficient. We were able to establish connectivity through Verizon after they had some availability develop on their Smith Island service. We now have sufficient connectivity to provide telemedicine services from the island and have registered the sites with the State of Maryland as originating telemedicine sites.

Transportation to care services is a continual barrier to provision of service. The Crisfield Clinic has contracted with the area Taxi Service to provide transportation to the Crisfield Clinic for any patient that needs assistance traveling between their home and the Crisfield Clinic. The taxi service has made accessible much easier for patients to reach in person visits when necessary or when they are incapable of walking to the closest location.

Locating and coordinating with specialists for services has been a gradual process as awareness related to telemedicine has grown throughout the state. We now have access to not only primary care but also behavioral health specialists. Contractual arrangements have just been completed with Johns Hopkins Infectious Disease and Genetics programs. Dr. Palakanis has spoken at the several state meetings and continues to provide outreach to encourage telemedicine communication.

Part VII: Sustainability

A. Structure

Our consortium will continue under working agreements for the provision of telehealth services to the area. Consortium partners who will continue to be part of our program include:

The Crisfield Clinic will continue to provide primary care access to Smith Island residents, behavioral health medication management and serve as an originating site for specialty care for primary care patients.

MAC Inc. will continue to provide ongoing educational support to the CHWs and networking opportunities for learning.

The Somerset County Health Department has taken the lead locally in addressing the opioid epidemic and created a collaborative group of providers including Somos Inc. to work on local efforts at intervention. The Crisfield Clinic has agreed to partner with SCHD to develop a telemedicine-based response program and expansion of access sites for addiction management.

Peninsula Regional Medical Center (PRMC) - has agreed to cover the cost of the salaries of the Smith Island CHWs for at least one year beyond the grant period.

The following will become consortium partners through service agreements:

University of Maryland Medical Center and Children's National Medical Center will continue to serve as specialty care access points for services on an as-needed basis.

J David Collins and Associates (JDCA) – provide behavioral health clients who require medication management. Future development plans include providing primary care to the behavioral health clients at JDCA via telemedicine.

Johns Hopkins University (JHU) – contractual agreements are underway to allow JHU to provide Hepatitis C and Genetic care to patients in our consortium network via telemedicine. Upon successful integration, JHU is interested in exploring expansion of specialists via telemedicine.

MedStar Shah Medical Group – have expressed an interest in providing specialty care via telemedicine to our service area. We are in discussions to begin with endocrinology and gastroenterology services both of which are large need areas.

B. On-going Projects and Activities/Services To Be Provided

i) Will all, some or none of the elements of the program be sustainable once Outreach grant funding has ended? Please check the appropriate selection.

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained (i.e. the program will completely end after the grant period)

ii) Identify the projects and activities that will be sustained beyond Outreach grant period.

It has been determined that the management structure and sustainability of the consortium activities will require the consortium partners to absorb the cost of the roles into their organizations. The rationale behind this decision is that the agencies can bill for and receive reimbursement for the telehealth services and therefore the programs can become self-sustaining. Somos Inc. is not a healthcare service provider and therefore by Maryland law cannot generate revenue by the provision of healthcare services. The positions for this consortium to continue will require one full-time clinician/program director, one full-time CHW and a prn contracted technical services representative. The cost of the program director, CHW and contracted technical services representative will be covered by the Crisfield Clinic as they are able to bill for care services and therefore can obtain the revenue necessary to sustain the program positions. Peninsula Regional Medical Center will absorb the costs of the two 0.5 FTE Smith Island CHW positions into their budget and will sustain their program cost via revenue obtained as originating site billing. Expenses for office space, utilities and supplies are being divided by the two organizations.

The plan for sustaining outreach activities is to use the established telemedicine sites as remote access sites for billing for services. The Smith Island sites have the opportunity to bill for care provided as an originating site. Community Health Workers on Smith Island can also provide reimbursable Chronic Care Management to their residents which will provide additional revenue.

The Crisfield Clinic will be generating revenue as both a distance site for primary care as well as an originating site for specialist services. The Community Health Workers at the Crisfield Clinic will also provide Chronic Care Management as an additional revenue source to offset expenses.

C. Sustained Impact

The long-term effect of our program is improved access to care for residents in an underserved area of Maryland. Through our collaborative consortium model we are able to work together to identify and address the unmet needs of the population at large and improve overall health outcomes.

Part VIII: Implications for Other Communities

Similar communities can benefit from the implementation of telemedicine to address access issues and to overcome barriers to health such as transportation.

Part IX: Success, Increased Capacity, and Contributions to Change

A. Defining Success

i) How do you define "success" for your grant program? Please check the appropriate selection(s). You may choose more than one option. If other, please describe.

- Access to a new or expanded health service
- Increased number of people receiving direct services
- Improved quality of health services
- Operational efficiencies or reduced costs
- Integration of process improvement into daily workflow
- Continuation of program activities after grant funding
- Continuation of network or consortium after grant funding
- Health improvement of an individual
- Health improvement among your program participants
- Health improvement among your community
- Enhanced staff capacity, new skills, or education received
- Improved capacity to adapt to changes in healthcare

ii) Do you believe that your program has achieved success? If so, how?

Our program has absolutely achieved success. We have two Community Health Workers with their training completed under the Stanford Model Chronic Disease Self-Management Program. We will have the remaining two CHWs trained this spring. The delay in training the CHWs was related to not having an accessible class available for the identified CHWs. Our program staffing is complete. The staff is trained on or electronic health record (EHR) and the Chronic Disease Management program. The telemedicine carts have been purchased and installed at the designated locations.

The remote patient monitoring equipment has been operational since August 2015 and we have been utilizing the BHIPP telemedicine system to communicate with the University of Maryland for our pediatric psychiatry population. At present, we are providing acute care for patients identified to have chronic health concerns. Our program has provided over 1300 patient contacts since its inception and continues to grow patient visits monthly by recruiting new patients. Ten children had specialty consults via the Maryland BHIPP program. We have registered our sites with the state of Maryland and are approved Telehealth providers and designated sites.

Our community health workers have been involved with local agencies promoting and recruiting for participants in our program. We have created active social media campaigns as well as advertised in traditional print media. Community health education programs have been held targeting diabetes, smoking cessation, obesity and hypertension. In addition to establishing the role of CHWs in addressed areas of need, we have worked with our consortium partners to identify creative ways in engaging patients in the care and management of their chronic health conditions. We believe that our program is fulfilling the goal of providing residents access to primary care and reducing the burden of chronic disease on the population.

B. Organizational Capacity

How has the federal funding of your grant program increased local capacity at your organization, within your network, and/or in your community? Please check the appropriate selection. If other, please describe.

- Formalized networks or coalition
- Developed new partnerships or relationships
- Enhanced skills, education, or training of workforce
- Enhanced data collection and analysis

C. Contributions to Change

Residents of Smith Island have been positively impacted by having community health workers and telemedicine available. In the winter of 2017 when the bay was frozen over and the residents could not leave the island for care we were able to utilize telehealth to provide evaluation of the health status of a resident who was having chest pain. It was determined that the chest pain was not cardiac and did not require evacuation of the resident for care.

Another resident of Smith Island was seen by telemedicine for ear pain. She disclosed during her telemedicine visit that she was suffering from depression. The island resident had not left the island in two years due to her anxiety and therefore was not able to receive counseling. We were able to arrange with our consortium partners to provide her with telebehavioral health counseling as well as medication management via our telehealth program.

Our program has been instrumental in contributing to Maryland telehealth legislation and policy changes. We have testified at the state legislature in support of legislation to improve reimbursement for telehealth services. We have participated in work groups at the state level to develop telehealth policy. As a result, we worked with Maryland Medicaid officials to improve the process for providers to register as telehealth service providers.

Michigan

Part I: Organizational Information	
Grant Number	D04RH28403
Grantee Organization	Harbor Beach Community Hospital
Organization Type	Hospital
Address	210 S. First St., Harbor Beach, MI 48441
Grantee organization website	www.hbch.org
Outreach grant project title	Community Connections
Project Director	Name: Trish VanNorman
	Title: Project Director
	Phone number: 989-479-3961
	Fax number: 989-479-5014
	Email address: tvannorman@hbch.org
Project Period	2015 – 2018
Funding level for each budget period	May 2015 to April 2016: \$200,000
	May 2016 to April 2017: \$200,000
	May 2017 to April 2018: \$200,000

Part II: Consortium Partners		
* Indicates consortium partners who signed a Memorandum of Understanding/Agreement		
Partner Organization	Location (town/county/state)	Organizational Type
Harbor Beach Community Schools*	Harbor Beach, MI	Public K-12 School
Department of Health and Human Services*	Bad Axe, MI	County Level – Department of Health and Human Services
Eastern Huron Ambulance Services*	Harbor Beach, MI	Emergency Medical Services
Harbor Beach Community Hospital*	Harbor Beach, MI	Hospital
Harbor Beach Area District Library	Harbor Beach, MI	Library
Knights of Columbus	Harbor Beach, MI	Christian Civic Group
Barclay Furniture	Harbor Beach, MI	Local Business

Part III: Community Characteristics

A. Area

The main focus for Community Connections is Harbor Beach, Port Hope, and its surrounding communities in Eastern Huron County along with the Northern edge of Sanilac County. However, services are provided to anyone that has transportation to get to the office for services.

B. Community description

The Community Connections initiative is located in the rural area of Michigan, referred to as the “Thumb”. There are 9000 residents in the City of Harbor Beach, village of Port Hope, and surrounding townships. In 2013, the Harbor Beach Community Hospital formed a community committee to complete a Community Health Needs Assessment. The top two needs identified by the community were: 1-Taking Personal Responsibility for One’s Own Health and 2- Economic Barriers to Obtaining Health Services. These needs align with research that indicates 30% of health status reflects personal behavior and 40% are linked to socio-economic factors (David Kindig, M.D., University of Wisconsin, 2014¹). The service area has many residents with socio-economic needs. Currently 42% of the population is considered working poor or living in poverty. Average household income is \$10,000 lower than Michigan and \$18,000 lower than the United States average. The Department of Human Services estimates that 1 in 4.5 people in Huron County are receiving some form of public assistance. Using this data, it is estimated that there are over 2000 people in our target population, vulnerable populations.

C. Need

The focus of this initiative is improving health status for the target population. The Community Connections initiative will enable vulnerable populations to improve their health status through model programs that have been shown to empower individuals toward self-sufficiency. The evidence based models integrated into the program design were Bridges out of Poverty and the RAC Online Community Health Worker Toolkit. Community Connections utilizes a holistic, participant centered service approach. Participants are actively engaged in assessing their own needs, setting goals, and selecting services that will help them meet those goals. Services include referrals to existing programs, individual education, information services, enrollment assistance, establishing medical homes, service navigation, case management, life skills training, ongoing support, and life coaching. Four organizations have partnered for the project: Harbor Beach Community Hospital, Harbor Beach Community Schools, Department of Human Services, and Eastern Huron Ambulance Services.

Part IV: Program Services

A. Evidence-based and/or promising practice model(s)

Bridges Out of Poverty is a comprehensive evidenced based program developed by Dr. Ruby Payne. Her company, Aha! Process offers a resource builder model that Community Connections has used to guide program development. The resource model includes six tracts, community, healthcare, businesses, K-12 education, high education, and criminal justice. Community Connections has done work in all six of these areas in an effort to create a thriving community initiative.

The RAC now known as RHI Hub Online Community Health Worker Toolkit was a useful toolkit that helped us develop the CHW program. It provided resources on best practices and implantation strategies. Since there were no other CHW programs in our rural area it was a very useful resource.

B. Description of Activities

Health Literacy and Referrals

Community Connections has worked with over 300 individuals to make almost 1,300 referrals to programs in the community. Referrals include assistance with payment for property taxes, utility bills, financial planning, and other community health needs. Referrals have been made to over 162 organizations. If possible, referrals are made to local programs first, and then to resources beyond if applicable. Clients are able to access services Monday through Friday 8am to 4pm, or alternate times by appointment. Staff assists with enrolling in services, meeting basic needs, problem solving, finding training and education, setting goals, creating resumes and finding employment, and more. Events for clients have included a three class series budgeting class, stretching your food dollars, diabetic education, emotional wellbeing classes, as well as a workshop to obtain or replace social security cards.

Through partnering with organizations, Community Connections has been able to connect individuals to services they would otherwise not be aware of. Community Connections partners with Knights of Columbus Council 11432 and a Barclay Furniture, a local furniture store, to deliver pantry food from the Community Action Agency in Bad Axe to Harbor Beach. The route saves locals from traveling nearly twenty-five minutes each way. Over seventy individuals and family are served through this program. Several of these individuals are home bound and receive the food boxes delivered to their door. Community Connections also acts as a sign up location for Christmas programs such as Coats for Kids, Harbor Beach Goodfellows, and the Giving Tree.

Several grants have been obtained through community organizations such as Huron County Community Foundation and Huron County Child Abuse and Neglect Council. Funding from these sources have been used to support children's story hour and family literacy resources. Adult literacy classes are also offered at Community Connections as well as two local libraries as a result of these initiatives. Many local community groups also contribute annually to the Backpack Program which is held in partnership with DHHS and Easter Michigan Food bank. The program sends food home with 48 qualifying elementary children on weekends and holidays to ensure their nutritional needs are being met.

Education

Community Connections has hosted eight Getting Ahead in a Just Gettin' By World Classes in our target area, and three Getting Ahead While Getting Out classes in our local county jail. Both of these client-guided programs are fourteen week evidenced based programs developed by Phil DeVol. Community Connections has also hosted two poverty simulations in our community and several others across the state of Michigan. The Harbor Beach Community Hospital staff has attended Bridges to Health and Healthcare, a comprehensive curriculum focused on improving patient care for individuals in poverty. Health Departments in Huron, Lapeer, Sanilac, and Tuscola Counties have also received more than ten hours of training on this curriculum. Various Bridges Out of Poverty community trainings have been held in our community. These trainings have been highly attended by local Department of Health and Human Services staff members, County Mental Health providers, local churches, community action

agencies, and community members. Schools throughout the county have also received extensive professional development on how to assist under resourced students. Harbor Beach Community Schools, one of our consortium partners, has received more than ten hours of a Framework for Understanding Poverty, and expects to continue the work within the school district.

C. Role of Consortium Partners

Consortium members were identified with the 2015 HRSA Planning Grant. Consortium members include a hospital, community school, ambulance service, social services agency, district library, two parochial schools, local business owners, two churches, as well as various community agencies such as the Knights of Columbus Council, American Legion, and Woman's Life Chapter.

Together, this team created the vision of Community Connections. Upon notice of award, the consortium meetings became Community Connections' Leadership Team Meetings. The purpose of the meetings is to use community members and project partners to gather feedback on the project. Meeting participants also share what they would like to see additionally from Community Connections. Meetings were initially held monthly as the program was becoming established and finding its footing in the community. Meetings are now held bi-monthly, and consortium partners attend on a regular basis. Consortium partners also consult on major business operations such as hiring additional staff and purchasing licensing agreements.

Part V: Outcomes

A. Outcomes and Evaluation Findings (do not submit your Evaluation Report in lieu of completing this section)

Clients report a high degree of impact. Of those returning surveys, 91% rated the services as very helpful and 95% said they would recommend Community Connections to family and friends. Clients overwhelmingly report they are more able to manage their health (92%). Additionally, 86% of participants stated they now have a better understanding of how finances impact other areas of his or her life.

As a result of the project many professionals were trained in the Bridges out of Poverty Framework. Bridges out of poverty challenges professionals to take another look at their interactions with people who are under-resourced and to shift policy and practice to be more effective. As part of the project 775 healthcare, education, and human service professionals have been trained. Training evaluations indicate the information was valuable and that the information would be utilized to adapt their work with individuals who are under-resourced. Results indicate that on a 7 point scale (7 being strongly agree), professionals increased their knowledge and skills, intended to use at least one strategy from the program, and would use the information in decision making around their clients/patients/students. They also indicated that the quality of the workshop presenter was high.

B. Recognition

A Community Connections Bridges trainer was asked to present on our unique model at the Aha! Process annual poverty summit in 2017. A presentation was also given to critical access hospital administrators at an annual meeting in winter 2018 about Bridges to Healthcare.

Part VI: Challenges & Innovative Solutions

A major challenge during the Outreach grant program has been finding and retaining qualified staff members. The project is on its third, Program Coordinator. We found that the best solution was to grow our own talent by promoting the part time Life Coach to the Program Coordinator role. In order to help her fill her role training and coaching was provided by the Project Director and Project Consultant.

An additional challenge was informing individuals about the services that Community Connections had to offer. Press releases in the newspaper and flyers in the community were not drawing in the target group the grant was hoping to reach. By attending the local food pantry and being more present in the community we were able to gain the trust of individuals. Once people started accessing our services, their word of mouth helped to bring in additional participants. Other outreach events in the community included providing free family movies, and booths at health fairs and being present at informational events throughout the county.

Part VII: Sustainability

A. Structure

The Leadership Team will remain intact. At this time due to challenges in filling staff positions and being careful about using our funds there is enough money to apply for a no cost extension to enable services for the next year. Our goal with this extension is to continue to work on our target numbers and provide the services that have been offered over the past 2.5 years at Community Connections. As a result the guidance of the Leadership Team will still be needed. During this next year, as it has been for the

past couple of years, sustainability will continue to be a main priority. Community Connections is working to develop and Employee Resource Network and continue offering Bridges trainings in our service area determined on our license. Work will continue with the Team to try to determine various options to try to continue the work of Community Connections.

B. On-going Projects and Activities/Services To Be Provided

i) Will all, some or none of the elements of the program be sustainable once Outreach grant funding has ended? Please check the appropriate selection.

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained (i.e. the program will completely end after the grant period)

ii) Identify the projects and activities that will be sustained beyond Outreach grant period.

All the programs started during the grant have been impactful and there is a desire to continue them. These programs include the information and referral services, case management and coaching services, and professional development and consulting programs, backpack food program, commodity food distribution, college coaching program, story hour, and adult literacy programs.

- **Community Health Worker Services:** In the office, Community Health Workers provide information, referrals case management, and coaching services. We are pursuing grants to fund staff in the office and also exploring other options for offering these services in community based settings such as primary care offices and workplaces. We are advocating for insurance reimbursement for these services and have provided for one of the staff to become a certified Community Health Worker. A grant application has been submitted for an integrated behavioral health that includes the support of a Community Health Worker. If this grant is awarded, a community health worker will be in multiple clinics at Harbor Beach Community Hospital to provide information and referral services to patients. We are also in the process of approaching businesses with the goal of establishing an Employer Resource Network which would fund the placement of Community Health Workers as Success Coaches in local workplaces. This model would include additional funds to cover the staff at the office.
- **Professional Development and Consulting Services:** During the third year of our grant funded project, we utilized our certified instructors to pilot a fee for service professional development program. Through this program Community Connections became a certified Local Area Consultant for the Bridges out of Poverty framework (Aha! Process, a Ruby Payne Company). During the first year, we have developed programs, obtained start up resources, and started to develop a client base. As with any new service, there was a fair amount of time and energy in the startup of the services. We did not quite cover the cost of providing the services.
- **Backpack food program:** The backpack program is currently being offered in partnership with Eastern Michigan Food Bank and Department of Health and Human Services. Financial contributions from community organizations support the cost of the program and provides food on the weekends and over breaks for 48 students. This program helps to ensure that children have their nutritional needs met. The program is open to children who receive free or reduced lunches grades kindergarten through fifth grade. At the end of the project, partners will be positioned to continue the program without any grant support.
- **Commodities:** Commodity food distribution is offered in partnership with Human Development Commission, Barclay Furniture, Knights of Columbus Council # 11432, and other community volunteers. The program allows pantry food to be delivered to elderly, homebound, and those without transportation on a bi-monthly basis. Without this program in place, over seventy individuals would have to drive forty minutes round trip, or go without the food. Many greatly depend on this food to make ends meet. This program should be continued because poor nutrition can hurt an individual's wellbeing. At the end of the project, partners will be positioned to continue the program without any grant support.
- **Ready, Set, College:** Ready, Set, College! is a college coaching program currently supported by the Harbor Beach Community Schools through a grant through Michigan College Access Network. This program places Community Connections' life coach in the school two days a week as a Success Coach for high risk seniors. Students qualify based on being first generation college students, on the free or reduced lunch list, having low grades, etc. The Success Coach is helping this future generation to get ahead by applying for FASFA, enrolling in college, and applying for scholarships. Additional "real world" activities are facilitated under the grant. Including a reality fair where children have to design a lifestyle based off a career they are interested in with correlating salary. A poverty simulation where students role play the experiences

of a family in poverty is also completed with this program. Evaluation data at the end of the first year of the program will be reviewed with stakeholders making a decision about continuation of the program and following up with other grants to fund the program.

- **Literacy Programs:** Story Hour and Adult Literacy Programs are funded by a combination of grants from the Huron County Community Foundation and Huron County Child Abuse and Neglect Council. The training provided as part of these programs has prepared the Harbor Beach Community Library to continue these programs at the conclusion of these grants. Another local library, the Bad Axe Area District Library, will also be offering adult literacy assistance as needed in the community.

C. Sustained Impact

Through this project sustained impacts have been felt on two levels. On the individual level, many clients have made life changes that will have a long term impact on their life. Evaluation data supports the effectiveness of programs on the long term impacts on clients 91% rated the services as very helpful and 95% said they would recommend Community Connections to family and friends. They overwhelmingly report that they are better able to manage their health.

Other sustained impacts are related to the increase in knowledge of local providers as well as the development and strengthening of partnerships. As a result of the project many professionals were trained in the Bridges out of Poverty Framework. Bridges out of poverty challenges professionals to take another look at their interactions with people who are under-resourced and to shift policy and practice to be more effective. As part of the project 775 healthcare, education, and human service professionals have been trained.

Sustained impacts are also related to the development of partnerships in the community. The following are examples of these partnerships:

- The school has a stronger relationship with the hospital and continues to partner on additional projects.
- Community Connections has established a partnership with the Knights of Columbus who is actively helping with distribution of food commodities.
- Churches have stepped forward to help with various needs of individuals such as building an access ramp for a homebound client.
- Two local libraries have been trained to provide adult literacy supports and has initiated a story hour.
- The low income housing apartment complex has developed a strong referral relationship with community connections.
- Primary care providers are more aware of services related to social determinants of health and the importance of making referrals related to non-medical needs of patients.

Part VIII: Implications for Other Communities

Poverty exists nation-wide, and while many acknowledge that it is a problem, few know how to address the issue in their own community. Implementing the Bridges Out of Poverty curriculum, creates awareness, assistance, and system changes that are beneficial for both rural and urban areas. Hospital staff, educators, health departments, community mental health organizations, and various community members have taken Bridges Out of Poverty trainings through our grant programming. We have had the pleasure of presenting to more than 775 individuals on the Bridges Out of Poverty curriculum.

Part IX: Success, Increased Capacity, and Contributions to Change

A. Defining Success

- i) How do you define "success" for your grant program? Please check the appropriate selection(s). You may choose more than one option. If other, please describe.
- Access to a new or expanded health service
 - Increased number of people receiving direct services
 - Improved quality of health services
 - Operational efficiencies or reduced costs
 - Integration of process improvement into daily workflow
 - Continuation of program activities after grant funding
 - Continuation of network or consortium after grant funding
 - Health improvement of an individual

- Health improvement among your program participants
- Health improvement among your community
- Enhanced staff capacity, new skills, or education received
- Improved capacity to adapt to changes in healthcare

ii) Do you believe that your program has achieved success? If so, how?

Yes, we believe that Community Connections has been a successful program. Over 300 individuals have received assistance in instances where they felt lost and desperate. Our office has offered a neutral location for clients to receive assistance from staff whom are willing and educated to help. On the individual level, many clients have made life changes that will have a long term impact on their life. Assistance is not only given in the moment of crisis, but follow up is provided to help participants get on their feet and make steps towards a lifestyle of stability. We have helped individuals to make connections within the community that will not only help them in times of turmoil, but also cheer them on during success.

B. Organizational Capacity

How has the federal funding of your grant program increased local capacity at your organization, within your network, and/or in your community? Please check the appropriate selection. If other, please describe.

- Formalized networks or coalition
- Developed new partnerships or relationships
- Enhanced skills, education, or training of workforce
- Enhanced data collection and analysis

C. Contributions to Change

Change in individuals' lives, your organization, consortium, or community:

Ronald, a young single father moved into the community with few social supports. His overdue electricity bill was preventing him from having his own apartment. Staff helped Ronald make arrangements to pay his bill and enroll in the budget plan. Since accomplishing this he has continued to work on his goals. He has his own apartment for him and his children. He has purchased his own vehicle, and is now studying for his GED during the day while his children are in school. Ronald has shared that he feels less stressed and like he is a better father than ever before.

Martha has struggled with her health and smoking cigarettes for years. After completing Getting Ahead in a Just Gettin' By World she knew she had to make some changes if she wanted her health to improve. In the months since, Martha has worked hard to stop smoking. She uses other hobbies to keep busy such as cooking and baking for people in her apartment complex. Martha has noticed a difference in how she feels since taking charge of her health. Sharing has made the apartment complex feel like a community.

Change in policies, systems, and environment:

Community Connections has raised awareness about the reality of living in poverty. Before this grant program, many individuals in the community were considered to be working poor, or living in poverty, yet it was a taboo topic in the community. Community members had little empathy for those that were living in poverty most feeling like these individuals were lazy and needed to get a job. Our efforts over the last three years have made poverty a much more acceptable topic and have made others see the reality of living in poverty and the difficulties of getting ahead. As a result of the community awareness members of the community have started to join us in our anti-poverty initiative. Community Connections has also facilitated various trainings to community members, organizations, hospitals, and schools on the importance of addressing poverty in one's own community. By educating different organizations within the community there will be people who better understand and are able to work with those that are under resourced and their children.

ⁱ Kindig, D and Isham, G. Population Health Improvement: A Community Health Business Model That Engages Partners in All Sectors. *Frontiers of Health Services Management*. 30(4): 3-20, 2014.

Minnesota

Part I: Organizational Information

Grant Number	D04RH28397
Grantee Organization	CentraCare Health-Long Prairie
Organization Type	Rural health system
Address	50 CentraCare Drive, Long Prairie, MN 56347
Grantee organization website	https://www.centracare.com/locations/long-prairie/
Outreach grant project title	TeleStroke/Vascular Neurology Patient Navigator Program
Project Director	Name: Dan Swenson
	Title: Administrator/Chief Executive Officer
	Phone number: 320-732-7210
	Fax number: 320-732-7298
	Email address: swensond@centracare.com
Project Period	2015 – 2018
Funding level for each budget period	May 2015 to April 2016: \$189,654
	May 2016 to April 2017: \$199,991
	May 2017 to April 2018: \$156,539

Part II: Consortium Partners

* Indicates consortium partners who have signed a Memorandum of Understanding/Agreement

Partner Organization	Location (town/county/state)	Organizational Type
CentraCare Health-Long Prairie* (Program lead)	Long Prairie (Todd County), Minnesota	Community hospital/Clinic
CentraCare Health-St. Cloud*	St. Cloud (Stearns County), Minnesota	Community hospital/Clinic (Teleneurology consultant/provider)
CentraCare Health-Melrose*	Melrose (Stearns County), Minnesota	Community hospital/Clinic
CentraCare Health-Paynesville*	Paynesville (Stearns County), Minnesota	Community hospital/Clinic
CentraCare Health-Sauk Centre*	Sauk Centre (Stearns County), Minnesota	Community hospital/Clinic
Glacial Ridge Health System*	Glenwood (Pope County), Minnesota	Community hospital/Clinic
Lakewood Health System*	Staples (Todd and Wadena counties), Minnesota	Community hospital/Clinic
Swift County-Benson*	Benson (Swift County), Minnesota	Community hospital/Clinic
Tri-County Health Care*	Wadena (Wadena County), Minnesota	Community hospital/Clinic
CentraCare Health-Home Care*	St. Cloud (Stearns County), Minnesota	Home health agency
Glacial Ridge Home Care*	Glenwood (Pope County), Minnesota	Home health agency
Knute Nelson Home Care*	Alexandria (Douglas County), Minnesota	Home health agency
Lake Region Home Health*	Paynesville (Stearns County), Minnesota	Home health agency
Lakewood Health System-Home Services*	Staples (Todd and Wadena counties), Minnesota	Home health agency
Swift County Benson Home Health Care*	Benson (Swift County), Minnesota	Home health agency
Todd County Public Health Home Care*	Long Prairie (Todd County), Minnesota	Home health agency

Part III: Community Characteristics

A. Area

Chippewa, Pope, Todd, Swift, and Wadena counties along with parts of Stearns County.

B. Community description

More than 92,000 people live in the rural, economically challenged Minnesota counties of Todd, Swift, Chippewa, Pope, and Wadena as well as the following five census tracts in Stearns County: 27145010500, 27145010600, 27145010900, 27145011000, and 27145011500. The service area is so rural that, on average, only 35.8 persons live per square mile compared to the state average of 66.6 and the national average of 87.4 (US Census QuickFacts, 2010). On average, 96 percent of the population in the service area is White, 5.1 percent Hispanic, 0.52 percent African American, 0.36 percent American Indian, and 0.48 percent Asian American. Per capita income (2008-2012) was \$24,256 compared to a state average of \$30,656 and a national average of \$28,051. The counties have more residents with disabilities than the state average and a larger senior citizen population than both the state and national averages. Out of 87 Minnesota counties, Chippewa, Pope, Todd and Wadena ranked in the bottom half in both health outcomes and health factors. The population in this area is at greater risk of stroke simply based on age. Other risk factors associated with stroke include, but are not limited to, high blood pressure, smoking, obesity, diabetes and heart disease.

C. Need

The TeleStroke/Vascular Neurology Patient Navigator Program was designed to improve access to care and health outcomes among patients recovering from stroke or TIA residing in rural Minnesota. The objectives of the program are to increase the percentage of patients who have had a neurological examination by a neurology provider within 30 days post discharge; reduce the degree of disability among patients after discharge; improve quality of life among patients after discharge; improve patient satisfaction/experience with care after discharge; and reduce readmissions. Further, the program will satisfy needs identified as: directing patients on how to care for themselves after discharge; bringing specialty care to the rural community when it is otherwise unavailable; negating the need to travel to St. Cloud, especially during inclement weather; how to navigate the system of care; and assist them in accessing therapies, medicines, food banks, utility assistance, etc.

Part IV: Program Services

A. Evidence-based and/or promising practice model(s)

The program uses the following evidenced based models:

▮ *A Review of the Evidence for the Use of Telemedicine Within Stroke Systems of Care: A Scientific Statement From the American Heart Association/American Stroke Association* Lee H. Schwamm, Robert G. Holloway, Pierre Amarenco, Heinrich J. Audebert, Tamilyn Bakas, Neale R. Chumbler, Rene Handschu, Edward C. Jauch, William A. Knight IV, Steven R. Levine, Marc Mayberg, Brett C. Meyer, Philip M. Meyers, Elaine Skalabrin and Lawrence R. Wechsler. *Stroke*. 2009; 40:2616-2634; originally published online May 7, 2009;

▮ *Health Navigators Support Self-Management With Primary Care Patients, Leading to Improved Behaviors and Lower Utilization.* <https://innovations.ahrq.gov/profiles/health-navigators-support-self-management-primary-care-patients-leading-improved-behaviors>

The evidence-based model the proposed program adopted to meet the community's need has been telemedicine and patient navigation. There have been no modifications from the original models; only the disease in which the services are implemented is different from other telemedicine and patient navigation models. The Tele-neurology Patient Navigator Program supports the Office of Rural Health Planning goals of: 1) the delivery of health care services to include new and enhanced services exclusively in rural communities; 2) delivering health care services through a strong consortium, in which every member is actively involved and engaged in the planning and delivery of services; 3) the utilization and/or adaptation an evidence-based or promising practice model(s) in the delivery of health care services; and 4) improving the population health, demonstrate health outcomes and sustainability. Evaluation of the Tele-neurology Patient Navigator Program is designed to support effective program monitoring and program assessment that will inform on the impact of the program on improving access to care and health outcomes among patients recovering from stroke or TIA who live in rural-designated areas. The evaluation design includes both process and outcome measures that are either derived from PIMS or are program-specific.

B. Description of Activities

The TeleStroke/Vascular Neurology Patient Navigator program does not duplicate any services provided in the area but complements and supports current services. There has been no identified negative impact on current providers. The program links patients to community agencies for services to provide a holistic approach to meeting the needs of the patient and/or caregiver and/or bringing new services into the community (telehealth and Patient Navigator). For example, the Patient Navigator will refer

patients and/or caregivers to local social service agencies as individual treatment plans are created. Patients and/or caregivers in need of mental health providers, food banks, housing assistance provider, etc., will be referred into the local community. The program only enhances patient outcomes and ensures that people who might not ordinarily receive a service actually enroll in the needed services.

In order to address the community need, CCH-LP has convened rural health care providers and home health agencies to create a post hospital discharge network, the TeleStroke/Vascular Neurology Patient Navigator Program. The network is a telehealth network via video conferencing that provides stroke and TIA patients with recommended follow up to neurology care (2 weeks – 90 days after hospital discharge) at CentraCare Health-St. Cloud Stroke Center as well as patient navigation (RN case management) to eliminate barriers to care and guide rural patients through the systems of care. The program is guided by a Steering Committee made up of all consortium members. The program director and a Patient Navigator are employed by CCH-LP but service all the consortium partners' stroke patients throughout the rural target area.

The referrals to the program were collected by the Patient Navigator through a report showing the use of emergent TeleStroke from participating hospitals.

The Patient Navigator serves as the point person for the program by coordinating individualized culturally competent care for the patient (in conjunction with the caregiver, as needed) in partnership with the home healthcare worker. The Patient Navigator communicates with patients and/or their caregivers via phone. The home health care worker is the “legs in the community” and works in partnership with Patient Navigator. Within 5-7 days of hospital discharge, the Patient Navigator conducts an initial intake with the patient and/or caregiver to determine the individual's health needs and to enroll interested patients. Health needs may consist of, but are not limited to: obtaining medications; obtaining durable equipment; connecting patient and/or caregiver with community supports (support groups, respite care, etc.); linking neurology with primary care provider and/or assistance with establishing a medical home; providing patient and/or caregiver education; ensuring patient follow up from medical appointment recommendations; making the patient's home accessible; arranging speech, physical, occupational, and respiratory therapies; and ensuring that caregivers have the training, equipment, and physical ability to assist their loved one. The role of the navigator is to remove barriers to care that exist for the patient and/or caregiver and to assist them with meeting their identified healthcare needs. The Patient Navigator also provides patient and/or caregiver education on the importance of monitoring blood pressure, nutrition, exercise, and more as well as setting up blood pressure monitoring on a schedule prescribed by the physician.

The Patient Navigator also works with the patient and/or caregiver to schedule follow-up neurologist appointments utilizing telemedicine. The Patient Navigator coordinates care with other clinicians and social service agencies as necessary to ensure other needs including food, housing, medical, education and social needs. Patients are enrolled in the program for six months after hospital discharge. The Patient Navigator contacts the patient once every three months to ensure adherence to care including any follow-up labs or screenings and healthy preventative life choices unless the patient requests to discontinue services. The Patient Navigator conducts the Quality of Life Index scale with patients on entrance to the program as well as on upon completion of the six months of navigation services.

The second component of the TeleStroke/Vascular Neurology Patient Navigator program provides Stroke/TIA patients with telehealth consults by 30 days post hospital discharge. Through videoconferencing, the rural consortium hospitals and clinics provide a consultation room in their facilities and connect with a neurology provider at the Certified Primary Stroke Center at CCH-St. Cloud to provide post discharge follow up appointments. The Patient Navigator works with the patient/caregiver to schedule telehealth appointments with the provider in St. Cloud. Patients come to their local rural hospitals' outpatient unit for the follow-up appointment. An LPN conducts a patient intake and assists with the telehealth consult, as needed. The virtual provider visually conducts a thorough medical examination of the patient. The provider evaluates the patient from the hospital baseline regarding strength, emotions, communication skills, etc., as well as determining any new issues. Being able to see the patient is imperative for stroke patients, as their affect is an important indicator in stroke/TIA recovery. Telehealth appointments have become standard ways for doctors to visit rural communities. The Patient Navigator assists the patient with follow up per recommendations from the provider.

C. Role of Consortium Partners

The purpose of the TeleStroke/Vascular Neurology Patient Navigator Program (consortium) is to: 1) encourage creative and lasting collaborative relationships among health providers in rural areas; 2) ensure that the applicant organization receives regular input from relevant and concerned entities within the health sector; and 3) to ensure that the grant-funded program addresses the health

needs of the identified community. All the consortium members were carefully selected by their community standing, expertise in healthcare and/or home health care, and ability to participate fully in the program and its Steering Committee. Hospitals are appropriate collaborators as they are located within the target population rural area providing inpatient, outpatient, primary and specialty care 24/7. The hospitals and their associated clinics are where the community goes for medical care. Accredited by Joint Commission, all the hospitals and associated clinics bring medical expertise, clinical staff and a local knowledge of the community's unique needs. Responsibilities to the program include: the use of tele-consult and videoconferencing equipment; providing space for local patients to connect with CCH-St. Cloud for telehealth consults; and providing an LPN to assist with telehealth visits. Contributions to the program include: house and maintain technology infrastructure for telemedicine; collect and report data to program team for telemedicine consults; actively participate in sustainability planning; disseminate findings through publications and websites, as needed; support and encourage communications with consortium partners; active participation on the TeleStroke/Vascular Neurology Patient Navigator Program Steering Committee; and work with Patient Navigator and assist with scheduling telehealth appointments. The participating Home Healthcare Agencies are appropriate collaborators as they bring the expertise on home health care, which includes: skilled nursing staff; post-surgical care; memory care services; case management; physical, occupational, respiratory and speech therapists. All home healthcare agencies are Medicare Certified Home Health and hold Minnesota Department of Health certifications. Consortium members have all provided significant contribution to the program. The group has met weekly in the development of this program. The development of the program has been crafted to meet the needs of not only the community but also the consortium members.

Part V: Outcomes

A. Outcomes and Evaluation Findings

Four consortium partners already had telehealth equipment in place: CentraCare Health-Long Prairie, CentraCare Health-Melrose, CentraCare Health-Paynesville and CentraCare Health-Sauk Centre. Funds from the grant were used to purchase equipment for four other consortium partners: Glacial Ridge Health System, Lakewood Health System, Swift County Benson Health Services, and Tri-County Health Care. One partner, Chippewa County Montevideo Hospital, dropped out of the original collaboration. Additionally, with grant funding, CentraCare Health Melrose was able to update its old and failing TeleStroke equipment. The Patient Navigator (Sarah Zastrow) was hired. To date, more than 120 patients have been enrolled into the program.

Seventy-seven percent of all patients enrolled in the grant program completed their follow-up stroke neurology visit. The degree of disability measured by the mRS at enrollment in the grant program and six months later shows a 53 percent decrease in degree of disability among enrolled patients. The patients enrolled in the grant program have indicated through survey that 95 percent of the patients who have had a telehealth appointment would not choose to drive a longer distance for a face-to-face appointment in lieu of telemedicine. It also reflects 82.4 percent of the patients believe the quality of care via telemedicine is as good as a face-to-face visit. In addition, the all-cause readmission rate for patients enrolled in the program and receiving either patient navigation services or telehealth services or both is less than 9 percent. This shows positive reinforcement of post-discharge instructions, medications, and follow-up visits to prevent additional admissions to the hospital.

B. Recognition

Through a coordinated effort between CentraCare Health marketing and communications, CCH-Long Prairie published updates regarding the program in many small-town newspapers in the area. These include the Long Prairie Leader, the Brainerd Dispatch, the Browerville Blade, and a Spanish-language newspaper that serves a large immigrant population. Most of these were also cycled through social media exposure and picked up by other outlets. They also included photographs and other forms of media and information from Sarah Zastrow, the program's Patient Navigator.

Also, with collaboration from marketing, a feature story appeared on CentraCare.com at <https://www.centracare.com/services/stroke-care/patient-stories/deloris-symalla/>. This related the experience of Deloris Symalla, an 80-year-old retired teacher, who suffered a stroke and a fall in 2016. It detailed how she was diagnosed with a stroke via telehealth and was transported to St. Cloud Hospital for a 14-day stay and extensive treatment and rehabilitation. Eventually, she returned to her home – which she thought would be impossible the day she originally went to CCH-Long Prairie. “These services are wonderful,” she said. “The best thing ever.”

Part VI: Challenges & Innovative Solutions

The different hospital partners use different electronic health record systems. This has presented challenges when searching for patient information to determine who could benefit from the TeleStroke/Vascular Neurology Clinic. It has also been difficult for partners who want to monitor the status of their patients at St. Cloud, as they need to log onto a different EHR system to review St. Cloud patient charts. Different EHR systems also make providing feedback to local providers a challenge, particularly when those providers do not have a license to log on to St. Cloud's EHR. Adopting a transitions of care concept will benefit our patients as they transition back to their community. The health information management department of CentraCare Health sends paper copies of the chart to hospitals and clinics that are not on the same electronic medical record (EMR). The Patient Navigator further assists with this by phone calls to the patient to follow up on the recent hospitalization and contacts the local clinic to assist with scheduling of follow-up appointments.

There are no formal discharge criteria for patients in the program. This has become a challenge as patients often do not want to be engaged in ongoing program services, yet the Patient Navigator has committed contractually to contacting them quarterly. With the sustained program, the patient navigation services will be offered for the initial three months after discharge. Should the patient require additional services, the patient would be referred to a clinical chronic disease management team.

There were nine patients engaged in the TeleStroke/Vascular Neurology Clinic at Tri-County, and all patients chose to drive to St. Cloud rather than engage in telehealth. Encouragement to the staff at Tri-County to offer these appointments has been ongoing. Additional training for staff in the hospital has been initiated to set up the telehealth appointments upon discharge rather than having the Patient Navigator pursue changing the appointment later. Having the provider in the hospital promote telehealth will provide patient confidence in having the appointment managed this way.

Most patients will be transferred and admitted at St. Cloud, as the tertiary care hospital for stroke care. Coordination of post-discharge ancillary services, such as speech and physical therapy, does not always flow seamlessly from the hospital to the community level. The Patient Navigator continues to assist with making sure the patient has appointments scheduled and, if they don't, the Patient Navigator will assist the patient in determining who to call.

Scheduling for telehealth visits is not streamlined at St. Cloud and multiple steps are needed to coordinate and schedule the follow-up telehealth neurology visit. Currently, the CentraCare Patient Navigator follows up with different staff across St. Cloud to coordinate the visit. There is some promise to improve scheduling by having this program follow the model used for the multidisciplinary telehealth clinic, if concerns around software can be resolved (currently the two programs use different software).

Part VII: Sustainability

A. Structure

All consortium partners will continue to be part of the established program. They will continue to provide telehealth as an option for follow-up neurology visits.

B. On-going Projects and Activities/Services To Be Provided

i) Will all, some or none of the elements of the program be sustainable once Outreach grant funding has ended? Please check the appropriate selection.

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained (i.e. the program will completely end after the grant period)

ii) Identify the projects and activities that will be sustained beyond Outreach grant period.

Patient Navigation services will continue to be provided for all patients being discharged home from St. Cloud Hospital or in-patient rehabilitation with a stroke or TIA diagnosis. The goal is to maintain a good transition of care for each patient to help maximize the recovery. Enrolling the patients who have discharged from St. Cloud Hospital Stroke Center ensures continuity of care and allows for the Patient Navigator to receive reports through the electronic medical record (EMR) of patients qualifying for services.

The modified Rankin Scale (mRS) and the PHQ depression scale both will continue to be used to assess patients through the sustained program.

Through the sustained program, patients will be contacted within one week of returning home after discharge from St. Cloud Hospital. The mRS will be assessed upon enrollment, at 30 days, at 60 days and at 90 days. After 90 days, the patient will be discharged from the program. If the patient continues to require additional assistance at time of discharge, they will be referred to transitional care management at their local clinic for further assistance of their chronic health issues.

The Patient Navigator will continue to collaborate care of the patients with any home care agencies or clinic-based chronic care programs affiliated with the patient's care.

Telehealth visits will continue to be offered to patients for stroke follow-up. Telehealth visits will be completed by the consortium partners that are set up with the equipment and training to perform these visits.

In the future, additional specialties may be considered for telehealth among the consortium partners. Additional sites throughout rural Central Minnesota that are not currently part of the consortium will be considered as part of future expansion of the telehealth network.

C. Sustained Impact

All consortium partners have equipment in place to provide telehealth specialist appointments to the rural patient. In the future, this will allow the rural patient access to additional specialists besides stroke/vascular neurology.

Part VIII: Implications for Other Communities

As noted above, all partners have the equipment to make specialty telehealth appointments possible, furthering the reach for specialists to the rural patient.

The patient navigation segment of the program provided success for the rural patient as well. Seventy-seven percent of all patients enrolled in the grant program completed their follow-up stroke neurology visits, whether it was face-to-face or via telehealth.

The degree of disability measured by the mRS at enrollment in the grant program and six months later shows a 53 percent decrease in degree of disability among enrolled patients.

The patients enrolled in the grant program have indicated through survey that 95 percent of the patients who have had a telehealth appointment would not choose to drive a longer distance for a face-to-face appointment in lieu of telemedicine. It also reflects 82.4 percent of the patients believe the quality of care via telemedicine is as good as a face-to-face visit.

In addition, the all-cause readmission rate for patients enrolled in the program and receiving either patient navigation services or telehealth services or both is less than 9 percent. This shows positive reinforcement of post-discharge instructions, medications, and follow up visits to prevent additional admissions to the hospital.

Part IX: Success, Increased Capacity, and Contributions to Change

A. Defining Success

- i) How do you define "success" for your grant program? Please check the appropriate selection(s). You may choose more than one option. If other, please describe.
- Access to a new or expanded health service
 - Increased number of people receiving direct services
 - Improved quality of health services
 - Operational efficiencies or reduced costs
 - Integration of process improvement into daily workflow
 - Continuation of program activities after grant funding
 - Continuation of network or consortium after grant funding
 - Health improvement of an individual
 - Health improvement among your program participants

- Health improvement among your community
- Enhanced staff capacity, new skills, or education received
- Improved capacity to adapt to changes in healthcare

ii) Do you believe that your program has achieved success? If so, how?

This program has achieved success as reflected above with the patient statistics for reduction in disability as well as reduced readmission rate. The demonstration of success in this program has encouraged St. Cloud Hospital Neurosciences department to review and adopt this program to continue to provide care to the stroke/TIA patient.

B. Organizational Capacity

How has the federal funding of your grant program increased local capacity at your organization, within your network, and/or in your community? Please check the appropriate selection. If other, please describe.

- Formalized networks or coalition
- Developed new partnerships or relationships
- Enhanced skills, education, or training of workforce
- Enhanced data collection and analysis

C. Contributions to Change

Change in individuals' lives, your organization, consortium, or community:

Many patients have indicated how appreciative they are to drive only a few miles to get to their local clinic for an appointment rather than driving the 45-plus miles to attend a follow-up appointment in St. Cloud. In the winter, several elderly patients appreciate not needing to have their loved ones take time off from work to assist them as they do not like driving in St. Cloud. The consortium partner closest to St. Cloud is still 33 miles away with the farthest partner nearly 90 miles away. In Minnesota, the winters can provide challenges with ice and snow, causing the roadways to be difficult to travel. These patients were able to travel a maximum of 15 miles to get to their follow up appointments, increasing the likelihood of completion of the appointment.

The consortium partners provide the service to their patients, allowing their patients to continue to use their clinic for health care.

One patient was able to depend on the Patient Navigator to assist in providing additional resources through their local clinic for financial assistance. The patient had learned to trust the Patient Navigator enough to request help. The Patient Navigator was able to work together with the primary care provider and the clinic nurse to get the patient the help he needed.

Change in policies, systems, and environment:

CentraCare Health as a system has adopted the idea of implementing telehealth options for multiple specialties. Since the adoption of the grant program, CentraCare Health has been able to add Cardiology, Urology, Oncology, Neurosurgery, and infectious disease specialties to the telehealth program. With the added specialties, scheduling processes had to be updated to accommodate.

CentraCare Health Neurosciences has also realized how beneficial this program was to the patient population. Currently, they perform follow up phone calls to satisfy the requirement for Primary Stroke Certification, however, they plan to adapt these follow-up phone calls to provide additional navigation services to the patient to continue to promote positive health outcomes.

Minnesota

Part I: Organizational Information	
Grant Number	15D04RH28375
Grantee Organization	Mississippi Headwaters Area Dental Health Center d/b/a Northern Dental Access Center
Organization Type	Nonprofit Community Access Dental Clinic
Address	1405 Anne Street NW, Bemidji, MN 56601
Grantee organization website	www.northerndentalaccess.org
Outreach grant project title	Improving Determinants of Health Among Vulnerable Populations
Project Director	Name: Jeanne Edevold Larson
	Title: Executive Director
	Phone number: 218-444-8933
	Fax number: 218-444-9252
	Email address: Jeanne.Larson@northerndentalaccess.org
Project Period	2015 – 2018
Funding level for each budget period	May 2015 to April 2016: \$200,000
	May 2016 to April 2017: \$200,000
	May 2017 to April 2018: \$200,000

Part II: Consortium Partners		
* Indicates those consortium partners who have signed a Memorandum of Understanding/Agreement		
Partner Organization	Location (town/county/state)	Organizational Type
Mississippi Headwaters Area Dental Health Center (d/b/a Northern Dental Access Center)	Bemidji/Beltrami/Minnesota	Nonprofit Community Access Dental Clinic
Community Resource Connections	Bemidji/Beltrami/Minnesota	Consortium of Community Service Organizations
Legal Services of Northwest Minnesota	Bemidji/Beltrami/Minnesota	Regional Legal Aid Organization

Part III: Community Characteristics

A. Area

This outreach program serves the rural Minnesota communities of Bagley, Bemidji, Fosston, Mahanomen, Gonvick, Clearbrook, Blackduck, Red Lake, Crookston, Thief River Falls, Warren, Roseau, Baudette, International Falls, Walker and more in the counties of Beltrami, Clearwater, Lake of the Woods, Polk, Red Lake, Mahanomen, Marshall, Roseau, Kittson, and Norman.

B. Community description

The target population includes uninsured and underinsured families and individuals who are affected by barriers to care such as transportation, affordable health services, low incomes, and a shortage of service professionals. They suffer from diminished life expectancy and a variety of other health disparities, some of which include poor birth outcomes related to late entry into prenatal care, high rates of teen pregnancy, high rates of diabetes, high rates of suicide, substance abuse, and mental health disorders.

C. Need

To address health disparities experienced by the most at-risk people, HRSA funding allowed us to expand patient support services to include the barriers patients identified in three categories:

Uninsured and Newly Insured: The advent of Minnesota's Medicaid expansion and subsequent insurance exchange created a population of people who are crossing from uninsured to newly-insured; many of whom are only accustomed to seeking health

care in the emergency room and lack the health literacy and familiarity with traditional health care delivery. There also remain a number of people unable or unwilling to enroll in safety net insurance programs available to them.

Pregnant Women/Babies Birth to age 3: Pregnant women hold the key to the future health of our region and have the capacity to affect the health disparities their children will experience. Even with the increase of health and dental care coverage that comes with pregnancy, too many women do not seek the care they need. The critical development phases of birth to age three are a blank slate, on which a child's future health can be written; and many vulnerable families are unaware of the impact these years have.

Social/Legal Disparities: Most health determinants fall outside the purview of the traditional health care delivery system and those who fall through the cracks are often experiencing social or legal disparities—situations that a doctor or social worker cannot address.

The goal of the proposed project has been to level several determinants of health among vulnerable and high-risk people to reduce health disparities.

Part IV: Program Services

A. Evidence-based and/or promising practice model(s)

Northern Dental Access Center synthesizes several evidenced-based and promising practices such as Ruby Payne Framework for Understanding Poverty, the Social Determinants of Health, Medical-Legal Partnership, Community Health Worker emerging profession and more. Combined, these practices create a patient-centered and culturally-competent dental home that serves 'more than the mouth,' overcoming barriers, mitigating negative determinants of health, empowering patients and providing them with the means to address legal problems that affect their health, safety or self-sufficiency. After years of demonstrated successes and improved patient outcomes, Northern Dental has published an article in the Journal of Public Health Management & Practice entitled "*Offering Wraparound Services at a Community Dental Access Clinic to Reduce Health Disparities among Rural Populations in Poverty.*" We are setting the stage to be acknowledged as a Promising Practice for innovation in rural health care delivery.

B. Description of Activities

Connect Uninsured/Newly Insured People with Health Care Services: Formalize Lead Patient Advocate position and assemble Patient Advocacy Team, create internal referral process between insurance exchange navigators and Patient Advocacy Team, cohort of current staff certified as Community Health Workers to promote health literacy among newly insured patients, provide transportation assistance and service navigation within the healthcare landscape in region, convene Patient Advisory Group to garner feedback and guidance from the target population, measure and report on data.

Connect Pregnant Women and Babies (Birth to age 3) to a Dental Home: Confer with Medicaid providers to identify improved methods for pregnant women to access increased dental benefits during pregnancy, create a referral system between Northern Dental and Beltrami County Health & Human Services to identify pregnant women and connect them with healthcare and dental resources, implement universal caries risk assessments for every age, host community events centered on new mothers/parents and children under age 5, connect with local OB/GYN providers to distribute oral health educational materials and "Welcome Baby" kits for newborns and mothers, partner with National Children's Oral Health Foundation to receive best practice educational materials and guidance on a national level, participate in local organizations such as ECI (Early Childhood Initiative) and child care providers to be a resource for patient/parent education.

Provide Legal Information and Access to People with Barriers and/or Health-Harming Legal Situations: Create/implement intake form for screening all current/new patients for legal issues, measure intake information to identify common legal issues within target population and patient database, conduct onsite "Know Your Rights" sessions addressing key topics identified by aforementioned measurement of intake data, provide in-service training to consortium partners and key stakeholders on legal barriers to care, present findings at local, state and national conferences as invited to do so.

C. Role of Consortium Partners

Northern Dental Access Center and its Consortium partners have worked together for many years to serve the needs of low income people in northwest Minnesota. As we seek to improve our outcomes, we have disciplined measurements processes in place and a tapestry of client interactions that assure continuous input from people we serve. The members of this consortium have been interconnected for more than ten years. Their selection for work on the proposed project was obvious, given the

longstanding history of successfully collaborating toward common goals—and because of the rural and isolated nature of this region—they are the major agencies with the capacities to achieve the desired results.

Consortium partners meet at leadership and frontline levels on a regular basis to review activities; and all interact in community groups, interagency organizations and civic groups. Cross-representation on each of the Consortium Boards assures continuity of communication. As we review what we accomplish, and what we see as remaining gaps and pressing needs, the activities within this proposal were designed.

Community Resources Connection (CRC) is a 20-year old nonprofit association in rural, northern Minnesota, representing more than 40 agencies that provide a variety of human and social services to various target populations. CRC provides information, advocacy and assistance so low income people in need will effectively access community, government and nonprofit family services before personal issues turn into crisis. CRC staff are trained by the Minnesota Department of Human Services, the Minnesota Board on Aging, Social Security Administration, Minnesota Department of Health and more.

Beltrami County Health and Human Services is the largest department of Beltrami County, managing more than \$19 million dollars (over 35% of county budget) to serve a county population of 40,000. Beltrami County covers a huge geographic span of over 3,000 square miles, including portions of Leech Lake and Red Lake Indian Reservations. As one of the early partners is the development of the new dental access clinic, this agency is committed to the success of the clinic, and more importantly, the success of the patients we will serve. HHS is providing significant resources to this project, including the staffing of public health outreach on site at the new clinic and outreach and support for patients.

Legal Services of Northwest Minnesota (LSNM) –is the only regional organization which combines both legal and non-legal components to remediate client's legal barrier to health, making it a powerful force for change. Its lawyers can actually bring legal actions in state or federal courts when necessary, or can use that potential to strengthen negotiations and mediation.

Part V: Outcomes

A. Outcomes and Evaluation Findings

The outcomes have been impressive: increasing access to care; reducing health care costs and community burden; and achieving high patient satisfaction and loyalty. Specifically,

- A 40% reduction (since 2012) in patients reporting using the Emergency Room for dental emergencies
- External referrals for specialty care (involving long distance travel) have been reduced by more than 40% since 2013

Last year alone:

- 1480 people received insurance navigation or enrollment assistance;
- 27% of patients access one or more patient support services; over 2,000 referrals to partner agencies were made to assist patients in accessing support services;
- Over 100 people have received legal assistance;
- Over 1,200 urgent-care/walk in encounters were provided; and
- 98% of patients responding to exit survey questions:
 - ~ rate the quality of their dental care as good or excellent;
 - ~ rate the facility as having a welcoming environment as good or excellent;
 - ~ are likely to return for their next appointment.

Consortium Partners participated in trainings on topics like symptoms of sexual assault, de-escalating mental health crises, understanding the connection between sensory deprivation and children struggling with dental care, and more. These are critical to understanding the population we serve. For example, 25% of all women have been sexually assaulted at least once; 40% of American Indian women have been victims of assault. One of the most anxiety-filled experiences for these women is the vulnerable recline of the dental chair and someone working in her mouth. Our team knows this, can watch for signs, offer a blanket, offer a female dentist, or offer to have an advocate in the room during treatment. Building this internal capacity means staff can more effectively deliver dental care, ultimately impacting the long term health of patients.

Our experience aligns with scholars who find that many in poverty, especially in minority groups, lack trust in dominant culture systems and traditional providers, so additional help is often refused or ignored. In our practice, regular consultation with a patient focus group provides us 'reality therapy' so that we can distinguish what 'looks good', compared to what will really work for the people we are trying to reach. Recognized with multiple "innovation" awards, Northern Dental staff implement programs and

services in ways that make common sense. We believe it is this approach, which includes our partners offering wraparound services, that has allowed Northern Dental to become a significant part of the social and health safety net in our region.

B. Recognition

The Consortium has received multiple awards for its values-driven approach:

- 2014 Community Partnership Award, Mutual of America Foundation
- 2015 Grand prize Eide Bailly Resourcefulness Award
- 2016 Bush Foundation Community Innovation Award
Kate B Reynolds Charitable Trust Innovation in Rural Health Award
Partner in Justice Award from Legal Services of Northwest Minnesota
Blue Cross Blue Shield Trailblazer Award
- 2017 A "Report from the Field" has been published in the February 2018 issue of Journal of Public Health Management & Practice entitled "Offering Wraparound Services at a Community Dental Access Clinic to Reduce Health Disparities Among Rural Populations in Poverty." In this manuscript, data is presented that demonstrates improved patient outcomes directly linked to support services such as transportation and insurance counseling.
- 2018 Article published in local newspaper, The Bemidji Pioneer, titled *Determined Dentists*, outlining the challenges, accomplishments and commitment to serving the community and region

Part VI: Challenges & Innovative Solutions

A necessary intake/patient screening tool for the Medical-Legal Partnership required several iterations and testing to identify the most effective way to reach patients. Working with the Patient Advisory Group, a final version was in place mid-way through the grant period and current data has demonstrated success. It includes a business card for the attorney, attached to the bottom for people to take, unobtrusively. To date, over 150 people have taken that card.

Reaching patients who have left the clinic building, but express a desire for follow-up legal assistance—has been the single greatest challenge, primarily due to disconnected phone numbers, no return calls or texts, missed appointments and so-on. Fewer than 30% have been contacted. After consultation with the Patient Advisory Group, we learned a number of factors for this gap, best described by one participant: "admitting you have a legal issue, is a world away from being ready to confront that issue...and everything that might happen as a result of taking action..." Patients assured us that the first step is only that, a first step; and that we should assume a person may need three or more contacts to build trust and courage.

We also faced a physical space challenge within the dental clinic building, but were able to reconfigure some open spaces to create private offices for the attorney, insurance navigators and the Patient Support Services Coordinator.

Northern Dental Access Center and its consortium partners have developed a unique model of care delivery. We do this by understanding the interconnectedness of the determinants of health and weaving a tapestry of patient support to impact a whole person, family or population.

Part VII: Sustainability

A. Structure

Consortium partners have worked closely together, to institutionalize all activities daily so that they have become an organic part of the daily, mission-focused work. In addition, each partner has been able to leverage separate funding resources to capitalize on the impact these collaborative efforts has had on their respective organizations. As such, the current plan includes continued partnerships with Community Resource Connections as well as Legal Services of Northwest Minnesota.

B. On-going Projects and Activities/Services To Be Provided

- i) Will all, some or none of the elements of the program be sustainable once Outreach grant funding has ended? Please check the appropriate selection.
 - All elements of the program will be sustained
 - Some parts of the program will be sustained
 - None of the elements of the program will be sustained (i.e. the program will completely end after the grant period)
- ii) Identify the projects and activities that will be sustained beyond Outreach grant period.

Consortium Partners agree to sustain these specific activities beyond the conclusion of the HRSA grant funding:

- Community Resource Connections will continue to house two Insurance Navigators/Service Access Specialists on-site, full time at Northern Dental Access Center. Northern Dental agrees to provide private office space, in-kind.
- Legal Services of Northwest Minnesota will continue to provide full-time access to Legal Aid attorneys to provide legal advice and services to Northern Dental patients. Northern Dental agrees to provide office space for attorneys, in-kind.
- Northern Dental will continue to assign a full time Patient Support Services Coordinator/Community Health Worker to provide intake and follow-up assistance to Legal Aid attorneys; to monitor all patient legal screening activities and provide in-person hand-offs to attorneys; and to help patients access patient transportation and other community support services to address barriers to care.
- Northern Dental will continue to assign a full time Community Health Worker to sustain community outreach and oral health education to area schools, child care centers, maternal-child health organizations, primary care settings, and more.
- Northern Dental will continue to fund patient transportation assistance and quarterly patient advisory group meetings that are critical for patient feedback and program evaluation.

C. Sustained Impact

The collaborative approach to resource generation has leveraged hundreds of thousands of dollars and created a safety-net clinic that has surpassed the community's expectations and now serves more than 12,000 low income people each year with dental care and support services. Bringing multiple agencies together and building trust and common values, we have been able to leverage resources and create more than any agency could manage independently.

The use of wraparound support services started with a desire to counter reported patient experiences of 'assembly line' dentistry or what some called 'drill and fill' access clinics. The dental home model informed decisions to seek inter-agency partnerships and grant funds that would help overcome patient barriers to care. None of these services are billable for reimbursements. However, results have demonstrated that addressing barriers translates into greater delivery of billable services. For example, roughly \$31,000 is expended annually for patient taxi services or prepaid gas cards by this clinic. Dental care provided to those patients amounted to \$421,000 in production, a net return of \$390,000 in Medicaid reimbursements (which pay 51% on average); this amounts to almost 650% return on investment. Analyses such as these raise grant funders' interest and investment, as well as provide data to prioritize general operating funds for these services, should grant funds no longer be available.

A defining characteristic of the Northern Dental Access Center's approach is the investment in wraparound services and assistance for patients. This is a choice grounded both in mission and, candidly, prudence. As the results show, patients that receive assistance, especially transportation, are more likely to complete treatment. This is good for the patient, and it also makes sense from a cost-benefit perspective. Patients with additional transportation needs also tend to have more robust treatment needs than an average patient. Functionally, this also means these patients have higher billing potential. Assessing whether a potential new program or feature is patient-first *and* fiscally-sound guides our clinic - whether it is offering dentures, evening hours, or child supervision during a caregiver's visit. Comparing the costs and benefits of these add-ons tends to be cost-beneficial (or at least cost-neutral) for us and helpful for the patient. And while offering insurance navigation, counseling, child supervision, non-traditional clinic hours, and referrals to a number of social services does not necessarily generate excess revenue, it increases the value of Northern Dental as a central location from the patient perspective.

By reducing silos between organizations and sharing revenue streams, each brings something to patients. One receives a state grant to provide insurance navigation; another receives funding to provide legal aid to the target population, so they now do that here.

Part VIII: Implications for Other Communities

Recognized with multiple "innovation" awards, Northern Dental implements programs and services in ways that make common sense. We have learned over the years that when a family is food-insecure, transportation insecure, safety insecure, employment insecure, or is managing multiple health challenges—then making or keeping a dental appointment is not the most important thing. Our patient advocacy team works with families to identify barriers and connect them to a web of health and human services agencies.

Our experience aligns with scholars who find that many in poverty, especially in minority groups, lack trust in dominant culture systems and traditional providers, so additional help is often refused or ignored. In our practice, regular consultation with a patient focus group provides us 'reality therapy' so that we can distinguish what 'looks good', compared to what will really work for the people we are trying

to reach. We believe it is this approach, which includes our partners offering wraparound services, that has allowed Northern Dental to become a significant part of the social and health safety net in our region. It is this approach that communities across northwestern Minnesota have called on us to provide, duplicate, or train others in how to deliver healthcare “the Northern Dental” way.

Wraparound services are typically supported through grants and charitable giving. Evidence such as that offered in our published journal article can inform policy makers and insurance companies, making the case for reimbursing nonprofits that provide them. Employing the tactics described here, especially those of employee training and shifting language and perceptions—have ultimately resulted in increased patient trust, participation and self-care. Providing a dental home, rather than a safety net setting, has been the goal; and has also turned out to be the financially-prudent choice.

Part IX: Success, Increased Capacity, and Contributions to Change

A. Defining Success

i) How do you define “success” for your grant program? Please check the appropriate selection(s). You may choose more than one option. If other, please describe.

- Access to a new or expanded health service
- Increased number of people receiving direct services
- Improved quality of health services
- Operational efficiencies or reduced costs
- Integration of process improvement into daily workflow
- Continuation of program activities after grant funding
- Continuation of network or consortium after grant funding
- Health improvement of an individual
- Health improvement among your program participants
- Health improvement among your community
- Enhanced staff capacity, new skills, or education received
- Improved capacity to adapt to changes in healthcare

ii) Do you believe that your program has achieved success? If so, how?

Without a doubt, the most recent program made possible through HRSA funding was a success. Consortium partners have each benefitted substantially from the HRSA-funded activities these past years. Combined efforts to overcome economic, social, legal and health barriers faced by low income people in the region have demonstrated an impressive level of impact. Grant funds have afforded us the opportunity to pursue new ideas, evaluate and identify those things that have the greatest impact and best return on investment.

Each partner has also been able to leverage project activities within their respective stakeholders, getting grants and investments to support their part in the project. Because cross-training staff and board members of each agency—and developing project materials constituted much of the cash costs for the project, outside of wages, fewer new, cash resources are necessary in the coming years.

Evaluation activities during year three also led the Consortium through deep data mining that has unearthed a number of potential avenues for further impact measures. Most recent efforts resulted in a “*Report from the Field*” manuscript accepted for publication in an upcoming Journal of Public Health Management & Practice titled “*Offering Wraparound Services at a Community Dental Access Clinic to Reduce Health Disparities among Rural Populations in Poverty.*” In this manuscript, data is presented that demonstrates improved patient outcomes directly linked to support services such as transportation and insurance counseling. This has essentially affirmed the Consortium’s approach as a “promising practice”. Northern Dental has made the financial commitment to further cull data to extract meaningful impact reports on treatment plan completion, caries experience among children and adults, access to care and more. These reports, along with continued patient advisory group feedback and an upcoming stakeholder assessment—will inform Northern Dental Access Center’s Board of Directors’ upcoming strategic planning process for 2018-2021.

Expansion of activities is on the horizon, as Northern Dental Access Center is in the early stages of developing a satellite dental access clinic in the western part of the northern Minnesota service region. The goal will be to replicate the organizational culture and successful, collaborative approach to providing dental care and wraparound patient support

services—in order to address barriers to care and the determinants of health that cause disparities among rural people in need.

B. Organizational Capacity

How has the federal funding of your grant program increased local capacity at your organization, within your network, and/or in your community? Please check the appropriate selection. If other, please describe.

- Formalized networks or coalition
- Developed new partnerships or relationships
- Enhanced skills, education, or training of workforce
- Enhanced data collection and analysis

C. Contributions to Change

Change in individuals' lives, your organization, consortium, or community:

The Medical-Legal partnership branch of this consortium can be credited with assisting a patient with planning and implementing an exit strategy for her and her two young children from the domestic violence situation they were living in. The onsite attorney helped her identify safe, temporary housing for her and her sons, as well as taking the legal steps she needed (but had been previously unaware of) to make the safest and quickest exit possible. This life-saving encounter with legal services could not have taken place, had it not been for the “cover” of going to dental appointments at Northern Dental Access Center. Her husband (at the time) had ongoing surveillance on her whereabouts, but seemed unconcerned as long as she was at the dental clinic. Had she attempted this same strategy while visiting the main Legal Services office downtown, she is confident she and her children would still be living in the home to this day, enduring the violence they escaped.

Change in policies, systems and environment:

Northern Dental Access Center and its consortium partners have developed a unique model of care delivery. We do this by understanding the interconnectedness of the determinants of health and weaving a tapestry of patient support to impact a whole person, family or population.

Patient support services have become successful after multiple attempts, getting appropriate feedback, and having the agility to make modifications. For example, we have redesigned our patient transportation assistance program, after evaluation indicated only sporadic success. After consultation with our patient focus group, and measuring several options, we found that pre-paid fuel cards were more effective in helping patients overcome transportation barriers. As a result, we now have a program that has 100% appointment success. Data also demonstrate that patients accessing transportation assistance are 37% more likely to complete dental treatment.

In addition to patient impact, Northern Dental has contributed its voice to a national conversation in a recent article in the Journal of Public Health and Practice (*excerpt*):

Northern Dental Access Center has received several inquiries from local, state and national public health advocates seeking a process through which the program might be replicated. We hold that consistent performance improvement and sensitivity to the needs of diverse populations is not merely the result of a linear process, but from a planned change in organizational culture.

When a family is in chaos or maneuvering through the complexities of poverty, dental care may fall by the wayside, only becoming important when there is serious pain. Beyond that, other priorities may take precedence. We maintain that it is not our role to educate patients so they learn how to start thinking and acting like those in the dominant culture (i.e., making, keeping and coming early to a pre-arranged appointment) nor to penalize them when they don't (i.e., missing an appointment becomes one of “three-strikes-you're-out”). Our job is to use the resources we steward to provide dental care successfully, so we must adapt what we do. In our view, modifying our expectations is the only way the Public Health community will stop being frustrated by the very people we say we care about.

Mississippi

Part I: Organizational Information

Grant Number	D04RH28444
Grantee Organization	Delta Health Alliance
Organization Type	Non-Profit Organization
Address	435 Stoneville Road, Stoneville, MS 38776
Grantee organization website	www.deltahealthalliance.org
Outreach grant project title	Delta Care Transitions Program
Project Director	Name: Shenetta A. Drone
	Title: Project Director
	Phone number: 662-686-3861
	Fax number:
	Email address: sdrone@deltahealthalliance.org
Project Period	2015 – 2018
Funding level for each budget period	May 2015 to April 2016: \$199,590
	May 2016 to April 2017: \$199,590
	May 2017 to April 2018: \$199,590

Consortium Partners

* Indicates those consortium partners who have signed a Memorandum of Understanding/Agreement

Partner Organization	Location (town/county/state)	Organizational Type
South Sunflower County Hospital*	Indianola/Sunflower/MS	Hospital
Delta Regional Medical Center*	Greenville/Washington/MS	Hospital
Leland Medical Clinic*	Leland/Washington/MS	Clinic
Indianola Family Medical Group*	Indianola/Sunflower/MS	Clinic

Part III: Community Characteristics

A. Area

The Delta Care Transitions Program serves Bolivar, Sunflower, and Washington counties.

B. Community description

The service area for the *Delta Care Transitions Program* is a three-county, rural region located in the Mississippi Delta. More than a third of the approximately 111,734 people residing within these counties live in poverty, and 7 in 10 are African American. Nearly one-quarter of adults do not have functional basic literacy skills. More than a quarter of adults have not graduated high school, which makes it difficult for patients to understand complicated healthcare advice or medication instructions. Clinicians struggle to help patients improve their outcomes as the millions of dollars spent annually on unnecessary hospitalizations and prolonged clinical care catapults the economic burden. The Mississippi Department of Health's *Report on the Burden of Chronic Diseases in Mississippi, 2014* reported that in 2010 there were 155,629 (41.2%) discharges due to chronic conditions in Mississippi and the total charges for chronic related conditions was over \$4 billion.

C. Need

In impoverished, rural communities like the Mississippi Delta, families can find themselves crushed under the financial and emotional weight of caring for a family member who is trapped in a cycle of poor health, hospitalizations, and increasing expenses. Out-of-pocket costs and time off from work can push a family living in poverty over the edge. These families are often already struggling with the extreme emotional and psychological strain of caring for loved ones with chronic illness. Often, a hospitalization can serve as a wake-up call for an individual struggling with diabetes, heart disease, COPD or pneumonia, but if they do not receive appropriate post-discharge follow-up care, patient education, and empowerment training upon returning to their community, they often end up back in the hospital, and remain on the road to premature death.

Thus, the *Delta Care Transitions Program* was designed to aid in improving health outcomes for at-risk patients transitioning from in-patient to out-patient settings and in reducing hospital readmissions for chronic illness. This program, developed with input from the communities served, addresses a very important health gap in the community by providing services that work with and around existing programs to reach impoverished, low literacy patients with chronic illness who have a history of multiple hospitalizations. This program also makes a concerted effort to incorporate existing services and resources for families who may be struggling to cope with the demands of caregiving and are in need of support.

Part IV: Program Services

A. Evidence-based and/or promising practice model(s)

Dr. Eric Coleman's Care Transitions Intervention (CTI) evidence-based model was used as an initial model for the program. It was adjusted to better meet the needs of the hospitals and the patients by incorporating chronic disease self – management education and connecting patients to needed services.

B. Description of Activities

The *Delta Care Transitions Program* team works with patients hospitalized with a diagnosis of diabetes, heart disease, chronic obstructive pulmonary disease (COPD), or pneumonia. These patients are at high risk of being readmitted to the hospital due to their not receiving the appropriate post-discharge follow-up care or patient education. Dr. Eric Coleman's Care Transitions Intervention (CTI) evidence-based model was adopted for use, with additional emphasis on nutrition and chronic disease self-management education and the identification of socioeconomic needs.

Dr. Eric Coleman's Care Transitions Intervention (Coleman Model) evidence-based model requires each patient receive the same number of home visits and phone calls at the same frequencies. We identified a need to tailor the model to better meet the needs of our patients. The first modification was engaging patients while they are still inpatient instead of engaging them after discharge. This enabled the patients to meet the Health Coach and begin building trust in a safe environment. We also recognized a need to modify who made the first contact with patients after discharge. For example, the Coleman Model requires the Health Coach to make the first post-discharge contact two days after discharge. During a meeting with South Sunflower County Hospital to review and draft Care Transitions workflows, it was determined that the hospital was required to contact patients two days post discharge. We removed the day two call from the Health Coaches workflow and replaced it with scheduling the first Care Transitions home visit or phone call before the patient left the hospital, if possible.

Health Coaches also develop care plans that are specific to each patient. The patients have an opportunity to set short term goals and to explain their needs in their own words. Patients' families are involved in the discussions if they are available. The hospital care team is also involved in this process. Once the level of need and readmission risk level are determined, the Health Coach is able to adjust the frequency and number of phone calls and home visits. Some patients need more while others benefit from less engagement. Health Coaches assist patients in connecting with programs in the community to leverage available resources and improve long-term sustainability. Examples of these resources have included senior centers, home health agencies, pharmacy assistance programs, free grocery store tours, physical fitness opportunities, counseling, and support groups. Patients are engaged while in-patient and followed for up to 45 days post-discharge.

C. Role of Consortium Partners

South Sunflower County Hospital/Indianola Family Medical Group: assisting in identifying discharge protocol improvement opportunities; protocols to support care transitions; identifying inpatients eligible for program enrollment; coordinating intake process with the Health Coaches; establishing and maintaining the data collection system; providing assistance with ongoing data collection, including readmission rates; coordinating health education program; assisting with reporting; and developing sustainability plans.

Delta Regional Medical Center: joined the consortium in 2018 and has made significant progress toward the following: assisting in identifying discharge protocol improvement opportunities; protocols to support care transitions; identifying inpatients eligible for program enrollment; coordinating intake process with the Health Coaches; establishing and maintaining data collection system; providing assistance with ongoing data collection, including readmission rates; coordinating health education programs; assisting with reporting; and developing sustainability plans.

Leland Medical Clinic: helping to facilitate care coordination, medication management, reminders of pending appointments and follow-up care. The clinic also shares information with Health Coaches regarding clinic-sponsored health outreach activities and education programs.

Part V: Outcomes

A. Outcomes and Evaluation Findings

Improved Processes – South Sunflower County Hospital improved hospital readmissions rates review methodology and frequency. At the beginning of the program, the hospital reviewed the readmissions rate based on when they received their rates from the Centers for Medicare and Medicaid Services (CMS). This approach was reactive as oppose to preventive. Now the hospital reviews the readmissions rates monthly to identify any commonalities in admitting providers, admitting diagnoses, and/or admitting patients. This has allowed them to identify one provider who was responsible for more than 50% of the readmissions. Upon speaking with the provider, the hospital determined that he was either admitting patients or sending them to the emergency room to be treated for problems that he could evaluate within his clinic. He explained that he chose to do this based on when he was scheduled to conduct rounds at the hospital. He did not understand the financial impact this had on the hospital or the misdirection provided to patients. As a result, the hospital immediately provided hospital staff education on the impact of the 30-day readmission rates and the importance of distinguishing when to advise patients to go to the hospital versus the clinic.

Improved Communications – Our program has only been active at Delta Regional Medical Center a few months, but internal communications have already improved. The hospital is larger than South Sunflower County Hospital and has a much greater patient volume. Delta Regional Medical Center also has more internal resources; however, many were working in silos when the program started. For example, the Dietician was not directly included in discussions regarding possible cause of Congestive Heart Failure patients readmitting frequently. After the Health Coach encountered a patient who did not know how to read food labels well enough to monitor salt-intake, the Health Coach asked the social workers if Dietetics could be engaged. The social workers advised they had not considered contacting Dietetics before and immediately added it to their workflow.

Readmissions Rates – We are currently evaluating the 30-day outcomes of patients enrolled in the Care Transitions Program compared to patients with similar diagnoses who did not receive Care Transitions services. To date, we have 6 known readmissions out of more than 200 patients. We are currently working with the hospitals to confirm and to evaluate further.

B. Recognition

During the biannual State survey, the Care Transitions Program at South Sunflower County Hospital was credited as being a key factor in the hospital's readmissions rates reducing from the 2014 to the 2016 survey.

Part VI: Challenges & Innovative Solutions

Contract Delays – the program experienced an extensive delay in implementing the project during the 2015 budget year due to contract delays.

1. **South Sunflower County Hospital** did not sign a contract until the end of 2015 due to the scheduled vacations and illnesses of essential personnel. While we awaited contract signatures, we encouraged the hospital to review its current readmissions data to identify any trends. They realized that most readmitting patients had the same primary physician. After engaging the physician, they determined that he was directing patients to present at the hospital when he was working there. Immediately, hospital administrators were able to reeducate the provider on emergency room utilization versus clinical visits. Additionally, the Health Coach was able to begin developing relationships with hospital team members to gain their buy-in and support. Once the contract was executed, patient enrollment was initiated on February 1, 2016.
2. **North Sunflower Hospital/Sunflower Clinic** did not sign a contract. Initially, the primary contributing cause of delay in executing a contract with North Sunflower Hospital and the Sunflower Clinic was directly related to the hospital's request for an increased annual budget to cover their data reporting costs. South Sunflower County Hospital had previously participated in care transitions grants and did not have the same data or reporting challenges as presented by North Sunflower Hospital. Thus, upon receiving a scope of work from North Sunflower Hospital, the hospital's request to increase the maximum contract amount from \$15,000 to \$18,100 was approved. However, in spite of the increase in funding North Sunflower Hospital never executed a contract and the care transitions programming was not implemented.

3. **Delta Regional Medical Center** As a result of North Sunflower Hospital's not participating in the program, we approached Delta Regional Medical Center regarding the care transitions program to determine if the hospital wanted to join the consortium for the remainder of the grant period. A contract was executed in February 2018. The hospital had existing staff consisting of case managers and social workers who could facilitate inpatient Care Transitions. This enabled the program to be implemented quickly. Patient enrollment continues to increase weekly, and we are working diligently to maximize the remaining grant period to actualize as great an impact as possible.

Part VII: Sustainability

A. Structure

All current members of the consortium will continue, since they have a vested interest in improving the health care continuum and preventing avoidable readmissions.

B. On-going Projects and Activities/Services To Be Provided

- i) Will all, some or none of the elements of the program be sustainable once Outreach grant funding has ended? Please check the appropriate selection.

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained (i.e. the program will completely end after the grant period)

- ii) Identify the projects and activities that will be sustained beyond Outreach grant period.

South Sunflower County Hospital – will submit a request to the MS Division of Medicaid to have its reimbursement rate increased, based on its improved readmissions rates. This will increase hospital revenue, thus enabling the hospital to hire a health coach to continue to facilitate the patient-level care transitions activities. The hospital discharge team, providers, and administrators will continue to review readmissions rate, diagnoses, and admitting providers for trends and abnormalities. The hospital care team will continue to work cohesively instead of in silos.

Delta Regional Medical Clinic (DRMC) – employs social workers and case managers who are learning the Coleman Model and the Care Transitions methodologies developed during this program. These skills will enable them to continue the out-patient Care Transitions patient engagement. DRMC currently works in silos. They have recently begun engaging the dietary department, and we are aiding them in developing disease-specific education materials.

C. Sustained Impact

The impact of this program can be identified in various ways, including:

1. **An increase in mental health resources in Washington and Sunflower counties** – When the program began, identifying mental health resources in our service area was difficult. During meetings and other interactions with consortium members, the lack of mental health resources was a consistent topic. The group explored how access to these services could be enhanced. A major development during this program was the start of mental and behavioral health services at Leland Medical Clinic and South Sunflower County Hospital. Both have been viable resources not only for our program participants but also for the entire community. While we cannot assume ownership of the decision-making process, we do believe that facilitating the conversation did lead to consortium members exploring their resources.
2. **Reductions in South Sunflower County Hospital's 30 day Readmissions Rate** – The hospital has improved how various members of the hospital staff engage each other and the patients. The nurses engage the dietician to ensure patients presenting with complications from congestive heart failure understand the importance of avoiding salt and weighing themselves daily. Prior to this program, the various hospital teams worked in silos. The Health Coach was able to bridge the gap by sharing patient engagement stories with the staff and by asking questions. For example, a patient with congestive heart failure admitted to the hospital frequently. The nurses would ask if she was eating a lot of salt and the patient would say no. Perplexed, the health coach asked the patient to tell her some of her favorite foods. The patient happily explained that she loved fried bologna sandwiches and ate one almost daily. The health coach shared this information with the nurses and asked if the dietician could talk to the patient. An education opportunity was identified and addressed which ultimately led to this patient's avoiding a premature readmission.

Part VIII: Implications for Other Communities

Beneficial outcomes/experiences – Often, evidence-based models are designed to be implemented in urban communities. The resulting methodologies may not always work well in rural communities. The modifications we made to the Coleman Model would enable other rural hospitals and clinics to adapt it to fit the needs of their patients.

Beneficial qualitative measures/indicators – These could include a hospital's monthly readmissions, including admitting diagnoses and admitting physicians for all patients to determine recurring diagnoses and to determine if certain providers are admitting patients at an abnormally high rate. Additionally, developing a few simple questions about eating habits or a patient's sense of wellbeing is invaluable as it helps to identify needed resources and education.

Part IX: Success, Increased Capacity, and Contributions to Change

A. Defining Success

- i) How do you define "success" for your grant program? Please check the appropriate selection(s). You may choose more than one option. If other, please describe.
- Access to a new or expanded health service
 - Increased number of people receiving direct services
 - Improved quality of health services
 - Operational efficiencies or reduced costs
 - Integration of process improvement into daily workflow
 - Continuation of program activities after grant funding
 - Continuation of network or consortium after grant funding
 - Health improvement of an individual
 - Health improvement among your program participants
 - Health improvement among your community
 - Enhanced staff capacity, new skills, or education received
 - Improved capacity to adapt to changes in healthcare
- ii) Do you believe that your program has achieved success? If so, how?
Yes, we do believe our program has achieved success due to the improvements at South Sunflower County Hospital, the small expansion in mental health resources, and the opportunities we have to help other hospitals develop their own Care Transitions Programs.

B. Organizational Capacity

How has the federal funding of your grant program increased local capacity at your organization, within your network, and/or in your community? Please check the appropriate selection. If other, please describe.

- Formalized networks or coalition
- Developed new partnerships or relationships
- Enhanced skills, education, or training of workforce
- Enhanced data collection and analysis

C. Contributions to Change

Change in individuals' lives, your organization, consortium, or community:

A Congestive Heart Failure patient frequently readmitted to the hospital due to fluid buildup. Separately, the hospitalist, nurses and social workers asked the patient about her diet, salt intake and medication adherence. The patient confidently explained that medications were taken as prescribed and a low salt diet was maintained daily. The hospital team knew something did not add up due to the complications the patients was experiencing and the frequency of readmissions. The patient was referred to our Care Transitions Program and the Health Coach was informed of the facts by the social worker. The Health Coach used the first patient interaction to gain the patient's consent to participate in the program and to learn more about the patient based on information the patient shared directly. The Health Coach was able to determine two things quickly: 1.) The patient was very concerned about the patient's current health status; and 2.) The patient understood how to manage the patient's diagnosis. The Health Coach decided the likely cause of the fluid retention was salt intake, so she asked the patient to tell her what foods she likes to eat. The patient advised that fried bologna sandwiches are a favorite and one was eaten at least once a day. Recognizing a learning opportunity,

the Health Coach created a care plan that included education on reading and understanding food labels. The patient was thankful as the patient did not understand that sodium and salt are the same. This was also a learning opportunity for the hospital care team as they were able to witness the benefit of asking questions differently and using terminology that is easy to understand.

Change in policies, systems, and environment:

Discharge and follow-up contact has improved. Health Coaches maintain various levels of contact with patients for a minimum of 45 days post-discharge. This has improved patient adherence to discharge instructions and medication compliance. It also has allowed the hospital to receive communications regarding the health status of patients who cause the hospital concern. For example, one patient was referred to the program 4 days post-discharge because the social worker was concerned about the patient's caregiver being willing to have the patient ready for transport to an outpatient rehabilitation center. The social worker could not maintain contact with the caregiver as her inpatient caseload was high. The Health Coach was able to contact the caregiver, schedule a home visit, and communicate her observations to the social worker. In turn, the social worker immediately identified resources for both the caregiver and the patient.

Mississippi

Part I: Organizational Information

Grant Number	D04RH28415
Grantee Organization	Tallahatchie General Hospital
Organization Type	Critical Access Hospital
Address	201 South Market Street or P.O. Box 230 Charleston, MS 38921
Grantee organization website	www.mytgh.com
Outreach grant project title	Tallahatchie Wellness: One Community's Journey Toward Optimal Wellness
Project Director	Name: Catherine Woodyard Moring
	Title: Executive Director, Wellness
	Phone number: 662-625-3040
	Fax number: 662-625-3024
	Email address: cwoodyard@mytgh.com
Project Period	2015 – 2018
Funding level for each budget period	May 2015 to April 2016: \$193,296
	May 2016 to April 2017: \$168,351
	May 2017 to April 2018: \$168,351

Part II: Consortium Partners

* Indicates those consortium partners who have signed a Memorandum of Understanding/Agreement

Partner Organization	Location (town/county/state)	Organizational Type
The University of Mississippi*	Oxford and Jackson, MS	University
Southern Discount Drugs*	Charleston, MS	Pharmacy
Tutwiler Community Education Center*	Tutwiler, MS	Community Center
Charleston Rural Health Clinic*	Charleston, MS	Clinic
James C. Kennedy Wellness Center*	Charleston, MS	Wellness Center
Delta Health Alliance	Stoneville, MS	Non-Profit Health
Delta Health Collaborative	Greenwood, MS	Non-Profit Health
Tallahatchie River Foundation	Tallahatchie County, MS	Non-Profit Education
Tallahatchie Early Learning Alliance	Tallahatchie County, MS	Early Learning Collaborative
Mississippi Department of Health	Charleston, MS	Healthcare
Mississippi Diabetes Coalition	Jackson, MS	Non-Profit Diabetes

Part III: Community Characteristics

A. Area

Our outreach grant served Tallahatchie County, Mississippi. Within the county, our grant primarily served the communities of Charleston, Sumner, and Tutwiler.

B. Community description

Tallahatchie County is 645 square miles, vastly rural and home to 14,394 residents. The county is located in the Mississippi Delta, an extremely impoverished region facing challenges in many areas of psychosocial, physical, and economic development, including issues pertaining to health, social, education, and economic conditions. The demographic makeup is 41.2% white, 56.3% black, and 44.2% female. The median household income is \$29,731, well below the national and state averages of \$38,882 and \$53,046, respectively. Further, the per capita income is \$13,819, which is also well below the state and national averages of \$21,057 and \$28,931, respectively. Over a quarter of residents report poor or fair health, 15% have diabetes, almost half have

obesity (it is estimated that over a third of children under 18 have obesity), a third are physically inactive, and a quarter of adults have not finished high school. There is a hospital, an extended care facility, one dentist, two pharmacies, a wellness center, and four clinics in the county. There is very little specialty care and tremendous gaps in healthcare services. While we have a long way to go, the community is significantly improving the health of its citizens. Though the work of our outreach grant and other community endeavors, we have moved from 81st to 60th in the most recent RWJF County Health Rankings.

C. Need

Our outreach grant was designed to address the following the needs: 1) the need for an employee wellness program to improve employee (and community) health; 2) the need for chronic disease management and prevention programs/strategies/screening policies; 3) the need for increased access to health care and preventive screenings; 4) the need to address childhood obesity and reduce risk factors for chronic health conditions; 5) the need to improve community health in a broad context and 6) the need to improve our rank in the RWJF County Health Rankings.

Part IV: Program Services

A. Evidence-based and/or promising practice model(s)

We used the following evidenced based models: The Coordinated Approach to Child Health (CATCH), The Stanford Model Chronic Disease Self-Management Program (CDSMP), and Cooking Matters. We used our annual health fair carnival and three-month wellness challenge as promising practice models. We did not have to adapt the models.

B. Description of Activities

Through our outreach program, we conducted the Standord model CDSMP courses several times annually, taught cooking classes (Cooking Matters), conducted an after school youth program using the CATCH curriculum, had a year-round garden and provided produce to the community, taught youth gardening classes, taught diabetes and chronic disease education in individual and group-based formats, ran an employee wellness program for over 350 employees, had an annual health fair carnival with an average of 400 attendants, as well as the annual wellness challenge, partnered with the local school for events such as the back to school bash and healthy Halloween, worked with individuals and families in a myriad of other ways to improve health, identify undiagnosed chronic conditions, promote healthy aging and increase quality of life.

C. Role of Consortium Partners

The consortium partners helped to develop the scope of work and implementation plan. The clinic was responsible for helping us recruit participants and provide personnel for events such as the health fairs and wellness challenge. The hospital was responsible for running lab work, supporting programming, and providing personnel when needed. The pharmacy was responsible for assisting with participant recruitment and provided a pharmacist for classes once annually. The University of Mississippi was responsible for assisting with evaluation and IRB approval. The wellness center was responsible for program implementation, evaluation and sustainability planning. The Tutwiler Community Education Center (TCEC) was responsible for participant recruitment, providing a place to conduct programing, and implementation of CATCH as part of their existing after school youth program.

Part V: Outcomes

A. Outcomes and Evaluation Findings

Each year during the wellness challenge, we saw substantial weight loss, significant improvements in participant biometrics, increased knowledge of health topics and sustained behavior change. The health fair carnival provided an array of free health screenings annually to over 350 people and always caught a plethora of people who had unidentified chronic health conditions. We identified over 100 people with undiagnosed pre-diabetes or diabetes and were able to provide early intervention and in many cases, reduce their A1C under 5.7 through lifestyle intervention. Over 100 Cooking Matters participants learned to cook healthy, affordable meals, changed their cooking behaviors (e.g. cooked in the home more often after completing Cooking Matters), and increased their knowledge of nutrition and health cooking skills. Participants in our various programs have lost over 3,000 pounds as a combined total. Our county has moved from 81st to 60th in the county health rankings. Over 2,000 people were reached and positively impacted as part of our programming.

We are especially proud of our annual results of our wellness challenge. Tallahatchie Wellness includes the annual Tallahatchie Wellness Challenge, a promising practice model. In the five years of implementation, participants demonstrated improved biometric measures, improved dietary patterns, increased health-related knowledge, and subsequently demonstrated substantial weight loss. The twelve-week Challenge is a community-based wellness program and includes cooking demonstrations and weekly classes with various health topics. The overall goal is to improve all dimensions of wellness, not just physical. At the

beginning and end, participants receive a health assessment and the following biometric data is collected: height, weight, BMI, metabolism, body fat%, waist circumference, blood pressure, glucose, cholesterol, A1C, and triglycerides. Participants have access to group fitness classes, personal training, health coaching, nutrition counseling, and group support. The five-year averages are as follows: Each year over 200 people participate, and we observe a 76% completion rate. An average of 9.6 pounds per person is lost, waist circumference is reduced by 2.35 inches, we see a significant reduction in blood sugar and cholesterol and 70% of participants lower blood pressure.

B. Recognition

We were regularly featured in our local newspaper and state magazines. We have presented our work at numerous conferences and invited presentations. Our hospital and associated entities (which includes the wellness center) were awarded Mississippi non-profit of the year in 2015. Our progress and impact as the entire entity, including the hospital and clinic, has received a lot of attention and recognition in other areas as well. Our programming and facility is often referred to as the best thing that has ever happened to Tallahatchie County.

We have been especially intentional about information dissemination, as we recognize the need for similar programs and efforts through the replication of our model in other areas with similar needs as well as the importance of transparency and communication to our partners and stake holders. We have spread lessons learned about our program as well as the impact of our funded work via multiple state, regional and national conference presentations as well as through numerous articles in the local newspaper (i.e. the Sun Sentinel), a local University's online news source (i.e. hottytoddy.com) and regional magazines (e.g. Delta Magazine and the Mississippi Rural Health). We have also had a couple of videos made highlighting our work and have disseminated those via various social media platforms and our website. We are now in a formal community-university partnership with the University of Mississippi and have several peer-reviewed publications in the pipeline for peer review; this will enable us to have peer-reviewed publications evidencing the positive work we are doing.

The program presentations to date include: 1) The 2017 Mississippi Public Health Association Conference – The presentation was focused on Creating Sustainable Community Change and was titled One Community's Journey Toward Optimal Wellness; 2) The Mississippi Business Group on Health Summit – The presentation was focused on a discussion of our work regarding community health with a specific focus on our worksite wellness program; 3) The 2017 Empowering Communities for a Healthy Mississippi Summit – The presentation focused on an overview of the Tallahatchie Wellness programming and the James C. Kennedy Wellness Center as well as the creation of effective Community Clinical Linkages (CCLs); 4) We presented at the University of Mississippi Department of Pharmacy Administration Graduate Student Seminar regarding the process of conducting community health needs assessments using community based participatory research and then using findings to obtain external funding and drive your plan of action; 5) We were invited to serve on a panel at the 2nd Delta Regional Forum: Population, Development, and Entrepreneurial Problem Solving to discuss the health system in the Mississippi Delta as well as the most pressing health issues in the Delta; The session ended with a broader discussion of health and health system issues in the Delta and a specific focus on the work we are doing through our HRSA funding; 6) The 2014 Public Health Association Annual Conference as an invited panel member to discuss the Tallahatchie Wellness Initiative, its concept, implications and lessons learned; and 7) We presented our work in the Community Assessment and Education to Promote Behavioral Health Planning and Evaluation (CAPE) Webinar which was broadcasted nationally – The Title was Community Health Needs Assessments in Rural Communities using Principles of Community Based Participatory Research; this webinar informed participants about a novel approach to conducting community health needs assessments in rural communities as well as using findings to obtain external funding and included an overview of our funded work and model for improving health in areas with limited resources.

Part VI: Challenges & Innovative Solutions

We had a challenging time implementing the after-school youth program at the wellness center due to limited space and very limited staff. We really underestimated the amount of staff we would need and it became unmanageable. After 2 years of conducting the youth program, we decided not to continue it. Another reason we decided to drop it was that our staff is much better trained and has expertise in the areas of prevention, reduction, treatment and management of chronic disease. The CATCH program is still being implemented on the west side of the county at the TCEC as part of their existing after school youth program. Another challenge we encountered was data management. We just recently discovered REDcap for data management and it has been a real game changer. Recruitment was challenging initially but after about six months, it improved. We also had challenges initially identifying potential patients from our clinic for our diabetes programming. To address that problem, we used the electronic health record (EHR) to identify potential participants who had diagnosis for diabetes.

Part VII: Sustainability

A. Structure

Our consortium will continue but some partners will no longer remain part of the consortium but will remain strong community partners. The Southern Discount Drugs pharmacy and the TCEC will remain partners but will not remain formal members of the consortium. The pharmacy is not remaining part of the consortium because their role is mostly to assist with participant recruitment and we can work together in doing so without them being a formal member. Further, their staff is very busy and not able to commit to the consortium responsibilities. The TCEC is not remaining part of the formal consortium but are remaining community partners and we will conduct at least one cohort of Cooking Matters and The CDSMP at the TCEC annually and will continue to pay them rent for their space to do so. TCEC has also agreed to continue to utilize the CATCH in their after-school program enabling program sustainability for the youth aspect of the programming. Each of our consortium members have been involved with our discussions regarding sustainability except for Southern Discount Drugs, as they are more in a support role and not necessarily making decisions about future program implementation. The consortium now includes the wellness center, the Tallahatchie General Hospital (TGH), the Charleston Rural Health Clinic, The University of Mississippi, and the TGH Medical Foundation. We decided that moving forward we will focus intensely on chronic disease management and prevention and are adding several new services and programs to our offerings including Chronic Care Management (CCM), Diabetes Self-Management Education (DSME), the Diabetes Education and Empowerment Program (DEEP), the Diabetes Prevention Program (DPP), and Whole30. Moving forward, the program components as well as individual patient services will be housed under our MASTER Plan, which stands for **Managing All Symptoms TogethER**.

B. On-going Projects and Activities/Services to Be Provided

i) Will all, some or none of the elements of the program be sustainable once Outreach grant funding has ended? Please check the appropriate selection.

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained (i.e. the program will completely end after the grant period)

ii) Identify the projects and activities that will be sustained beyond Outreach grant period.

We are going to try to continue all of our grant programs except for the youth program, as previously stated and the garden produce program. While funding always dictates final decisions, we are currently planning to continue CDSMP, Cooking Matters, the annual health fair carnival, and the employee wellness program. We also have intentions to add a number of programs including CCM, DSME, DEEP, and DPP as part of our MASTER Plan. We plan to expand our reach as we continue to build partnerships and disseminate information about our model to other communities with similar needs. We also plan to extend our programming plan to include individual services for our patients including personal training, nutrition counseling, diabetes education and weight management/loss.

C. Sustained Impact

We are implementing a new diabetes screening policy in our clinic to identify individuals with unidentified diabetes and pre-diabetes. All newly diagnosed individuals with diabetes or pre-diabetes will then be referred to the MASTER Plan and will have access to individual services and group-based programs in attempt to better manage and/or prevent diabetes. Our service providers were able to attend a seminar on treating diabetes, and project staff were able to attend a number of trainings to increase knowledge and improve delivery of services. The wellness center and its associated programs as part of the Outreach grant were the first of its kind in our community. It truly created and sparked a movement and a culture shift in regard to health and improving all aspects of wellness. Many community members are now talking about health and taking the appropriate measures to improve their health status and well-being. A number of employers have joined our employee wellness program and made a commitment to improving their employee's health. We will also continue to work intensely with individuals who have diabetes and pre-diabetes. Our program also resulted in new and improved service models, increased capacity to address chronic disease treatment, management and prevention, new skills in our staff at the wellness center, the establishment of a Community Clinical Linkage (CCL) between our clinic and wellness center.

Part VIII: Implications for Other Communities

Our program can be helpful to other communities with similar needs who are interested in implementing a program such as ours. It is replicable in other communities given those communities have the facility and manpower to deliver such programs. We have found the use of exit surveys and follow-up focus groups to be very helpful and effective with our evaluation efforts and for continual improvement and quality assurance. We have and continue to figure out best practices for implementation, measurement and evaluation of such

programs and resources. The nation as a whole is facing a crisis when it comes to diabetes and other chronic health conditions such as heart disease and obesity. The implication of implementing similar programs would bring improved health outcomes and positively impact individual, community and population health while reducing the prevalence of new cases of such conditions and improving the management and treatment of existing ones. Our program is also designed to where it can be replicated in pieces and not necessarily the entirety which could benefit communities preferring to focus on one thing at a time.

Part IX: Success, Increased Capacity, and Contributions to Change

A. Defining Success

i) How do you define "success" for your grant program? Please check the appropriate selection(s). You may choose more than one option. If other, please describe.

- Access to a new or expanded health service
- Increased number of people receiving direct services
- Improved quality of health services
- Operational efficiencies or reduced costs
- Integration of process improvement into daily workflow
- Continuation of program activities after grant funding
- Continuation of network or consortium after grant funding
- Health improvement of an individual
- Health improvement among your program participants
- Health improvement among your community
- Enhanced staff capacity, new skills, or education received
- Improved capacity to adapt to changes in healthcare

ii) Do you believe that your program has achieved success? If so, how?

Absolutely. We were a brand new organization in 2014 when we were awarded the Outreach grant. Since then we have successfully run our program according to our scope of work outlined in the grant proposal. We provided chronic disease education to over 150 people and were able to improve their self-management as well as increase physical activity levels and general wellness. We reached over 2,000 people through our direct services throughout the three-year grant period. We are the only entity in our county that provides information and programming regarding health education and prevention as well as chronic disease self-management, on an on-going basis. We have successfully implemented our programming and have moved in the county health rankings from 81st to 60th!

B. Organizational Capacity

How has the federal funding of your grant program increased local capacity at your organization, within your network, and/or in your community? Please bold/highlight all that apply. If other, please describe.

- Formalized networks or coalition
- Developed new partnerships or relationships
- Enhanced skills, education, or training of workforce
- Enhanced data collection and analysis

C. Contributions to Change

i) Please provide a story or two about how your program made a difference in individuals' lives, your organization or consortium, or your community.

Our program has made a difference in the lives of countless individuals as well as our community as a whole. Prior to the wellness center opening and its associated programs and resources, there was **nowhere** in our county to go to exercise, play outside in a park-like setting, receive health education, prevention and disease management information. We now have over 600 active members who use facility on a regular basis and over 1,000 people who have participated in our program and experienced positive health outcomes. The playground and walking path are open to the public and the community uses both amenities regularly. We have countless success stories of individuals losing 10, 20, 30, 50, 100+ pounds, reducing triglycerides, cholesterol, blood pressure, blood sugar, A1C and the like significantly and improving overall health and quality of life. We were also able to provide after school programming to children while teaching them about health and wellness and introducing them to important health topics. The county has moved in the County Health Rankings from 81st to 60th, evidence of our work as well as our community partners and hospital system as a whole. One success story is Mr. Tallahachie – He

has lost over 50 pounds, lost 6.5 inches in his waist, blood pressure was reduced from 154/100 to 120/70, cholesterol was reduced from 301 to 186, triglycerides were reduced from 330 to 147, and A1C is now 5.3 and he is no longer pre-diabetic. His sinuses are clear and he is pain free for the first time in three decades. He and countless others often mention how thankful they are for our facility and its life changing programming. We have many other stories such as this and we are going to begin showcasing them monthly in our local news paper and on our facebook page. We are hoping by highlighting such success stories of community members that more people will be motivated to participate in our programming and we can continue to help more people. One of adolescent participants has lost over 40 pounds and her blood sugar and blood pressure are now within normal range. In our wellness challenge program this year alone, we identified 23 people with prediabetes and following our weigh out, they were no longer pre-diabetic. Other results were its will be ready after April 8, 2018 (not at time of this report).

- ii) Please provide an example of how your grant program may have directly or indirectly contributed to policy changes, systems changes, or environmental changes? Examples may include passing school nutrition policies, implementing Lean process improvements within your organization, or enhancing walkable spaces in your community.

Indirect Contributions: The Wellness Center opened in January 2016 and includes an outdoor Path to Wellness (1.25 miles) a pond, and a public playground. The outreach grant supports the majority of the facility's programming and indirectly contributes to use and awareness of those outdoor amenities. The amenities are the first of its kind in our community. Our project staff has also worked with the Mayor's Health Council and the city aldermen to pass local policies supporting health including: passing a smoke free ordinance and a helmet ordinance. We are still working to pass complete streets and joint use agreements. Another contribution has been the increased knowledge and skill development for our staff. Our staff has been able to attend trainings and conferences and as a result has been able to drastically increase their knowledge and skill set regarding the work and therefore able to help our community more effectively.

Direct Contributions: Our program directly contributed to policy changes regardingin diabetes screenings. Through our work we realized the vast number of people who have undiagnosed pre-diabetes and diabetes. As such, we worked with our clinic to instill a policy where we screen everyone who comes to the clinic who has a risk factor for diabetes. If we find someone is pre-diabetic or diabetic, they are given appropriate medical care and then referred to our wellness center for programming and individual services to support weight loss and disease prevention and/or management. Our program also directly contributed to systems changes by providing a plethora of individual services and group-based chronic disease education classes to assist those with chronic conditions to improve their health outcomes and prevent the progression of various conditions. Prior to our Outreach grant, such services and resources were not available.

Missouri

Organizational Information

Grant Number	D04RH28388
Grantee Organization	Northeast Missouri Health Council
Organization Type	Federal Qualified Health Center
Address	1416 Crown Drive, Kirksville, MO 63501
Grantee organization website	www.nemohealthcouncil.com
Outreach grant project title	Improving Oral Health Access for the Senior and Elderly Population
Project Director	Name: Mandy Herleth
	Title: Corporate Compliance Officer
	Phone number: 660-627-5757
	Fax number: 660-627-5802
	Email address: mherleth@nmhcinc.org
Project Period	2015 – 2018
Funding level for each budget period	May 2015 to April 2016: \$150,000
	May 2016 to April 2017: \$150,000
	May 2017 to April 2018: \$150,000

Part II: Consortium Partners

* Indicates consortium partners who have signed a Memorandum of Understanding/Agreement

Partner Organization	Location (town/county/state)	Organizational Type
*A.T. Still University – Missouri School of Dentistry and Oral Health	Kirksville, MO	Dental School
*Clark County Nursing Home	Kahoka, MO	Long-Term Care Facility
*Kirksville Manor Care	Kirksville, MO	Long-Term Care Facility
*Heartland RSVP	Kirksville, MO	Senior Volunteer Organization
*Northeast Missouri Area Agency on Aging	Kirksville, MO	Agency which provides elder specific programs
Northeast Missouri Area Health Education Center	Kirksville, MO	AHEC

Community Characteristics

A. Area

The project targets rural Adair, Clark, Knox, Lewis, Mercer, Putnam, Schuyler, Scotland and Sullivan counties in northeast Missouri (total population = 70,998).

B. Community description

In terms of demographics, 96% of the population is white, 1.3% is black, 3.2% is of Hispanic or Latino origin, and 17.2% (12,232 persons) are over 65 years old. This region's population over the age of 65 is 2.2% larger than the overall state of Missouri. Of the senior residents in the 9 counties, 11% are in poverty. In regards to health status indicators, an estimated average 17% of the overall population reported overall poor or fair health. Similar to most rural regions, the target region has a myriad of healthcare issues. In the *2014 County Health Rankings: Mobilizing Action Toward Community Health*, Clark, Knox, Schuyler and Sullivan counties were ranked 60 or below (of 114 Missouri counties), with a ranking of 1 being the healthiest county.

Table 6: Socioeconomic and Health Status Indicators

Indicators	Target Counties									MO	U.S.
	Adair	Clark	Knox	Lewis	Mercer	Putnam	Schuyler	Scotland	Sullivan		
Seniors in poverty	9.4%	10%	12.9%	9.2%	10.9%	10%	13.8%	10.5%	16.4%	8.2%	9.3%
Avg. income of senior households	\$38,287	\$37,577	\$31,026	\$37,983	\$30,534	\$24,467	\$38,205	\$39,152	\$27,178	\$46,767	\$46,312
SSI payments as % of total personal income	0.57%	0.42%	0.48%	0.37%	0.46%	0.55%	0.51%	0.22%	0.49%	0.36%	-
Seniors with a college education	21.8%	8.6%	13.9%	10.2%	7.6%	10.6%	4.2%	9.3%	7.7%	18.20%	22.10%
Seniors with high blood pressure	61.7%	58.7%	71.7%	56%	65.8%	60.2%	66.7%	62.1%	66.1%	62.20%	-
Seniors who currently smoke	7.4%	9.7%	12.4%	12.5%	6.5%	8.6%	10.4%	6.4%	15.2%	10.30%	8.30%
Seniors with high cholesterol	56.9%	46.2%	63.2%	53.8%	59.4%	58%	55.7%	59.4%	63.9%	55.70%	-
Seniors with diabetes	18.8%	24.9%	19.2%	20%	21%	22.6%	16.4%	12.6%	23.6%	21.5%	-

Most rural Missouri areas report a *lack and an unequal distribution of dentists*. One of the target counties, Mercer, is designated as a geographic/population-based *dental health professional shortage area* (DHPSA), while six of the target counties (Adair, Clark, Lewis, Putnam, Schuyler, and Scotland) are designated as low-income based DHPSAs.¹⁷ In comparison to other states, Missouri is 3rd with the most geographic and population-based DHPSAs and is also the 4th lowest state in terms of percentage of population in DHPSAs with met oral health needs. Missouri is significantly behind other states in regards to access to dental services.

C. Need

This project seeks to expand oral health services for the vulnerable and underserved elderly population, both in and out of residential facilities, in a rural 9-county region of northeast Missouri. The project was geared toward meeting the oral health needs of the rural elderly and senior population within long-term care facilities and other senior community organizations (i.e. senior centers, nutrition centers, assisted living facilities, hospital affiliated senior groups, senior housing, veteran groups, etc.).

In regards to health status indicators, an estimated average 17% of the overall population reported overall poor or fair health. In the area of oral health, 53.5% of Missouri adults 65 and older have lost six or more teeth due to tooth decay or gum disease, 10.4% more than the national average. Overall, Missouri has a low percentage (61.8%) of residents who regularly visit a dentist (national average is 65.5%), and an estimated 11% of Missourians have never even seen a dentist. Ranking 49th nationally, in 2014, 24.9% of Missouri adults 65 and older had all natural teeth extracted (5% increase from 2010), 8.7% more than the national average.

Federal law requires long-term care facilities that receive Medicaid funding to provide access to dental care, but only 80% of facilities nationwide report providing dental care. Even when dental care is provided for residents, many go without routine, preventative dental care (brushing teeth, cleaning dentures, etc.), letting oral problems go undetected. The routine, preventative dental care is left up to the already busy nursing staff that may not be adequately trained to identify or treat many oral health issues.

Program Services

A. Evidence-based and/or promising practice model(s)

While the Alliance did not locate a specific evidence-based practice, there have been several research studies conducted and state dental initiated dental care models targeting older adults that have proven to be successful and promising practices.

One promising practice identified was a study conducted in 2012 by the Department of Oral Health Science, Division of Public Health Dentistry, University of Kentucky College of Dentistry and four long-term care facilities in Kentucky. The aim of the project

was to develop and implement a unique oral health training program for Certified Nursing Assistants (CNAs) working in long-term care (LTC) settings that would ultimately improve the oral health and overall health of residents.

The University developed a curriculum based on a literature review to determine best practices and elements of successful oral health training programs in LTC facilities. **Evidence-based recommendations** were incorporated into the curriculum, including: 1) engage the leadership of the facility to ensure support; 2) provide information on the importance of a healthy mouth, focusing on the links between oral and systemic health; 3) provide detailed “how-to” instructions for using basic oral hygiene tools and for implementing appropriate infection-control measures; 4) and provide strategies for managing care-resistant behaviors. Specifically, guidelines from the American Dental Association and a self-study course developed by the Southern Association of Institutional Dentists were utilized. Faculty also consulted various academic nursing papers for evidence-based protocols for oral healthcare, as well as additional recommendations for communication and behavior strategies.³¹

The selected model offered extensive resources to support program replication/adaptation, which greatly assisted the Oral Health Alliance in the planning and implementation of the Rural Healthcare Services Outreach project. The promising practice offered resources, tools and detailed guidance for facilitating education and services. Long-term care (LTC) facility staff trainings were developed from the Universities tools and guides, and permission was received to copy and distribute a “how-to” video on caring for and cleaning dentures and teeth of residents of the LTC facilities. Training manuals were developed and a copy of manual and the “how-to” video were distributed to all facilities in the projects service area.

B. Description of Activities

With funds from the Outreach Services grant, NMHC hired an outreach coordinator to help manage and coordinate activities, coordinate care, deliver education/ training activities, and engage partners/stakeholders. This position has been key to the success of the project. The coordinator has worked diligently to build relationships with staff and administrators of local service agencies that provide services to the target population.

One of the Alliances biggest accomplishments was the development and implementation of staff training on oral healthcare for the long-term care facility staff. **During the grant period, in-service staff training has been provided to approximately 451 LTC facility staff.** Through all of the staff trainings, it became apparent that there is a great need for the training and for the facilities to put more emphasis on oral healthcare. Staff was always surprised at how poor oral health affects the overall health of the residents and that poor oral health can lead to pneumonia, a common condition among long-term care residents. The graphics from the curriculum was also very impactful on the staff to see the harm poor oral healthcare has on the mouth. In addition, many of the staff was not aware of how to properly care for dentures, or how to provide care to patients with cognitive impairments such as Alzheimer's or Dementia. With these patients requiring special care, we found that many were getting very limited oral healthcare due to the difficulty in providing the care. The staff found the training and information provided with “tips and tricks” on how to work with care-resistant behaviors very useful.

In order to address the continual turnover in long-term care facility staff, a training manual, including a training video on improving Nursing Home Oral Health, was developed and given to each facility. This manual and training video have become a part of new staff orientation for several of the long-term care facilities that we have been working with over the past three years. The manual will continue to be updated as needed and shared with the facilities.

Oral health screenings in the long-term care facilities did not garner as many patient appointments as expected, but it was successful in identifying patients with needs and provided the opportunity for patient education. Many of the issues identified involved dirty, broken or non-fitting dentures. During the screenings, dentures were cleaned and patients, who were able, were taught how to properly clean their dentures and care for their teeth. Although the appointments were not as numerous as projected, there were residents with oral health issues identified who received the needed treatment. **During the grant period, 531 long-term care facility residents were screened.**

The community outreach activities provided excellent venues for oral health education and awareness, but the screenings were not as well received. Most of the screenings took place in public areas, and it was determined that the older generation was not as comfortable being screened in front of others. If the location allowed, screenings took place in private areas, but that was not possible in many of the locations. The education and awareness programs were held at various locations (nutrition centers, senior centers, assisted living facilities) and were very well received. Participants were made aware of the importance of oral health and how it affects the rest of their health, how to properly take care of their teeth, and how to properly take care of and clean their dentures. **Over 700 seniors were reached through community outreach activities.**

C. Role of Consortium Partners

The Oral Health Alliance project promotes rural healthcare services outreach by expanding the delivery of quantified, needed, oral healthcare services in northeast Missouri. The table below identifies the Consortium members and their project roles.

Member Organization	Key Services/Service Region
Northeast Missouri Health Council <i>(lead applicant)</i>	Refer patients for oral health services; expand/deliver direct oral health services/ care coordination via its rural FQHC dental and medical clinics.
A.T. Still University – Missouri School of Dentistry & Oral Health (ATSU-MOSDOH)	Expand local FQHC dental workforce and service capacity by infusing/training new dental students in FQHC clinics, exposing dental students to rural, underserved, and special needs populations.
Clark County Nursing Home	Provide expertise and guidance on project/material development and implementation. Coordinate and schedule oral health training for staff and screenings for residents.
Heartland RSVP	Coordinate senior volunteers to provide comfort, encouragement and companionship to elderly patients as they await treatment and screenings. Also serve as referral agency for oral health services.
Kirksville Manor Care Center	Provide expertise and guidance on project/material development and implementation. Coordinate and schedule oral health training for staff and screenings for residents.
Northeast Missouri Area Agency on Aging	Referring clients for oral health services, serving as a liaison to agency partners and contract agencies, and distributing and promoting oral health materials and community education programs.

Outcomes

A. Outcomes and Evaluation Findings

The Oral Health Alliance (OHA) contracted with an external evaluation consultant, Joseph Visker, PhD, to conduct the majority of the evaluation activities.

In order to evaluate the long-term care staff trainings, pre and post tests were utilized to assess what oral healthcare knowledge was gained during the training. Following Year 1 trainings (Year 3 trainings are still in progress), the pre-post knowledge assessments revealed a numeric, positive increase in knowledge as a result of the trainings. Data gathered from the staff trainings has been used to make changes or “tweak” the training materials that are being used in Year 3 trainings. In addition to pre and post-tests, satisfaction surveys on the training itself are also completed following the trainings.

As previously discussed, the OHA has reached over 700 seniors through community education programs at senior and nutrition centers, assisted living facilities and community events and activities. Approximately 450 long-term care facility staff received proper oral healthcare for residents training and over 500 residents received oral health screenings and tooth and denture cleanings. Based on the quantitative and qualitative information provided by the participants, satisfaction with the program, the presenters and material presented during the trainings has been high.

B. Recognition

There has been no formal recognition or acknowledgement received by the Oral Health Alliance for this project. However, based on what the consortium was doing, the group was invited to present the project at the Missouri Primary Care Association’s Oral Health Network of Missouri annual meeting. This group is composed of dental directors from all the health centers in Missouri.

Challenges & Innovative Solutions

One of the projects biggest challenges has been getting the long-term care (LTC) facilities to utilize an assessment tool to evaluate the oral health of all residents upon admission to the facility. One of our goals was to have the facilities make a system change and adopt the tool as a standard part of the admissions process. Most of the facilities have a couple of basic oral health questions on their admissions form (e.g. do you wear dentures?), but they do not conduct a detailed assessment of the resident’s oral health. We have had resistance to utilization of the assessment with the main reason sighted as “they do not have enough time to add another piece to the admission process”. Others have stated if it is not required by the state, then they will not do it.

The assessment is designed to take no more than five minutes, so we were quite surprised by the responses we have received. We have introduced the assessment tool following the staff trainings thinking they would see the value in assessing the resident's oral health upon admissions. However, another struggle we face is the facilities leadership (administrator, director of nursing, social services director) is not always at the trainings, so they do not see and hear about the effects poor oral health can have on the residents, thus not making it a priority. At this time we have two facilities utilizing the assessment tool and we recently sent them a questionnaire to evaluate if they are using the tool, how long it takes to complete the assessment, have they found it helpful in developing an oral healthcare plan, and are staff following the plan for the residents daily oral health needs. We have not received the questionnaires back at this time.

We believe if we can get two or three "on board", we can use their success as a way of encouraging other facilities to adopt the assessment tool. We will be doing staff trainings again in Year 3 and will use that as an opportunity to meet with administration to go over the assessment tool again, and explain the benefits of identifying the residents oral health needs upon admission to the facility.

Sustainability

A. Structure

With Consortium members continually facing funding challenges and limited staff availability, it has been a challenge to have consistent participation from all members. Although all of the Consortium members work with the target population in some aspect, each member agencies concentrates on a focused population, making it difficult at times for the OHA members to get out of their "silos". Even though the Consortium works together on common goals, when it comes to project activities and program areas, members are separated to a point by the agencies specific focus areas and client/patient base.

Due to the lack of engagement from so many of the consortium members, the decision has been made to discontinue the consortium upon completion of the grant. Through the consortium and project, partnerships were forged, but there is not enough commitment to continue the actual consortium. NMHC will continue to partner with long-term care facilities to provide screenings and some training. The partnership with the Missouri School of Dental and Oral Health will continue by infusing and training dental students in the Federally Qualified Health Center (FQHC) setting exposing the students to the elderly underserved population

There has been limited consortium participation from the two long-term care consortium members. With oral healthcare in the long-term care facilities the main focus of the grant project, not having participation from these two facilities made it more difficult to "get into" some of the other facilities. The OHA was relying on these two members to help secure "buy-in" from other facilities and assist in the overall development of the oral health staff trainings and the program itself. Administrative turnover at both facilities did play a role in the lack of participation, however, getting time commitments from the facilities was difficult. Between constant staff turnover and overwhelming job responsibilities, the facilities could not spare staff time. Although they did not participate in consortium activities, there were two long-term care facilities that served as a resource for training material development and are champions for the oral health project.

The Heartland Retired Seniors Volunteer Program (RSVP) played a very specific role in the consortium. The program was going to utilize senior community volunteers to accompany elderly patients to the dental clinic to help provide comfort, encouragement and companionship to elderly patients as they awaited exams and treatment in the clinic. In working with the seniors and the residents of the long-term care facilities, we discovered that this was not a need after all. The wait time in the dental clinic waiting room ended up being a very short time. The residents did not have to wait a long time in the waiting room so there was not the companionship needed that was originally believed. Additionally, when it came time for the patients to be in the exam room, it was noted that the residents did not need, and in some cases want, the RSVP volunteer to be in the exam room with them. We tried RSVP workers with several patients, and there really was not a need. With this being the focus that RSVP brought to the consortium, once it was decided to not continue this piece of the project, RSVP felt they did not have anything to bring to the table any longer.

B. On-going Projects and Activities/Services To Be Provided

i) Will all, some or none of the elements of the program be sustainable once Outreach grant funding has ended? Please check the appropriate selection.

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained (i.e. the program will completely end after the grant period)

- ii) Identify the projects and activities that will be sustained beyond Outreach grant period. Nursing home resident screenings were identified as an activity that should be continued. While the facilities did not schedule as many appointments following the screenings as expected, the screenings did provide the opportunity to identify residents who needed follow-up care and also provided the opportunity for dentures and teeth to be cleaned and minor denture repair work done.

While trainings will not be continued, the outreach coordinator will ensure that the Oral Health staff training manual is kept up-to-date and that facilities have current copies of the manual. Depending on the interest, NNHC may look at holding two or three regional trainings where multiple facilities can send their staff. This will save on travel and staff time.

C. Sustained Impact

The oral health education and trainings delivered to LTC facilities will support long-term delivery of oral health awareness for the staff and residents. The tools and resources gained through the in-service education and training activities will continue to be utilized and implemented by the facilities, who will continue to reach their residents. The staff training manuals will continue to be utilized in new staff orientations to train new facility staff on the importance of and proper oral healthcare.

Although the goal of trainings was to improve the oral health of the LTC residents, the trainings also had an impact on the way the staff looked at their own oral health and hygiene care. It was discovered that a number of facility staff did not prioritize oral healthcare for themselves and evaluations following the trainings showed that staff not only retained the information for their jobs, but also for their personal care.

Implications for Other Communities

While there were definite successes to the program, implementation of this project was more difficult than we had anticipated. The project had been piloted in two facilities with great interest and success, and a questionnaire sent to long-term care facilities showed an interest in oral health for their residents. But when it came time for the rubber to hit the road, it was more challenging than expected to get buy-in and support.

Success, Increased Capacity, and Contributions to Change

A. Defining Success

- i) How do you define "success" for your grant program? Please check the appropriate selection(s). You may choose more than one option. If other, please describe.
- Access to a new or expanded health service
 - Increased number of people receiving direct services
 - Improved quality of health services
 - Operational efficiencies or reduced costs
 - Integration of process improvement into daily workflow
 - Continuation of program activities after grant funding
 - Continuation of network or consortium after grant funding
 - Health improvement of an individual
 - Health improvement among your program participants
 - Health improvement among your community
 - Enhanced staff capacity, new skills, or education received
 - Improved capacity to adapt to changes in healthcare

- ii) Do you believe that your program has achieved success? If so, how?
- Although the project may not have been as successful as anticipated, it was proven to be successful in expanding the knowledge of the importance of proper oral health and how it can affect ones overall health. Through LTC facility staff and resident trainings and education, there was a greater awareness of oral health care and hygiene. When presentations were made at nutrition and senior centers, participants stated how much they learned about the care of their dentures. Additionally, oral health services were expanded for residents at LTC facilities who did not have access to oral health care.

B. Organizational Capacity

How has the federal funding of your grant program increased local capacity at your organization, within your network, and/or in your community? Please check the appropriate selection. If other, please describe.

- Formalized networks or coalition
- Developed new partnerships or relationships
- Enhanced skills, education, or training of workforce
- Enhanced data collection and analysis

C. Contributions to Change

There was a resident at a facility that had a very hairy, dry, tongue and hygienist spent 15+ minutes just cleaning his tongue and then discussing how to help prevent that from happening. We saw the resident nine months later, he had a significant improvement. He stated that he was taking much better care of his mouth and that he was now eating better and felt much more comfortable.

As noted in section VI, one goal of the project was to create system change by implementation of an oral health assessment tool to evaluate the oral health of all residents upon admission to a facility. By utilizing the tool, the aim was that the facilities would develop an oral healthcare plan that would be a part of the resident's everyday treatment. Although we did not have the success anticipated in usage of the tool, there were two facilities that are utilizing the tool and we hope to have additional facilities implement the assessment tool as part of admissions in the future.

Missouri

Part I: Organizational Information

Grant Number	D04RH28410
Grantee Organization	Ozarks Medical Center
Organization Type	Hospital
Address	1100 Kentucky Avenue, P.O. Box 1100, West Plains, MO 65775
Grantee organization website	www.ozarksmedicalcenter.com
Outreach grant project title	Improving Transitions of Care
Project Director	Name: Addy Van Os Keuls
	Title: Program Director
	Phone number: 417-293-4691
	Fax number: 417-256-9277
	Email address: addy.vanoskeuls@ozarksmediccalcenter.com
Project Period	2015 – 2018
Funding level for each budget period	May 2015 to April 2016: \$197,960
	May 2016 to April 2017: \$195,682
	May 2017 to April 2018: \$199,518

Part II: Consortium Partners

* Indicates consortium partners who have signed a Memorandum of Understanding/Agreement

Partner Organization	Location (town/county/state)	Organizational Type
Ozarks Medical Center	West Plains, MO	Hospital-not for profit
Brooke Haven Healthcare	West Plains, MO	Skilled Nursing Facility-not for profit
National Healthcare, Inc.	West Plains, MO	Skilled Nursing Facility-not for profit
West Vue	West Plains, MO	Skilled Nursing Facility-for profit

Part III: Community Characteristics

A. Area

The area serviced by this project includes the Missouri counties of Douglas, Howell, Oregon, Ozark, Shannon, Texas, and Wright.

B. Community description

Health disparities focus largely on issues of geography, health literacy, socioeconomic issues, and, to a limited degree, non-English speaking immigrant populations. First, is geography. The size of the service area, along with the rural nature and lack of public transportation make it difficult for patients to access care. Likewise it is difficult for their family to visit patients when they are hospitalized or at the rehab/nursing home. Second, is health literacy. The senior population in the service area was particularly high when it came to having poor educational attainment. Third, are socioeconomic factors. Poverty in the area is an average of 22%, which is significantly higher than the statewide average of 14.3%. Much of the poverty in our area is intergenerational and 5/7 counties in the service areas are persistent-poverty counties which means that they are defined as the residents living in poverty for at least the last 30 years. The last factor of influence is non English speaking immigrant populations. We have seen a relatively small amount of non-English speaking immigrant population's move into our service area. An estimate of individual in the service area that are foreign born is 1, 607 with 242 (15%) being 65 and older.

C. Need

The purpose of the project was to decrease unplanned readmissions (defined as readmitted within 30 days of original discharge) for patients discharged from OMC to one of three consortium-member nursing care facilities for skilled, long-term or rehabilitation care, as well as those individuals discharged from the hospital to rehabilitation to home within 30 days of original hospital discharge. Our program: 1) Expands the delivery of health care services to include enhanced services in rural communities; 2)

Delivers health care services through a strong consortium in which every consortium member is actively involved and engaged in the planning and delivery of health services; 3) Adapts an existing evidenced-based model in the delivery of health services; and 4) Demonstrates health outcomes and sustainability through reduced hospital readmissions and reduced Emergency Department visits. The project sought to provide patients, their loved ones/caregivers with smooth transitions of care to: 1) reduce confusion in new care environments; 2) reduce confusion with new care guidelines; 3) reduce hospital readmissions; 4) ensure greater compliance with medication protocols; and 5) ensure greater compliance with follow-up appointments.

Part IV: Program Services

A. Evidence-based and/or promising practice model(s)

The two models, while evidenced-based, reflected siloed approaches -- one occurring in the hospital (LACES) and the other (INTERACT) occurring at the nursing care facilities. Understanding that the OMC and our partners are already using evidenced-based models within our own silos (LACES at OMC and INTERACT at the nursing care facilities) we intentionally sought out a model that will allow us to continue to use existing evidenced-based models, while layering an additional evidence-based model that we have modified to support us as we work to eliminate our silos.

The consortium consulted a number of publications to learn about existing evidenced-based, promising, and best practices. The consortium broadly reviewed several models to determine which met our criteria including: 1) meaningful impact on patient outcomes; 2) serves a senior-citizen population; 3) ease of integration into existing practices; and 4) provides a straightforward and sensible approach. With this understanding, we identified *the Complex Care Management Program* from the University of Michigan Health Systems (UMHS). The model is consistent with the targeted patient population (Medicare beneficiaries), our primary goal (preventing admissions/readmissions and trips to the emergency department), and allowance for the use of existing evidenced-based practices (LACES and INTERACT). Within the construct of the model, social workers and nursing staff collaboratively reach out to nursing care facilities to support transitions, while also working with patients and their family members to simplify processes, provide information, and remain available to help with questions and address challenges. While the model implemented at UMHS is based on phone contact, we saw patients in person until they were discharged home from the facility, then follow-up phone calls may have been made.

The Complex Care Management Program allows patients and their families to feel comfortable during the transition process as it is focused on: 1) providing good and accessible information; 2) providing high level support; and 3) ensuring that the transition is smooth. A review of the model by the Center for Healthcare Research & Transformation indicates that the Complex Care Management Program components have demonstrated significant positive outcomes. As discussed by the Center for Healthcare Research & Transformation in their January 2014 publication, an article titled "Care Transitions: Best Practices and Evidence-Based Programs" indicates that programs, such as the Complex Care Management Program (specifically cited in their publication) are consistent with best-practices as they: 1) involve comprehensive discharge planning; 2) provide complete and timely communication of information; 3) include medication reconciliation; 4) provide patient/caregiver education ensuring that patients/family members fully understand their medical circumstances including diagnoses, medications (including any changes), warning signs, and follow-up required; 5) ensure open communication between providers; and 6) ensure prompt follow-up with physician/nurse practitioner following hospital discharge.

One element we believed was missing was the creation of shared goals of care between the patient/family, the Care Team, and the nursing care facility. We believe that developing shared goals of care, with the support of the social worker and nurse practitioner/physician's assistant was essential. We also found that physical and occupational therapy were very important in contributing to the shared goals of care. Our addition to the model is consistent with another evidence-based practice discussed in the Journal of the American Geriatrics Society called "Geriatric Floating Interdisciplinary Transitions Team." This team-based approach, is similar to the Complex Care Management Program, but adds an essential element -- shared goals of care. We believed, and the evidence demonstrates, that establishing shared goals of care results in increased satisfaction with care and increased confidence that care provided is appropriate. While the study did not have enough data to indicate whether or not hospital readmissions and/or transfers to the emergency department significantly decreased, there was promising evidence cited that led the researchers to conclude, "we are confident that this model will result in less service utilization and hospital readmission while improving clinical outcomes and patient satisfaction."

B. Description of Activities

Program Enrollment Steps Include:

- Upon admission to OMC, discharge planning begins.

- As part of the discharge planning process, the attending physician, nursing staff, and social worker discuss care needs and appropriateness of care settings for the patient's needs with the patient/family.
- Patients are evaluated for risk of readmission using LACES; scoring a 10 or greater will potentially meet criteria for the program.
- Consistent with existing practices, the patient/family and care providers develop a plan for discharge that includes the destination and type of care needed.
 - The patient/family selects care environment.
 - If the care destination decision is one of the three nursing care partners in our community (consortium member institutions, West Vue, Brooke Haven or NHC), the patient is eligible for continued participation in the project.
 - If the patient/family selects another care environment, they will be advised that services cannot be provided at this time.
- Once the determination is made if services can continue to be provided, the discharge planner and transitions coach will work with the family to make arrangements for admission to rehabilitation, skilled, or long-term care at one of the three consortium member facilities. Concurrently, OMC medical staff reach out to medical staff at the nursing care facility to provide required care information.
- A transfer date and transportation arrangements will be made collaboratively between OMC, the patient/family, and care facility.
- Upon transfer, the nursing care facility will implement the INTERACT model, ensuring that care and treatment notes are up-to-date, medications are reconciled, and physician orders are understood.
 - The day of transfer, the receiving facility will reach out to OMC to resolve any discrepancies and receive clarifying orders.
 - The patient/family are contacted by the transitions coach to determine if the transition was smooth and to address any problems or challenges.
- A visit by the transitions coach is scheduled within three days of transition from hospital to care facility. The patient/family is encouraged to participate in the transitions coach visit to ensure that questions and concerns are addressed. The transitions coach tries to schedule this visit at the same time as the nurse practitioner/physician's assistant.
- The attending physician is advised of the results of the transitions coach visit.
- Following the transitions coach visit, the transitions coach works with the care facility and family to develop shared goals of care, including a discussion of the capabilities and limitations of the care facility. The goal with this step is to open the lines of communication between the patient/family, the transitions coach and the nursing care facility and prevent the patient/family from insisting on return to the hospital.
- Collection of data occurs throughout the process by both the care facility and OMC.
- Any instances of re-hospitalization or transport to the emergency department are audited by the Project Director and transitions coach to determine root cause and what, if any changes, are needed to the process.

Other program activities were as follows:

- Patient and family education packets were developed that included program information, program brochure, letter from the Program Director, FAQ paper, and INTERACT pamphlets provided by Medline.
- Transitions of Care Team visit within three days of partner facility admission.
- Transitions Coach surveys the patient/family/caregiver at the beginning and end of the program.
- Programmatic literature is provided for patients, families, providers, and the community.
- OMC is educated on the process at each facility to better understand the individual's care.
- Transitions coaching was provided to all patients discharging to a participating facility that met program criteria.
- Forms and protocols were modified and/or adjusted to meet program needs.
- Patients are encouraged to make and complete follow up visits with their physician or clinic as indicated on their discharge instructions.
- Resources (LACES assessment) are utilized to identify patients who were at a greater risk of readmission.
- Evaluate the transitions (discharge from hospital) process
- Spreadsheets were developed for data collection
- A dashboard was developed for Transitions of Care data.

C. Role of Consortium Partners

Ozarks Medical Center (OMC) served as the lead agency, and, as the discharging hospital, served as the pivot point for the program. The patient referrals were discharged and assessed when discharged from OMC. The Transitions of Care team are

employed out of OMC. This includes the Program Director (MSW), Transitions Coach, and Data Specialists. They were responsible for the project management, developing all tools and forms, as well as data collection and dissemination.

The three consortium facilities, Brooke Haven Health Care, National Health Care, Inc., and West Vue, all agreed to the following for the duration of the grant.

- Facilitate and allow post-acute visit by Transitions Coach
- Collect data, report, and provide to OMC
- Utilize established tools
- Communicate with Transitions of Care staff

The consortium partners agreed to participate in project teams for planning, monitoring, and evaluation. The consortium has the shared goals to provide the patients and their loved ones with smooth transitions in care. The Project Director and consortia members reported to one another on a monthly basis for the first six months then transitioned to quarterly meetings, presenting project progress reports as well as financial reports. All reporting was reviewed by the network and submitted as outlined by HRSA for grant requirements. Accountability through the network was made during quarterly meetings and annual evaluation of members of the network. Any concerns of the members of the network and its operations were shared openly and transparently with concerns addressed in the same manner. Any other communication was done through e-mail, one-on-one visits at facilities, or phone communication.

Part V: Outcomes

A. Outcomes and Evaluation Findings

- The Transitions of Care team made a visit within three days of hospital discharge to the partner facility admission. This has been maintained 100% of the time thus far with patients enrolled in the program. The goal was that 80% of patients would receive this visit within this time frame.
- The Transitions Coach provided a survey to participants/families/caregivers at the beginning of the program and again at the end of the transition. This has been provided to 367 individuals so far. The goal set was to have 70% of those surveyed report feeling more confident and informed about the patients care and condition. The current average of those surveyed that report feeling more confident and informed of their care is 96%.
- Transitions coaching was provided to every patient enrolled on the program. The goal was for Transitions coaching to be completed by 80% of patients and 100% of the patients/families/caregivers would be surveyed.
- The team encouraged patients to make and complete follow-up visits with their physician or clinic as indicated on their hospital discharge instructions. 93% of patients have completed their follow up visit. The goal was for 80% of participating patient to make and complete their follow up visits. The main contact for this goal has been transportation providers or schedulers at the three skilled nursing facilities. They rely heavily on the Transitions coach to inform them of upcoming appointments. A procedure needs to be developed to educate the providers on how to become better aware and organized when it comes to scheduling appointments for patients who reside at their facilities.
- Resources were utilized on every patient admitted to Ozarks Medical Center to identify patients who possess a great risk for readmission. The LACES scale is used to identify those patients.
- Prior to the creation of the program the baseline for hospital readmissions from skilled nursing facilities was 30%.
 - The goal for Year 1 was to reduce hospital readmissions of identified moderate-risk patients discharging to a skilled nursing facility by 40% over the established baseline. This goal was met as those enrolled in the program reduced their readmission rate by 43%.
 - During Year 3 the readmissions for all skilled nursing facilities remain at 40% while the readmissions for patients enrolled in our program stand at 17%. The national average for readmissions from skilled nursing facilities is 21% , below which our program participants have remained.
- 98% patient/family indicated that the quality of care from the Transitions of Care Team was high.
- 96% patient/family reported feeling more confident and informed about the patient's care and condition during their final survey, compared to 90% on their initial survey given at time of program admission.
- 97% patients/family felt it was helpful to have a person connected with OMC still involved in care post discharge; 2% felt neutral.
- 91% patients/family felt the addition of a Transitions Coach to their care team helped relieve anxiety about their transition to the nursing/rehabilitation facility at hospital discharge; 8% felt neutral.
- 90% patients/families found the Transitions of Care program increased their satisfaction with their experience at OMC; 7% felt neutral.

- 87% patients/families found the Transitions of Care program increased their satisfaction with their experience at the nursing/rehabilitation facility; 9% were neutral.

B. Recognition

Describe any successful recognition or acknowledgement received, either local, state or national (e.g. tv, radio, newspaper article, award, community recognition) as a result of this grant funding.

The Transitions of Care program has been featured twice in our local newspaper, "The West Plains Daily Quill". First was announcing the awarding of the grant and again to announce the enrollment of our 500th patient with an update on the programs successes. The program has been featured a number of times in our hospital newsletter to keep staff up to date on successes or community involvement. Features in the newsletter include the start of the program, a presentation coordinated by the program about Transportable Physicians Orders for Patients Preferences (TPOPP), involvement with the planning and participation of community Alzheimer's Association walk, and enrollment of our 500th patient.

Part VI: Challenges & Innovative Solutions

The main hindrance to the success of our program was staff turnover. During the duration of the grant we had the following staff turnover: 2 external evaluators; 2 committed physicians; 2 Directors of Nursing at SNFs; 2 Administrators at SNFs; 1 Director of Pharmacy at OMC; 5 social service employees at SNFs; 1 discharge planner at OMC; 1 HRSA Project Officer; 1 Director of Public Relations, who was over the Grants Department at OMC and was not replaced; 2 Grant Office Coordinators at OMC who were not replaced after second employee left; Director of Documentation Integrity, who was the onsite Project Officer for OMC; Vice President of Clinical Service for OMC, who ran the grants department. Due to this enormous volume of turnover it was difficult to accomplish collaborative goals as it felt that the project was constantly starting over. Every time a new staff member came on board, the project and its purpose would have to be reintroduced.

Interest in the program from the rehab/nursing facilities and partner physicians also decreased as time went on. It appeared that all members had their own agendas, and as it became clear that the goals of the program were not to work on their specific needs, interest faded. Transitions of Care staff continued to keep staff involved by consortium meetings, visits, e-mails, and phone calls if any pertinent issues arose.

Part VII: Sustainability

A. Structure

The official consortium formed by the partner facilities will not continue in its original form. We will discontinue having scheduled consortium meetings with the three partner facilities and instead will likely transition to a different type of meeting including more community agencies. We will be changing the organization of our program to open services up to more patients, not just those discharging to the three facilities. Therefore, we will want to change the organization of meetings to include more involved agencies. These meetings will likely be held only quarterly. It has not yet been officially decided what the admission criteria will be for those to be admitted to the program.

B. On-going Projects and Activities/Services To Be Provided

i) Will all, some or none of the elements of the program be sustainable once Outreach grant funding has ended? Please check the appropriate selection.

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained (i.e. the program will completely end after the grant period)

ii) Identify the projects and activities that will be sustained beyond Outreach grant period.

High-risk patients will continue to be seen and coached, but it will be in a different format, and the services will be extended beyond just those in skilled nursing facilities. OMC will be using the Colman Transitional Intervention model. Patients will be assessed during their hospitalization and identified for enrollment, whether they are going home or to a nursing home. They will have one initial visit while at the hospital or skilled nursing facility to introduce the program, but the coaching will not begin until the patient goes home. This will include one home visit and two follow-up phone calls. This is similar in the services offered as they will receive coaching visits and phone calls; the program will last 30 days, and it will focus on showing patients the skills they need to be successful during transitioning. Similar to the current

program, the coaching could be done for either the patient or the involved family, whoever is most involved and appropriate.

We have not yet determined all the qualifications for enrolling patients into the program and/or what would qualify them as high-risk. Most likely we will continue to use a LACES score above 10 as in the current program but would implement other criteria as well.

OMC will be absorbing the cost of the program once the grant funding ends. We will continue to explore reimbursement from insurance as ACO's are introduced, but it is likely that nothing will be available for some time, if ever. OMC recognizes the need for continued care transitions once a patient is discharged from the hospital and the value to the emotional and physical health of the patient along with reducing readmission rates. This acknowledgment is the reason the program will continue in an adapted form.

C. Sustained Impact

The project has resulted in several sustained impacts. First, there is a stronger relationship between OMC and the consortium facilities. There has been an increase in trust, better communication, improved transfer of information, and all consortium agencies involved have a better understanding of what each other's roles and responsibilities are. This is not anticipated to change once the grant period comes to an end.

Second, the partnering skilled nursing facilities have improved relationships among each other. Prior to the creation of this project there was little interaction between the agencies, but throughout the project, they have been working together on certain projects such as the Alzheimer's Association walk. This is not anticipated to change once the grant period comes to an end. It is the hope of all involved that collaboration can continue for the betterment of the aging population of the community.

Third, policy changes have been enacted at OMC. Language has been changed from "Do Not Resuscitate" to "Allow Natural Death" in all policies. This was due to research done among the staff with the grant at OMC showing that the language "Allow Natural Death" is gentler for family members to hear and allows for a less traumatic experience when making difficult decisions. This will stay in place after the end of the grant period.

Fourth, the use of INTERACT tools and materials has been more consistent at SNF facilities. While at the beginning of the project two facilities were already using the INTERACT Hospital Rate Tracking tool and the other a similar software-based one, we were able to provide written materials provided by Medline with INTERACT tools that we hope the participating facilities will continue to use. The grant team also made visits to outlying facilities and found that several were interested in the INTERACT tools and material and were already using several themselves.

Part VIII: Implications for Other Communities

Other communities could implement a similar model by forming a consortium of a hospital or hospitals and rehab/nursing facilities. The relationships that were built during the program are invaluable. Most of the competitiveness that existed in the past between providers was pushed aside for the betterment of the community and patients. The satisfaction of patients receiving services proved that providing transitions services contributed greatly to both a reduction of readmission and satisfaction of care.

Part IX: Success, Increased Capacity, and Contributions to Change

A. Defining Success

- i) How do you define "success" for your grant program? Please check the appropriate selection(s). You may choose more than one option. If other, please describe.
- Access to a new or expanded health service
 - Increased number of people receiving direct services
 - Improved quality of health services
 - Operational efficiencies or reduced costs
 - Integration of process improvement into daily workflow
 - Continuation of program activities after grant funding
 - Continuation of network or consortium after grant funding
 - Health improvement of an individual

- Health improvement among your program participants
- Health improvement among your community
- Enhanced staff capacity, new skills, or education received
- Improved capacity to adapt to changes in healthcare

ii) Do you believe that your program has achieved success? If so, how?

- Absolutely. This program has achieved success. First, we have we achieved the goal of reducing hospital readmissions of identified moderate-risk patients discharging to a skilled nursing facility by 43%. Our average program readmission rate remains steady at 17%, lower than the national average of 21%.
- Second and more importantly we have positively affected our patients and families transitions experiencing shown through our survey results. Patients and families reported such positive experiences working with our program. Here are some of the survey results.
 - 97% patients/family felt it was helpful to have a person connected with OMC still involved in care post discharge; 2% felt neutral.
 - 91% patients/family felt the addition of a Transitions Coach to their care team helped relieve anxiety about their transition to the nursing/rehabilitation facility at hospital discharge; 8% felt neutral.
 - 90% patients/families found the Transitions of Care program increased their satisfaction with their experience at OMC; 7% felt neutral.
 - 87% patients/families found the Transitions of Care program increased their satisfaction with their experience at the nursing/rehabilitation facility; 9% were neutral.

B. Organizational Capacity

How has the federal funding of your grant program increased local capacity at your organization, within your network, and/or in your community? Please check the appropriate selection. If other, please describe.

- Formalized networks or coalition
- Developed new partnerships or relationships
- Enhanced skills, education, or training of workforce
- Enhanced data collection and analysis

C. Contributions to Change

Change in individuals' lives, your organization, consortium, or community:

- The administrator at one of the three participating skilled nursing facilities remarked that the participation in the Alzheimer's Association walk was something that never would have happened without this program bringing everyone together and mending relationships. The Alzheimer's Walk was hosted at one of the facilities, but all three participated in some way along with the hospital. It was a great example of how the entire consortium came together for the health needs of the community.
- The following is a letter from the son of a participant whose mother unfortunately had some errors made on her hospital discharge orders as well as an unpleasant experience in the OMC Emergency Room.

"As a medical professional, I have high standards for my patients and clients, as well as interactions with fellow colleagues. This expectation became amplified when my mother suddenly became the patient. The Transitions of Care team was integral between the care of OMC and NHC. Unfortunately, breakdowns in communication between facilities during this high stress transition can and do happen because of the large amount and speed of information exchanged. It is not only highly stressful for the patient and family but for the participating facilities. The Transitions of Care team fixed any issue with swift precision and followed up with questions, education, and personal care for weeks following my mother's hospitalization. Everyone involved recognized this excellence and say thank you! This commitment to experience shows that OMC continues to strive toward the motto of "The Right Care, Right Here.""

Change in policies, systems, and environment:

The Transitions of Care staff worked to have language changed from "Do Not Resuscitate" to "Allow Natural Death" in all policies at OMC. This was due to research done among the staff with the grant at OMC showing that the language "Allow Natural Death" is gentler for family members to hear and allows for a less traumatic experience when making difficult decisions. This will stay in place after the end of the grant period.

Missouri

Part I: Organizational Information	
Grant Number	D04RH28419
Grantee Organization	Washington County Memorial Hospital
Organization Type	Hospital
Address	300 Health Way, Potosi, MO 63664
Grantee organization website	www.wcmhosp.org
Outreach grant project title	Project CALM
Project Director	Name: Amber Coleman
	Title: Director of Support Services
	Phone number: 573-438-5451
	Fax number: 573-438-2399
	Email address: acoleman@wcmhosp.org
Project Period	2015 – 2018
Funding level for each budget period	May 2015 to April 2016: \$155,376
	May 2016 to April 2017: \$173,837
	May 2017 to April 2018: \$179,594

Part II: Consortium Partners		
* Indicates consortium partners who signed a Memorandum of Understanding/Agreement		
Partner Organization	Location (town/county/state)	Organizational Type
*University of Missouri	Columbia, Boone, Missouri	University
*Washington County Health Department	Potosi, Washington, Missouri	Health Department

Part III: Community Characteristics

A. Area

The six counties we have serviced are very poor counties. In 2017, the unemployment rate by county was as follows Washington 4.3%, Saint Francois 3.7%, Iron, 5.4%, Reynolds 3.4%, Crawford 3.9%, and Madison 3.8% compared to the state rate of 3.5%. Census estimates for 2015 indicates the Missouri Poverty rate is 14.8%. The six Southeast Missouri counties that we have serviced demonstrate an average poverty level of 20.3% and in 2015 Department of Elementary and Secondary Education reports free and reduced lunch participation at 66.2% compared to the state at 42.1%. Over half the children in the counties are enrolled in MO HealthNet (MA).

B. Community description

Tobacco smoke is a leading trigger for asthma attacks. The Missouri Foundation for Health 2007-08 County Comparison Tobacco Use survey reports Washington County current smokers at 34.7%, Crawford 27.5%, Iron 32.3%, Reynolds 32.9%, St. Francois 28.7% and Madison at 29.3%, all significantly higher than surrounding counties and the state at 27.2%. The Washington County Health Department surveyed 404 Washington County respondents in 2016. Respondents reported, 33.13% were current smokers, 27.92% had quit and only 38.95% had never smoked. According to the 2018 Missouri Kids Count Data, there are 6.1% uninsured children in Missouri. By comparison, Crawford County has 8.1%; Iron County has 7.6%; St. Francois County has 5.4%; and Washington County has 6.7% uninsured children.

C. Need

Based on emergency room statistics from the MO Department of Health and Senior Services, the rate of asthma admissions for children under 15 in Washington County 2002-2005 was 15.9 compared with 10.5 for the state. In 2006, Peggy Gaddy and Eric Ambrecht, representing the Missouri Prevention and Control Program helped us organize the Washington County Asthma Coalition to develop a community-based, integrated effort to reduce asthma-related ER visits, hospitalizations and missed school days. With technical assistance from the state and Ben Francisco from University of Missouri, our Asthma Coalition was able to

provide one-time training to medical providers and staff, child care providers, and school nurses. Project CALM provided nebulizers, spacers and other essential asthma tools to all of our county schools. Although there is an Urgent Care Clinic within the Hospital services/facilities, there is no access in the evenings and weekends in the event of an Asthma crisis. The use of the Emergency Room at the Hospital is often called upon to address problems that would be better served in the Urgent Care Clinic, and the essential needs for a follow up Action Plan with children and families affected by Asthma is not able to be fully performed due to the crisis circumstances.

Additionally, there are no pediatricians available/practicing in Washington County or in adjacent counties, and because the nearest, large metropolitan area is nearly two hours away, most children with moderate to severe asthma do not have access to specialty services and clinics in order to better understand and control their asthma.

Part IV: Program Services

A. Evidence-based and/or promising practice model(s)

For three years the county schools have followed the Missouri School Asthma Manual best practices, tracking absenteeism for children with asthma, developing asthma action plans and providing limited case management services. The Washington County Asthma Coalition has developed an intensive, hands-on approach to change child-caregiver knowledge, self-management behaviors and home environments by expanding the community's capacity to address asthma in a coordinated manner.

B. Description of Activities

Following the main goals of the State Asthma Plan, we seek to reduce school absenteeism and reduce inpatient/emergency room admission rates for county children with asthma by organizing our work under three objectives; 1) improve self-management behaviors, 2) integrate school, hospital and clinic healthcare services 3) significantly improve health outcomes in children with severe high risk asthma 4) increase the percentage of children with well controlled asthma 5) decrease the rate of school absenteeism in children with asthma and 6) training personnel to identify undiagnosed and uncontrolled cases of childhood asthma.

This intervention hinges on a thorough case management approach that systematically and pro-actively assesses child-care giver needs, knowledge, self-management behavior (e.g., medication use) and environment. Most services were intended to be provided in-home, one-on-one by the Lead Asthma Educator working in collaboration with hospital ER and respiratory staff, school nurses, caregivers, classroom teachers, and primary care providers. Many families preferred not to participate with the in-home visit, however many were willing to meet at other locations such as utilizing a classroom after school. Project CALM services included: health status assessment (including peak flow and FEV1), tailored education per evidence-based tools (Missouri School Asthma Manual, Impact Asthma® and Living with Asthma®), medication use assessment, environmental assessment, and referral/care coordination (e.g., making appointments).

The project also linked a certified asthma educator in Washington County with school-based asthma management services through a new full-time position; offering asthma education services to patients in conjunction with routine well-child visits. The office-based services utilized the same evidence-based assessment and education tools as the in-home services to assure continuity of messages and coordination of care. Training for all classroom teachers, coaches, Care givers and non-certified staff (e.g., teacher aids, bus drivers) was built into this project to address the project goal of identifying undiagnosed and uncontrolled cases of asthma; advanced training for School Nurses was based on a highly-participatory experiential learning method using case reviews. To address the immediate needs of children at a very high risk for complications, the Asthma Educators received 24-hour notification from the county hospital when a child with asthma was discharged (from an inpatient bed or the emergency room). This communication system permitted community collaboration on cases that are most likely to benefit from immediate assessment and intervention as well as on-going follow-up.

Through our collaborative efforts, Project CALM was instrumental in assisting 22 out of 23 school districts in our service area with a life-saving asthma policy. This policy allowed stock asthma medication, purchased by Project CALM, to be utilized in the event of an asthma exacerbation, whether identified or unidentified. Several of the students within the Project CALM service area are identified as having fatality prone asthma, ensuring that asthma relief medication was readily available as crucial for many of the school districts we serviced. This allowed our area students to remain successful by staying in class instead of leaving school for an emergency room visit. This also benefited the parents and or guardians, due to not having to leave work to take a forgotten inhaler to school, or take his or her child to the emergency room. The 22 schools that committed to this policy change also required their staff to go through a basic asthma education course, provided by Project CALM. Many of our schools reported having to use their stock asthma inhalers the day of receiving their inhalers. Each school would report numerous monthly having

numerous cases of having to utilize the stock inhaler. Since the implementation of this policy, the 22 districts participating in this policy change haven't had to send any students home due to asthma. The popularity of Project CALM grew within our service area and expanded into surrounding counties. Many school districts in counties bordering our service area are now inquiring about how they can also become a part of Project CALM and offer life-saving services to the students in their schools.

C. Role of Consortium Partners

Washington County Health Department as well as the University of Missouri is a referral source for Project CALM. Washington County Health Department provides in-kind support by providing storage of supplies and meeting space. Patty Robinson, staff nurse and asthma educator with Washington County Health Department continues to participate in Project CALM as support staff. As a support staff member, she continues to provide education at various events such as Camp Catch-Ya-Breath, community health fairs and school asthma educational trainings. The University of Missouri consistently teams with Project CALM on various school, community and statewide asthma education and events. The University of Missouri and Project CALM collaborate on Impact Asthma Echo, Asthma Care Essentials Echo, Asthma Self-Management ECHO, Teaming Up for Asthma Control and Becoming an Asthma Educator Course.

Part V: Outcomes

A. Outcomes and Evaluation Findings

Impact and Outcome Measures

1. **Pre- and Post-test for Asthma Knowledge.** The pre-and posttest instrument (Appendix E) uses questions with a true/false response to measure the knowledge of asthma symptoms and outcomes. Data showed a difference in mean scores between pre and post, but there were only 6 organizations. Pretest average was 85 and posttest average was 100.
2. **Pre and Post-test for Asthma Control.** The ACT Score is provided to the child to understand the types of symptoms they are experiencing. A score of 19 or above indicates well-controlled asthma. According to the Year 2 data (Table 9), 23 of the students were well-controlled at Time 1 (82%), whereas all but one of the participants was well-controlled after the intervention. A mean of 21 and 22 was shown in scores pre- and post, respectively and this was significantly different ($p < .05$).
3. **Emergency Room, Hospital, and Home Evaluation (N = 25)**
Children were surveyed in the hospital at baseline (N = 25). The instrument, Emergency Room/Hospital, and Home Evaluation Form was used to determine characteristics of their asthma. They were asked if their asthma symptoms caused them to be unable to play in PE or participate in sports activities. Seven of the students responded yes.
4. **CALM Parent/Guardian Survey**
Specific questions were analyzed from the CALM Survey for pre- and posttest differences. They related to the topics of waking up during the night, daytime symptoms, inactivity due to symptoms, confidence in the parent managing symptoms, and use of rescue inhaler. Significant differences were found on daytime symptoms, inactivity due to symptoms, and use of rescue inhaler. In all cases with significant differences, the posttest score revealed a better management of asthma. Interestingly, the parent's confidence in handling symptoms score stayed the same from pre-to posttest (Mean = 1.20, $p = 1.0$).
5. **Asthma Home Environment Master Survey (N = 13)**
Seven of the students live in a home, whereas 5 of them live in a mobile home. Two students lived in a home with a fireplace, 1 with an unvented kerosene or gas space heater and 3 had a wood-burning stove. Most students ($n = 10$) slept on a mattress with box spring. There was upholstered furniture in all the homes ($n = 12$) and 10 of the 13 children had stuffed toys. Only three of the children were in homes where they cooked with gas. Most ($n = 12$) did not arrange for pest control. Most ($n = 11$) vented their home. Only 1 of the children had humidifiers. No standing water was seen by the observers at the homes in most of the homes ($n = 12$) and standing water/leaks was seen in only 1 home. Food crumbs and holes/gaps were not seen in any of the homes. Five of the parents indicated that the asthma is worse when around warm-blooded pets. Second hand smoke is present in 4 of the 13 homes. No fuel burning appliances are used. All but 1 of the homes use filters in their heating and cooling system. There was no mold and mildew smelled by the observers in all the homes. An air-conditioning window unit was seen in 4 of the 13 homes.

B. Recognition

The Project CALM/Camp Catch Ya Breath Program was publicized in the 08/21/15 issue of the American Hospital Association News. This was re-published from the HIDI HealthStats report on "Innovative Care Delivery Models for Children with Asthma in Missouri" June 2015. The Daily Journal published an article highlighting the Central School District activities which described Project CALM in January 2016. The American Association for Respiratory Care published an article, "Missouri RTs Ensure Kids

Part VI: Challenges & Innovative Solutions

Due to healthcare disparities in the targeted rural area as described, numerous barriers to consistent asthma control contribute to adverse outcomes for children and their families who are affected by this life-threatening and potentially disabling problem. These barriers include: lack of a daily control medication, improper inhalation technique, infrequent monitoring of children with asthma, such as airflow measurements, no plans for asthma exacerbations, no plans for avoidance of triggers, exposure to secondhand tobacco smoke, lack of education and support and limited access to health care during crises. Interventions that effectively address these barriers and increase family, clinician and caregiver involvement have the most potential in the control of childhood asthma.

Unfortunately, for households living in poverty, such as in Washington County, indoor air quality is often poor and includes exposure to tobacco smoke, mold, dust mites, cockroaches, pet dander and other things that worsen a child's asthma symptoms and conditions. Additional barriers of households with children affected by asthma often include:

- Difficulty establishing treatment routines
- Struggle between households over care
- Disagreement over asthma management
- Smoking, pets, mold, and other triggers
- Cost & complexities of medications and devices
- Family strain - ill caregivers, siblings
- Competing needs and priorities

Similarly, many needs, significant barriers, and challenges that exist in the targeted area and that seriously and negatively impact the targeted population have been identified by the Asthma Coalition. For example, wood is the primary source of heat in Washington County's low-income homes, due to its availability and affordability, because many households in the targeted area cannot afford propane, natural gas or electrical heating systems. However, fireplaces, woodstoves, and unvented kerosene and gas space heaters that are used in the cold Missouri winters emit nitrogen dioxide, a primary irritant for those with and without asthma.

However, *unwillingness among families to allow "outsiders" in the home*, a common characteristic in rural, poor, and isolated communities, such as exist in Washington County, is noted by many home care providers, and includes resistance to the Asthma Coalition's arrangement of environmental assessments that would identify and assist in ameliorating debilitating factors, such as smoking, secondhand smoke, and inadequate ventilation of heating systems. The high rate of child abuse and neglect reports in the area, and distrust of the Division of Family Services, Health Department, and other entities further exacerbates this problem, because families are reluctant to allow officials into their homes for fear of being perceived as neglectful or abusive, or "hotlined", due to the conditions of the home.

This barrier is supported by the fact that throughout the eight years of the Asthma Coalition's collaboration with Southeast Missouri State University Center for Environmental Analysis, which offered to provide *free* home environmental assessments, none have been directly requested by households. Although information about the availability of these assessments was/is widely distributed at the hospital, health department, and clinics and was made available to the community as a referral source to medical staff, school nurses, and the health department, which also offered similar services, major resistance to in-home assessments persists.

Additionally, *parents'/caregivers' lack of knowledge, education, and capacities and skills necessary to care for children with asthma, and lack of transportation to resources creates challenges in the receipt of appropriate and available services and resources, such as the Health Department, Hospital, and Clinics*. For example, neither Washington County nor any of the surrounding counties have a *public transportation* system and even with a car available, most low-income working parents do not have the flexibility to leave work or capacity to travel extensively, even locally, in order to persistently attend to the complicated and numerous needs of children with asthma. This is an additional barrier for parents wanting to attend meetings at the school or even scheduled medical visits. *Childcare* for other children in the household is also a problem for some parents in meeting the special needs of family members with asthma and other health conditions.

Additionally, due to the *limited number of school nurses, the location of only one hospital in Washington County*, lack of pediatric and specialty medical providers, the Asthma Coalition has not yet been able to carry out its Strategic Plan and goal to fully develop a system of comprehensive care coordination, case management, home visits, training and environmental education. Therefore, *Funding* for capacity building in outreach and education has been a primary barrier to implementing the Asthma Coalition's community-

based plan, and the primary rationale for seeking Rural Healthcare Outreach Program support, in order to carry out comprehensive education and coordinated asthma case management, follow up to reinforce learning, and medication management.

Addressing identified barriers> Because of its accomplishments as noted, promising improvements, strategic planning, and alignment with both public and private collaborations (e.g., Missouri Foundation for Health CALM Project), the Asthma Coalition is poised to undertake expansion through the objectives outlined in this proposal, and to ensure that parents/caregivers and children with asthma understand the symptoms and medications related to asthma along with the appropriate administration of asthma medications on both an emergency and maintenance basis.

Part VII: Sustainability

A. Structure

The University of Missouri has been instrumental throughout the changeover of our state Medicaid program. Medicaid is changing in Missouri. It is moving from a state-based payment model where all Medicaid payments to providers are administered by the state Medicaid agency, to a Medicaid Managed Care model with Carve-Outs for specific aspects of the program like Prescription Drug payments. The development may add levels of complexity to financing the applicable CALM components or it might be able to be dealt with at the state MCO contract level. University of Missouri is also an important partner in terms of sustainability. The University of Missouri would act as the “gatekeeper” and alert the Project CALM asthma educators of asthmatic children in the area who require asthma education. Both organizations could be interested in the research aspects of the CALM model and provide student support of data and program information as well as support funding.

Potential areas that might provide fee-for-services for The CALM Project for follow-up: payments for outpatient respiratory services referrals – education and management based on medical provider referrals on an outpatient basis; In-Home Care – Medicaid has agreed to pay for in-home Asthma support services, but the program has not been finalized or is not totally understood (this needs to move forward with a clear understanding of volume and payment level); and, Medicaid payments for Asthma Academies and Camps and school critical Asthma education and emergency interventions – supplies and school personnel education.

B. On-going Projects and Activities/Services To Be Provided

i) Will all, some or none of the elements of the program be sustainable once Outreach grant funding has ended? Please check the appropriate selection.

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained (i.e. the program will completely end after the grant period)

ii) Identify the projects and activities that will be sustained beyond Outreach grant period.

CALM will build and expand on the outcomes achieved by the CALM project and significantly expand outreach through new collaborations and partnerships in a broader service area, including with Great Mines Health Center FQHC, Highlands FQHC, county health departments, daycares, and schools. Further, CALM will add an essential component to its prevention, intervention, and dissemination components through a key component focused on allergens that affect breathing, negatively impact overall health quality and activity levels, and may lead to severe crisis episodes or death of children. Project CALM will continue asthma education to asthmatic children with their parent and or guardian to help reduce the risk of a fatal asthma exacerbation. Through this education, children will learn the proper method for taking an inhaler in order to receive the most benefit from the medication. Through proper inhalation technique of inhalers, the risk for emergency room utilization and or hospitalization should remain low.

C. Sustained Impact

Improved relationships with schools in all six counties. Improved communication with Great Mines Health Center which has led to better continuity of care for patients as well as additional educational activities at Great Mines Health Center that include, Sleep Study Awareness, Diabetes Education, and Stroke Education.

Part VIII: Implications for Other Communities

The individual experiences of the school faculty, caregivers and patients have led to many “word of mouth” testimonials about Project CALM. Some examples are mothers that have been able to secure gainful employment because their child’s asthma is well enough

under control that school absenteeism is no longer an issue; reduction of financial burden due to less Emergency Rooms visits; increase in faculty knowledge and willingness to embrace policy change.

Part IX: Success, Increased Capacity, and Contributions to Change

A. Defining Success

i) How do you define "success" for your grant program? Please check the appropriate selection(s). You may choose more than one option. If other, please describe.

- Access to a new or expanded health service
- Increased number of people receiving direct services
- Improved quality of health services
- Operational efficiencies or reduced costs
- Integration of process improvement into daily workflow
- Continuation of program activities after grant funding
- Continuation of network or consortium after grant funding
- Health improvement of an individual
- Health improvement among your program participants
- Health improvement among your community
- Enhanced staff capacity, new skills, or education received
- Improved capacity to adapt to changes in healthcare

ii) Do you believe that your program has achieved success? If so, how?
The program has achieved very positive evaluation findings:

Three (6%) of the students had well-controlled status before the intervention, whereas, 14 had same status after the intervention. A mean of 14 and 21 (66% improvement) was shown in scores pre and post, respectively. 80% of the students had well-control status after the intervention.

An asthma protocol program was implemented within the emergency room and in-patient hospital setting. Every child 18 and under presenting with respiratory symptoms is provided with asthma management education and a consent form for Project CALM is signed by the guardian at the time of treatment. This consent then allows Project CALM to alert both the school nurse and the documented primary provider of the recent hospital visitation. This has resulted in 834 school nurse contacts.

Every school nurse with the state is notified by email of the events. 40 Children attended Camp Catch Ya Breath in 2016 with a goal of 40; 10 children attended the Asthma Academy on 2016 (1 day camp); 39 Children attended Camp Catch Ya Breath in 2017 with a goal of 40; 9 Children attended the Asthma Academy in 2017 (1 day camp).

Twenty-Three (23) of the students were well-controlled at Time 1 (82%), whereas all but one of the participants was well-controlled after the intervention. A mean of 21 and 22 was shown in scores pre- and post, respectively and this was significantly different ($p < .05$).

Twenty-Two (22) students were taught, and 20 were able to achieve acceptable technique, while 2 were not due to age restrictions.

Home environment changes were made in 13 of the 13 homes where changes were suggested.

The average days a child was not active due to asthma dropped from 2.5 to 1.5 and that was significant at the .05 level.

B. Organizational Capacity

How has the federal funding of your grant program increased local capacity at your organization, within your network, and/or in your community? Please check the appropriate selection. If other, please describe.

- Formalized networks or coalition
- Developed new partnerships or relationships
- Enhanced skills, education, or training of workforce

C. Contributions to Change

Change in individuals' lives, your organization, consortium, or community:

- a. THANK YOU TO CALM! I wanted to take a moment to send you both an email thanking you and Washington County Memorial Hospital for all the time and resources that have been used bringing Project CALM to our region. I first heard of Project CALM during the Wellness Fair held at Farmington R-7 during professional development day. I signed up to go to this session as my 3 year old son had been diagnosed with asthma the month prior. In addition, I had assisted in a medical emergency with a student who had a severe asthma attack at school the previous year. I felt like I needed more information not only as an educator working with students, but now as a mother as well. I learned more about asthma in that 30 minute presentation than I had in any of my first aid trainings combined. I was relieved that this resource was available if we ever needed it. At the time, my son's asthma was under control and being managed without complications. Over the summer, my son's asthma began to flare more and more. I was happy to see that Project CALM was coming to Farmington again to have an informational meeting for parents and students in the community. I attended the meeting with son, who is now 4, his twin brother, and their sister who is 6. All three of my kids enjoyed the meeting. After the meeting, the siblings, had a much better understanding of what asthma was and why my son needed the treatments he did. I would hear them asking their brother questions and also checking on him when they thought his asthma was becoming an issue. Over Christmas break, they even taught their grandparents how to make sure their grandson was taking his inhaler correctly. I have reached out to the asthma educators a few times and have always been greeted with a positive supportive attitude. I am relieved knowing that when I need information about asthma or supports for my son that they are there to answer them. I have referred parents, educators, as well as some medical doctors to Project CALM as a valuable resource available to parents, students, and the community. I will continue to spread the word of this organization so it can continue to help other families. I thank you not only as a school administrator, but as a grateful parent.
- b. Where do I begin...? Students: You all have helped so many of our Farmington R-7 students and their parents gain a better knowledge of asthma and have taught them how they can "live" their life in control. Asthma: not letting asthma control them. Our students talk about the class we've had with Project CALM for months after it is over. Several of our students are now able to afford their "correct" medications since meeting you all, and for that the nurse's at Farmington will forever be grateful. Staff: On multiple occasions Project CALM has taught our Farmington R-7 staff (i.e. secretaries and bus drivers) to have a better understanding of Asthma and know the warning signs leading up to an asthma attack. The Asthma Educators have come to several Wellness meetings/events to educate about asthma. Nurses: Every time we (the Farmington Nurses) come to you with a problem, you all have been there to help us figure out a solution (i.e. standing orders or school policy for standing orders), getting equipment to better treat our students. We recommend other schools, parents, and staff to contact Project CALM and try to explain to them that no question is too silly. Thank you for all the long hours, hard work and for ALWAYS having a positive attitude, our students are definitely benefiting!

Change in policies, systems, and environment:

School policy changes made- Potosi R-3, Kingston, West County, Valley Caledonia, Sullivan, Central, Lesterville, South Iron, Farmington, Ellington, Viburnum, Arcadia Valley, Marquand, Steeleville and North County. All schools have made policy change to stock Albuterol Inhalers, Nebulizer medication, Epi pens as well as all staff are required to receive yearly education. West County and Lesterville also stock medication on all buses.

Montana

Part I: Organizational Information

Grant Number	D04RH28384
Grantee Organization	Granite County Hospital District
Organization Type	Critical Access Hospital
Address	310 Sansome Street, Philipsburg MT 59858
Grantee organization website	www.gcmecenter.org
Outreach grant project title	Granite and Powell County Dental Collaborative and School-Based Preventative Dental Services
Project Director	Name: Jaime Bancroft
	Title: Grant Coordinator
	Phone number: 406-859-3271
	Fax number: 406-859-6527
	Email address: Jaime.bancroft@granitecmc.org
Project Period	2015 – 2018
Funding level for each budget period	May 2015 to April 2016: \$200,000
	May 2016 to April 2017: \$200,000
	May 2017 to April 2018: \$200,000

Part II: Consortium Partners

* Indicates consortium partners who signed a Memorandum of Understanding/Agreement

Partner Organization	Location (town/county/state)	Organizational Type
*Granite County Hospital District	Philipsburg, Granite County, Montana	Critical Access Hospital
*Missoula City-County Health Department	Missoula, Missoula County, Montana	Local Health Department
Clark Fork Dental, LLC	Missoula, Missoula County, Montana	Private Dental Practice
Granite County Public Health	Philipsburg, Granite County, Montana	Local Health Department
Meadowlark Dental	Missoula, Missoula County, Montana	Private Dental Practice

Part III: Community Characteristics

A. Area

The Outreach grant has served all of Granite County and neighboring portions of Powell County and Deer Lodge County in southwestern Montana.

B. Community description

Granite County is home to over 3,000 residents, scattered over a distance of 1,727 square miles. Located in the northern Rocky Mountains, it is one of the most rural—and frontier—counties in western Montana. The population is also significantly elderly, uninsured, and medically underserved. The county is served by a Critical Access Hospital (CAH) and its two affiliated rural health centers.

C. Need

The Granite County Dental Collaborative (GCDC) represents a unique partnership of traditional and public healthcare providers that together seek to meet a gap in basic dental services in Granite and Powell counties of Montana. As in many frontier communities healthcare is limited and constrained due to small populations living in large land mass areas with variable terrain and weather conditions. Healthcare providers are always a shortage in these areas. Before the start of the GCDC, Granite County had lacked dental services for over a decade.

Part IV: Program Services

A. Evidence-based and/or promising practice model(s)

The dental clinic has implemented a program with enhancing and increasing dental hygienist care encouraging preventative care with professional prophylactic procedures, oral cancer screenings, and consulting. We have also expanded services to include a new Panorex x-ray and digital equipment to expand dental capabilities.

B. Description of Activities

The purpose of this HRSA grant-funded project has been to reach out to the small, isolated communities of Granite and Powell Counties in western Montana to provide basic dental services to their chronically-underserved populations. Overcoming the many barriers-to-care faced by this population will require a long-term strategic approach that builds upon existing resources to provide additional outreach services and oral health education to work toward an integrated and sustainable solution.

Beginning with our past successes that established the permanent dental clinic at GCMC, we sought to expand our impact by "moving upstream" to provide education and preventative services to children in our region. By partnering with schools in our rural communities, our dental team was able to bring initial oral health care and education directly to their students. In these communities the schools are the focal point of the residents, using the schools as a starting point with education and preventative treatments, we were able to increase and expand our encounters with young adults, middle age and the older population of these less populated areas of our region. To better meet the needs of these patients, the program will offered to provide transportation from these distant communities to the permanent dental clinic at GCMC.

At the end of the grant period in 2018 we have seen the effects of oral health education, screenings, cleanings, sealants and varnish, and preventative maintenance.

C. Role of Consortium Partners

The Granite County Dental Collaborative was formed in 2008. Its beginnings are rooted in a 2007 Community Healthcare Development Survey, conducted by the Montana Office of Rural health and Montana Area Health Education Center. That survey, repeated in 2012 and planned again for 2016, mails questionnaires to a random sample of Granite County residents sufficient to representative of the county population. In 2007, the survey found that 27% of residents expressed concern about the lack of dental care services in the county, and this was the impetus for the creation of GCMC's dental clinic in 2010. When this survey was repeated in 2012 (after GCMC opened its dental clinic), this percentage dropped to 7.9% -- still an important issue, but clearly less urgent for the adults responding to the questionnaire.

Over the last year of the grant cycle the Granite County Dental Collaborative has seen some changes in members. The Missoula City-County Health Department is no longer servicing Granite County. The Public Health Nurse position has returned to Granite County and a new member has joined the team. Annie Young, RN is the new Public Health nurse and has been very active in the community establishing and solidifying services to the area. Clark Fork Dental is also less involved in the dental project for our community, but one of our dentists, Dr. Cyrus Larson has taken an active role in strengthening our dental home for the community.

Part V: Outcomes

A. Outcomes and Evaluation Findings (do not submit your Evaluation Report in lieu of completing this section)

Outcome #1 - Improve access to oral health care for the residents of Granite County and neighboring communities in Powell County and Anaconda Deer Lodge County by providing a sustainable dental home.

The Granite County Dental Collaborative has brought dental services to the neighboring communities in the form of School Dental Screenings. We have also established a dental clinic based in the hospital functioning at full capacity two days per month, with the hope of expanding as needed.

A full practice dental clinic has also started in Philipsburg two days per week as a result of the success of our dental program. The dentist originally worked for our project but due to the opportunity to purchase his own practice he has moved to a standalone clinic.

Outcome #2 - Improve oral health of at-risk adults, including the elderly, those in poverty, and the uninsured.

The Granite County Dental Clinic is now located in the Granite County Medical Center. This has allowed the residents of the Intermediate Care Facility easy access to dental services. Prior to the fixed based dental clinic the residents had to travel once a year, minimum, to a neighboring town to seek dental care. This often required a facility staff member and van driver to take them to

appointments. It was hard on the patients and often times dental care was put to the way side. Now, a dentist is able to evaluate the residents in the comfort of their own room if they cannot travel to the dental clinic located in the same building. This has greatly reduced the hardship to these elderly patients.

B. Recognition

While no formal recognition or awards have been granted to the dental clinic during the last HRSA Outreach Grant, we feel that the community has embraced its new dental home. This is shown by the increase in patients, screenings, encounters, and the opening of a new dental practice.

Part VI: Challenges & Innovative Solutions

Our dental program has been growing and developing over the last nine years as a result of our three consecutive Outreach grants. With our first Outreach grant, the program began as a mobile dental clinic that served two communities and outlying areas in Granite County. Granite County had been without dental services for over a decade. The mobile dental clinic was very instrumental in making people aware of oral health care and that oral health care services could be obtained locally, once again. This laid the ground work for dental services to become an integral part of our medical services.

The climate in Montana, however, proved unsuitable for a mobile service year around. In order to keep dental services available all year, a decision was made to move the dental clinic into a safer, warmer area. The Medical Center had a room in our long term care wing that was available. The mobile equipment was moved into that room and dental services continued. The only drawback was some patients were now further away from services. However, our long term care patients were more directly provided for, by being in the same location.

The second HRSA Outreach Grant helped us continue this program. We were able to create a 2 chair fixed dental office in our hospital facility. We have furnished the clinic with the best and newest dental equipment. We were open 2 days a week and provide all dental services for patients. We have 2 dentists, 1 Hygienist, 1 Dental Assistant/Office Manager.

A challenge that arose during the current project was the start of a new private dental practice in our town. The first year that the private practice was open did not seem have a measurable impact on our hospital's dental clinic, and we were able to add additional clinic days to meet our growing demand. However, during year 3 of our project, our busiest dentist decided to purchase that private practice and move his patients to that site, reducing our patient census substantially. Because of this change, we've had a temporary reduction in our clinic days while we build our numbers back up with our two current dentists.

Another challenge which became a partnership was the Sealants for Smiles program. The main focus for our grant was to provide dental outreach to the surrounding towns by establishing a school dental screening program. In year two, we found out we had missed the opportunity with one of the larger local schools to provide dental screenings. Upon hearing about this program we contacted Sealants for Smiles and partnered with them for future dental screening days in the local schools. This was a benefit to the students as they were then able to receive sealants if needed, during the dental screenings. With this partnership we are unable to bill for screenings/sealants, but we still provided care and were able to establish a solid relationship with the students, staff and families.

Part VII: Sustainability

A. Structure

We will be holding quarterly meetings with all consortium members. This will allow us to plan future outreach events and come up with a plan to strengthen our dental services. Monthly meetings will be held with all members of the dental staff in conjunction with the Granite County Medical Center's business office.

GCMC will (1) equip, host, and manage the fixed dental clinic; (2) organize and run the school-based dental program; (3) and maintain scheduling, billing, supplies/purchasing, grants reporting, and other administrative services. We will also provide long-term indirect support to the fixed and school-based dental clinics.

The Dentists will serve the fixed and school based dental clinic. Meadowlark Dental and Cyrus Larson will continue to help guide the clinic and promote dental health in the communities.

Granite County's Public Health Nurse will conduct outreach to promote dental services countywide. She will also assist with the logistics of the school-based dental program and with clients who have significant home health needs.

B. On-going Projects and Activities/Services To Be Provided

i) Will all, some or none of the elements of the program be sustainable once Outreach grant funding has ended? Please check the appropriate selection.

- All elements of the program will be sustained
- Some parts of the program will be sustained
- None of the elements of the program will be sustained (i.e. the program will completely end after the grant period)

We will continue to offer full scale dental services to our community. As of now, we cannot justify expanding our days. So we will focus on filling our schedule and expanding in the future as needed. This will include a dentist and hygienist performing any needed services.

Dental outreach will continue going to our neighboring schools. We will continue partnering with the Sealants for Smiles program as allowed. Our program will continue providing outreach at the county health fairs and other healthcare events.

C. Sustained Impact

In a frontier community, it can be a challenge to add a new healthcare service to the roster. However, with the help of the Outreach grant, we have been able to build a weekly fixed dental clinic that will continue to operate beyond the scope of the grant. Further, we have developed a cohort of dental providers and administrative staff dedicated to improving the state of oral health in our community, particularly for underserved populations. As a result, our community is beginning to rely on the dental clinic as a presence for the long-term. They are building relationships with our providers and committing to a regular program of oral healthcare. The dental clinic has hired a new assistant who also works in the billing department of the hospital. She helps with billing, ordering, assisting and going on outreach activities. As an active member in the community she has been extremely successful. We have created jobs hiring two dentists and a dental hygienist. Even with one of our dentists opening their own practice separate from ours, we foresee dental services being offered in the county into the future. It is difficult with a small population but we hope to work with the other dental practice to ensure dental care is readily available for years to come.

Part VIII: Implications for Other Communities

Prior to creating a program to provide dental care in rural communities it will be helpful to research population, provider base, current services, past services and community readiness for services. In our case, we benefitted from the hospital's community health needs assessment to help define the scope of the need for dental services and demonstrate its priority as a concern in our community.

A successful dental program must have the population base to sustain the service, and you must have the availability of providers willing to work and commit to your service. We have been fortunate in balancing these two factors, thanks largely to the flexibility of our providers, hospital staff, and the Outreach grant program. We have been able to scale our operations up in response to our initial growth, and down somewhat as new private dental providers have entered our market. The Outreach grant has provided for our start-up costs, while the hospital has underwritten many of the ongoing fixed-costs of sustaining our operation. This makes it possible for us to rein-in expenses in the form of fluctuating variable costs as our patient census and appointment rate changes.

Part IX: Success, Increased Capacity, and Contributions to Change

A. Defining Success

i) How do you define "success" for your grant program? Please bold/highlight your selection. You may choose more than one option. If other, please describe.

- Access to a new or expanded health service
- Increased number of people receiving direct services
- Improved quality of health services
- Operational efficiencies or reduced costs
- Integration of process improvement into daily workflow
- Continuation of program activities after grant funding
- Continuation of network or consortium after grant funding

- Health improvement of an individual
- Health improvement among your program participants
- Health improvement among your community
- Enhanced staff capacity, new skills, or education received
- Improved capacity to adapt to changes in healthcare

ii) Do you believe that your project has achieved success? If so, how?"

The Granite County Dental Collaboration project has reached a great level of success. The community, that in recent years had no dental services, now has access to multiple dental clinics and providers, offering a choice of dental homes. This ensures patients are able to seek dental care on an emergency and preventative basis on a day that is convenient for them. Dental practices often have long wait times prior to availability and our community is able to seek care within the week on a normal basis. This provides comfort and convenience for local residents and improves the oral health status of our community.

B. Organizational Capacity

How has the federal funding of your grant program increased local capacity at your organization, within your network, and/or in your community? Please bold/highlight all that apply. If other, please describe.

- Formalized networks or coalition
- Developed new partnerships or relationships
- Enhanced skills, education, or training of workforce
- Enhanced data collection and analysis

C. Contributions to Change

Change in individuals' lives, your organization, consortium, or community:

Two years ago, we were approached by a patient who had not sought out dental care for twenty years or more. This patient was examined by the dentist and determined that he was in medical need of having all teeth extracted and a set of dentures created. At the time of the initial visit, the patient had no access to a vehicle, health insurance or the funds to even establish care with a dental provider. With the help of the Granite County Medical Center business office manager and the dental staff, he was able to apply for and receive Medicaid. He was also enrolled in the Granite County Medical Center's Rural Health Discount Plan. Between the services the facility was able to enroll him in, we were able to create a care plan and help this patient have a nice and healthy smile within three months of his initial encounter. He was grateful that services were obtained locally and affordably.

Changes in policy, systems, and environment:

Prior to our grant, the patients in this area were in a much more advanced state of oral disease. Younger patients tended to be "drill and fill," while older patients frequently needed oral surgeries, extractions, dentures and neglected oral care completely. Essentially, people were not yet on a routine to maintain what they had. Currently, our clinic is seeing close to 500 patients, this is in a town of approximately 900 residents. This shows that we are providing patients with a dental home that they can trust to provide routine maintenance and standard dental health.

Nebraska

Part I: Organizational Information

Grant Number	D04RH28401
Grantee Organization	East Central District Health Department
Organization Type	Health Department/Federally Qualified Health Center
Address	4321 41 st Avenue, Columbus, NE 68601
Grantee organization website	www.ecdhd.ne.gov
Outreach grant project title	Increasing Parents Access to Children's Healthcare
Project Director	Name: Caitlin Schneider
	Title: Chief Public Health Officer
	Phone number: 402-562-8969
	Fax number: 402-563-0544
	Email address: cschneider@ecdhd.ne.gov
Project Period	2015 – 2018
Funding level for each budget period	May 2015 to April 2016: \$200,000
	May 2016 to April 2017: \$200,000
	May 2017 to April 2018: \$200,000

Part II: Consortium Partners

* Indicates consortium partners who have signed a Memorandum of Understanding/Agreement

Partner Organization	Location (town/county/state)	Organizational Type
Catholic Health Initiatives Schuyler*	Schuyler, NE	Hospital
Columbus Community Hospital*	Columbus, NE	Hospital
Good Neighbor Community Health Center	Columbus, NE	Federally Qualified Health Center

Part III: Community Characteristics

A. Area

Colfax and Platte Counties in Nebraska primarily.

B. Community description

The total target area population is 42,752. The target population for the I-PATCH are the 4,286 low-income, underserved individuals in the project's two county area: the 1,204 uninsured youth, ages 0-18 in the project area; and the 3,209 mostly Spanish-speaking adults and their children in the project area who are underserved due to insurance status and/or linguistic and cultural barriers. Within the two-county project service area, there are a number of disparities that have increased the need for preventive health care among the target population. These disparities include: age, race/ethnicity, socioeconomic status and insured populations. The project area as a whole has a higher percent of its population in the under 5 years and birth to 18 years age ranges compared to the state. In the two project counties, 38% of Colfax County's population is 18 years of age and younger and 34% of Platte County's population is 18 years of age and younger where the state average of residents 18 years of age and younger is 31.5%. The emigration of Hispanic/Latino individuals into the project area has been the most significant change in the population make-up in the last twenty years. Since 1990, the Hispanic/Latino population in the two counties has grown from 479 to 8,767 in 2010 – an increase of over 1,700%. Per capita income in both project counties is lower than the state average; the median household income is lower than the state average in Colfax County. Colfax and Platte counties have a higher than state average rate of families with related children >18 below the poverty level; Colfax has a higher than state average level of individuals below the poverty level. Both counties have double-digit poverty percentages for individuals younger than 18; Colfax County's levels are higher than state average. In terms of health outcomes, of the 2,203 K-6th grade students that were assessed, 18% were overweight and 19% were obese; 60% were at a normal weight. Grades 7-12 were also assessed; 832 students took part and of those: 17% were overweight, 23% were obese and 57% were normal weight. Nationally, Hispanic/Latino youths have disproportionate rates of overweight and obesity compared to their counterparts in age. At the ECDHD/GNCHC, 42% of patients

with a third birthday during the measurement year have not received age appropriate vaccines prior to reaching their measurement year. The significant rate of poverty and non-insured in the project area, a high percentage of non-English speakers and foreign-born persons who do not have a tradition of preventive health care and universal vaccination all contribute to this statistic.

C. Need

The I-PATCH project consortium of ECDHD/GNCHC, Columbus Community Hospital and CHI Health-Schuyler addressed the unmet health needs of the target population of 8,092 low-income, underserved individuals in the project's two county area (Platte and Colfax counties); the 1,077 uninsured youth, ages 0-17 in the project area; and the 3,209 mostly Spanish-speaking adults and children in the project area who are underserved due to insurance status and/or linguistic and cultural barriers by increasing the availability of preventive care to infants, children and adolescents. These unmet needs include:

- Compliance with well child visits. Available EPSDT Visit Data indicates a low incidence of well child visits.
- Obesity prevention among children and adolescents.

The I-PATCH program is designed to meet the needs of this population through the hiring of a pediatrician to expand access to care for families in two counties, the hiring and placement of a Community Health Worker to work alongside the pediatricians and provide follow up and referrals to other supports and programs available to children and families.

Part IV: Program Services

A. Evidence-based and/or promising practice model(s)

Community Health Workers
Healthy Families Nebraska

B. Description of Activities

The first evidence-based practice model that the IPATCH project used is a Community Health Worker. Community Health Workers such as nurses or social workers can increase the level of vaccinations by promoting recommended vaccinations with referrals to available immunization services. The Community Health Worker model may be used to direct interventions to all clients in a designated population, such as the low-income, uninsured, foreign born population targeted by the I-PATCH project; or to those clients who have been unresponsive to previous intervention efforts, such as ECDHD/GNCHC clients who have not continued with their infant or child's immunization schedule.

Community Health Workers are a valuable resource for accomplishing the goals of the I-PATCH project. As has been discussed earlier, not all area residents are familiar with the need for immunizations for their infants/children, whether due to a lack of health education, a lack of knowledge about United States health standards and protocols, or a reluctance/inability to seek preventive care due to access issues such as lack of transportation, no insurance or poverty. Community Health Workers are able to educate the target population on the importance of immunizations and alleviate concerns about insurance status and payment by offering services on a sliding fee scale or connecting them with an agency Certified Application Counselor for insurance needs.

Columbus Community Hospital (CCH) also offers the Healthy Family Nebraska Program (HFN) which targets young, primarily single, pregnant mothers and their families. CCH's voluntary HFN home visitation program targets the most vulnerable young women and their families by offering them intense, in-home education, support and resources. Since HFN official affiliation with the nationally recognized Healthy Families America began in October of 2003 and the first parent contact in March of 2004, HFN has been positively impacting families on a daily basis. 70% of HFN program clients have been single mothers, 30% are married. Of these mothers 37% are between the ages of 14-17 and the other 63% are between the ages of 18-21. 44% have graduated from high school or completed their GED, while 33% of the mothers in the program remain in high school. At this time, 22% of HFN mothers have dropped out of high school, however they are being encouraged to complete their GED. This past year, 59% of HFN families were Hispanic /Latino and 41% of HFN families were non-Hispanic/Latino.

In addition to mothers and babies, the HFN program directly and indirectly serves their immediate and extended family members such as: older siblings, maternal and paternal grandparents, brothers, sisters, aunts, uncles, nieces, nephews along with the baby's other caretakers and others in their support system. The HFN requires each mother/family to actively participate in building an individualized family plan. This plan of action establishes the steps needed to reach their desired outcomes/goals. HFN utilizes evaluations of participants, partners, and referral sources on how to improve the program. This strength-based approach promotes self-improvement, and enhances self-esteem and independence for young parents to make better decisions, and break out of destructive cycles.

C. Role of Consortium Partners

ECDHD/GNCHC, CCH and CHI all worked together to secure and hire the pediatrician and to then proceed in the credentialing processes and providing support services. GNCHC has trained and hired the community health worker and supported them in attending community health worker trainings and conferences. CCH has implemented the Healthy Families program and providing training to the medical providers to have information on how to provide referrals.

Part V: Outcomes

A. Outcomes and Evaluation Findings (do not submit your Evaluation Report in lieu of completing this section)

The greatest outcome was increasing the number of providers available for pediatric services in our community. During the first year of the grant when we were still using a locum tenen to cover the services, only 17 patients were seen that year. During this third year of the grant, that has increased significantly to 964 patients and 1,548 visits. Of those patients, 268 had no insurance and 436 had Medicaid. This service is providing valuable care to the low income and under or uninsured patients in our district. Not only are the children receiving primary care, but the clinic provides BMI screening, lead testing, immunizations, and many other resources that families can access through the clinic and partners.

The other major piece has been sustainability. In this final year of the grant through March, patient revenue was \$185,182.74. These levels of revenue are what's needed to sustain the services beyond the grant. It is also important to note that this is not operating at full capacity. For the majority of this final year, the two pediatricians were still sharing one schedule. They have now split their schedules, so as patient numbers continue to increase, the revenue should continue to increase as well.

B. Recognition

Dr. Pramod Shrestha received recognition from Columbus Community Hospital when he received his certification from the American Board of Pediatrics in December 2016.

Part VI: Challenges & Innovative Solutions

The biggest challenge has been getting approval for the pediatrician to practice at CHI in Schuyler. The overall CHI system moves very slowly and although it is making progress the rate of progress has been significantly slower than any of the consortium partners anticipated at the beginning. Another more recent change that has also hindered progress is a new provider being brought into CHI. A new family practice doctor has just started there and is trying to build his own patient base and is a little leery about bringing in a new pediatrician that would be seeing patients he could also be seeing. The administrator at CHI has had a brief conversation with him and will be talking to him further to ease his fears and still try to get the pediatrician in there as a provider.

Consortium partners never anticipated that the credentialing/approval process to get the pediatrician into Schuyler would be such a challenge. The consortium has worked diligently to move the credentialing process forward, but have also adapted by opening up the pediatrician's schedule at GNCHC to keep boosting his productivity and patient revenue.

Another challenge during the grant was keeping a Community Health Worker (CHW) on staff. During the three years, there were at least three different CHWs on staff at different points and difficulty in hiring a new one hired quickly. This is a challenge because momentum in training is lost and the families are affected. During the lapses in staffing, other CHWs would cover as much as possible in the clinic and a new CHW was hired as quickly as possible.

Part VII: Sustainability

A. Structure

CHI Health Schuyler, Columbus Community Hospital, and both East Central and Good Neighbor will continue to serve as partners. The designated people from each organization are uniquely connected to their community in multiple ways and have great ideas about how to grow and expand services. It will be important to still keep the communication lines open between all partners as the work evolves and grows, and to keep those referral points strong. At this time we don't foresee additional partners that will need to be involved, but times may change and additional stakeholders may be brought into to gain insight and support as needed.

B. On-going Projects and Activities/Services To Be Provided

i) Will all, some or none of the elements of the program be sustainable once Outreach grant funding has ended? Please check the appropriate selection.

All elements of the program will be sustained

- Some parts of the program will be sustained
- None of the elements of the program will be sustained (i.e. the program will completely end after the grant period)

ii) Identify the projects and activities that will be sustained beyond Outreach grant period.
 The pediatrician will continue to provide services to patients both at Good Neighbor and at CHI Health Schuyler. This is the primary activity but many preventative topics are also covered in the physician visit, including nutrition, physical activity, BMI status, the importance of immunizations, and dental care. We are planning to purchase and train the pediatricians to provide fluoride varnish applications during the well-child visit for preventative dental care. The services of the community health worker with the families will also be continued in the future as they are for all patients.

These activities are worthy of being sustained because they are primarily servicing children and families that lack preventative care and may otherwise have difficulty accessing services due to income or insurance status. The work being done in connecting families to other resources in the community are also vital to continue making a great impact in the important developmental years of the child's life. Program activities will be sustained by patient revenue and some private foundation dollars.

C. Sustained Impact

The sustained impact of this grant will be a wonderful partnership with two local hospitals, a Federally Qualified Health Center, and a health department. This partnership is vital in a rural community where we must pool resources to impact the community in the broadest way. The sustained impacts will hopefully also include a change in the culture towards utilizing preventative healthcare, especially by our lowest income, uninsured families to improve vaccination rates, obesity rates, dental health, and many other important health outcomes that come from having regular doctors' visits as a young child and for those outcomes to be long lasting.

Part VIII: Implications for Other Communities

The biggest lesson learned from this experience has been how to adapt to slow progress or unexpected bumps in the road. Progress has been very slow in the process of getting approval from a large hospital entity for a new provider and then situations can change again as a new provider is brought in. Providers are in this business to serve patients, but they also want to be sure that their job is secure and may feel threatened by new providers being brought in, which are valid concerns. However, this process has taught us the lesson of true teamwork and collaboration and the importance of having open dialogue about concerns and progress along the way.

We've also learned through the Community Health Worker model the importance of reaching families in a more personal way. Having someone that can speak their language, take the time to truly understand their concerns, and also take the time to connect them to useful resources in the community that the family may need is extremely valuable.

Part IX: Success, Increased Capacity, and Contributions to Change

A. Defining Success

- i) How do you define "success" for your grant program? Please check the appropriate selection(s). You may choose more than one option. If other, please describe.
- Access to a new or expanded health service
 - Increased number of people receiving direct services
 - Improved quality of health services
 - Operational efficiencies or reduced costs
 - Integration of process improvement into daily workflow
 - Continuation of program activities after grant funding
 - Continuation of network or consortium after grant funding
 - Health improvement of an individual
 - Health improvement among your program participants
 - Health improvement among your community
 - Enhanced staff capacity, new skills, or education received
 - Improved capacity to adapt to changes in healthcare

ii) Do you believe that your program has achieved success? If so, how?

This program has achieved success by bringing in a new provider to a community that has had very few if any pediatric providers in it before. This program also created a sustainable service to the community and increased the use of Community Health Workers in the clinics.

B. Organizational Capacity

How has the federal funding of your grant program increased local capacity at your organization, within your network, and/or in your community? Please check the appropriate selection. If other, please describe.

- Formalized networks or coalition
- Developed new partnerships or relationships
- Enhanced skills, education, or training of workforce
- Enhanced data collection and analysis

C. Contributions to Change

Change in individuals' lives, your organization, consortium, or community:

The pediatrician is very committed to providing high quality care to his patients. One story that comes to mind is a Hispanic family that had multiple children with high lead levels. He and his staff kept pressure on the family to keep coming in for follow-up testing and communicated with health department staff on the levels of the children and kept searching for additional resources. Health department staff reached out to the state health department that can conduct an environmental assessment at the family's home. Dr. Shrestha's persistence in making sure these kids improve their health shined through and shows the commitment he has to his patients.

Change in policies, systems, and environment:

We are still in the process of formalizing the partnership between the two primary agencies and getting a pediatrician into the Schuyler community to increase overall access to pediatric healthcare in Colfax County.

New Hampshire

Part I: Organizational Information

Grant Number	DO4RH28386
Grantee Organization	Mid-State Health Center
Organization Type	Federally Qualified Health Center
Address	101 Boulder Point Drive, Plymouth, NH 03264
Grantee organization website	www.midstatehealth.org
Outreach grant project title	Ignite: Making Connections That Spark Change
Project Director	Name: Sharon Beaty
	Title: Chief Executive Officer
	Phone number: 603-536-4000 ext. 1001
	Fax number: 603-536-4001
	Email address: sbeaty@midstatehealth.org
Project Period	2015 – 2018
Funding level for each budget period	May 2015 to April 2016: \$168,256
	May 2016 to April 2017: \$189,657
	May 2017 to April 2018: \$195,735

Part II: Consortium Partners

* Indicates consortium partners who signed a Memorandum of Understanding/Agreement

Partner Organization	Location (town/county/state)	Organizational Type
Speare Memorial Hospital*	Plymouth/Grafton, NH	Critical Access Hospital
Pemi-Baker Community Health*	Plymouth/Grafton, NH	Visiting Nurse Association
Newfound Area Nursing Association*	Plymouth/Grafton, NH	Visiting Nurse Association
CADY, Inc.*	Plymouth/Grafton, NH	Youth Substance Use Prevention
Central NH Mental Health Center* (formerly Genesis Behavioral Health)	Plymouth/Grafton, NH	Community Mental Health Center
Community Action Program* - Belknap/Merrimack Counties	Plymouth/Grafton, NH	Social Service Organization

Part III: Community Characteristics

A. Area

The Project's service area included towns in two counties: **Belknap County**-New Hampton and **Grafton County**-Alexandria, Ashland, Bridgewater, Bristol, Campton, Dorchester, Ellsworth, Grafton, Groton, Hebron, Holderness, Lincoln, Plymouth, Rumney, Thornton, Waterville Valley, Wentworth, Woodstock, and Warren.

B. Community description

The State of New Hampshire is a relatively healthy state, and the Central New Hampshire Health Partnership (CNHHP) service area is similar to the State overall on many measures of health and well-being. However, some residents are disabled by chronic disease, some have limited or no access to routine health care through health insurance, some live in poverty, and some die prematurely from preventable conditions. Income and employment influence the availability and affordability of health insurance. The rate of un-insurance is significantly higher in the region than for the state overall.

The economy of our rural communities is increasingly dependent upon service and seasonal industries such as the local ski industry or summer tourism industry. As a result, high seasonal unemployment is very common. Unemployment rates vary significantly throughout the year and many people in the service area move from minimum wage jobs with no health benefits to minimal unemployment benefits between seasons. A combination of seasonal employment fluctuations and a small employer base contributes to the high level of poverty, low-income, and lack of insurance.

The total population of the towns comprising the CNHHP region has grown nearly 15% in the past 10 years. Most of the increase in populations has occurred among residents who are 50 years of age or older. The region experiences socio-economic disparities more often than cultural disparities, with a population that is 98% White and English speaking. The quality of housing is an issue as well as access to community resources and connections. Access to services is often impacted by extreme weather conditions from November through April and a road system that must navigate several mountainous regions and wilderness areas. Transportation to health appointments and to the grocery store often is a challenge.

C. Need

New Hampshire's community benefits law enacted in 2000 requires periodic community health needs assessments, and member organizations of CNHHP CEO's and Directors have a history of undertaking this activity collaboratively. The most recent assessment included a series of community discussion groups convened and moderated by members of the CNHHP. A review of available updated population demographics and health status indicators provided current information to formulate a comprehensive community health needs assessment for the future. The CNHHP Community Needs Assessment highlighted a number of important priorities for community health improvement, including:

1. Access to mental health/behavioral health services

The Needs Assessment identified a lack of availability of mental health providers in the CNHHP service area, a Mental Health HPSA (Health Professional Shortage Area). The ongoing stigma and resistance to accessing mental health services further distances those in the population who are in need. A negative perception and lack of education regarding the benefits of behavioral health services are prevalent in the region. This gap in services was the number one priority in the region.

2. Prevalence of chronic diseases

In the CNHHP service area, the prevalence of diabetes in the grant target population of adults 55 and older is growing rapidly. Cardiovascular disease risk indicators also demonstrate a higher risk in the region. The higher than average prevalence of chronic disease coupled with the region's resistance to mental health services demonstrates a need for a targeted intervention strategy to improve diabetic and hypertension outcomes in order to improve overall population health and wellbeing.

3. Access to care challenges

Income and employment influence the availability and affordability of health insurance. The rate of the uninsured is significantly higher in the region than for the state overall. Since the economy of our rural communities is increasingly dependent upon service and seasonal tourism industries, high seasonal unemployment is very common, and employer-sponsored insurance is limited. In addition, impositions posed by long, harsh winters and travel on secondary roads in mountainous terrain present barriers to care for many year-round residents. Many residents cannot afford to have a car with all the associated costs or cannot drive due to the complications of chronic medical conditions. Public transportation is limited or non-existent and has been identified as a high community priority

Part IV: Program Services

A. Evidence-based and/or promising practice model(s)

The grant program, "Ignite: Making Connections That Spark Change," was designed to identify patients who are over 55 and have depression and a co-occurring chronic medical condition of diabetes and/or hypertension. The program is based on the evidence-based model for depression care called IMPACT, which stands for Improving Mood-Promoting Access to Collaborative Care Treatment. The IMPACT study found that adults with depression in primary care experienced improved quality of life, better functioning, decreased physical pain, less depression, and increased patient satisfaction with their treatment through the 12-week comprehensive support of a care manager versus regular primary care follow-up. A designated Nurse Care Manager was the key person in the development of a relationship with the patient and provided education about depression and supported and encouraged the patient in depression self-management.

Features of the Ignite program adapted aspects of the IMPACT Study. In the clinic setting, the Care Manager worked closely with both Behavioral Health Practitioners and the Primary Care Providers to reinforce the medical treatment plan and encourage behavioral activation principles such as re-establishing routines, re-engagement in pleasant activities, and re-engagement in physical activity. The target population was narrowed to over-55 patients with both depression and chronic disease. Referrals to the program originated from the MSHC medical providers, Behavioral Health providers and allied health professionals. The Ignite Care Manager or the Assistant Care Manager called the patient at home to explain to the patient about the grant program at MSHC and answer any questions. The main feature of the Ignite program included weekly phone call contact to offer support and encouragement to the patient in taking their medications, monitoring their depression symptoms, monitoring their blood sugars and home blood pressures.

B. Description of Activities

The goal of the Ignite project was to coordinate the care for Mid-State Health Center (MSHC) patients who are over 55 and have been diagnosed with depression and co-occurring diabetes and/or hypertension. The program mirrors the needs identified for aging patients, with rising rates of chronic disease and depression in this region.

A dedicated Registered Nurse was hired in October of Year 1 of the grant to serve as Care Manager and to tailor the model to meet the patient needs. Six months later, an Ignite Assistant Care Manager was hired. Together they worked to educate MSHC staff, partners, and patients. One of the first steps was education of staff. At a meeting of the Mid-State Medical Assistants, the Program Coordinator reviewed the Patient Health Questionnaire (PHQ 2) to screen for depression at the annual physical. The PHQ 2 is a nationally accepted screening tool to use for screening of symptoms of depression, but it was not being used consistently at MSHC. When meeting with the Medical Assistants (MA), they voiced that they felt uncomfortable asking the patient about depression. In response to their comments, the wording of the two questions for depression screening was put in the electronic medical record (EMR) and all the MA had to do was read the questions as written in the electronic medical record and put the numbers in the record and the PHQ 2 total would be calculated for them by the EMR. If the patient's PHQ 2 screening is positive (total >3) and the patient was over 55 years of age with diabetes and/or high blood pressure, the Medical Assistant would message the IGNITE staff through the clinic's electronic medical record to contact the patient and invite the patient to join the Ignite program. A second education session informed the medical providers about the Ignite criteria. If the patient had a positive PHQ 2 at the appointment, and if the patient met the other criteria, the provider could contact the Ignite Care Manager to speak with the patient while still in the office or have the Ignite staff call the patient later at home.

After referral by the MSHC staff, the Care Manager contacts the patients and describes the program, reviewing the responsibilities of the patient, which include being willing to answer 9 questions (PHQ 9) - an expanded version of the PHQ 2 screen for depression every four weeks while in the program. An additional requirement of the program is to complete the Dartmouth Quality of Life Index when beginning the program and again after the initial 12 weeks of the program.

During these phone calls, education about depression, diabetes and high blood pressure is reviewed every week. After completing weekly phone calls for 12 weeks, the patient decides how often he/she wants to be contacted by phone in the future. Most patients request to be contacted monthly after the initial 12 week program to benefit from continued support and encouragement of their self-care activities related to identification of signs of depression, monitoring blood sugars and eating well with diabetes and monitoring home blood pressures with high blood pressure.

C. Role of Consortium Partners

The Central New Hampshire Health Partnership (CNHHP) is a consortium of seven local health care agencies committed to collaborative, community-wide activities and initiatives to assure and improve comprehensive, quality health and wellness services for the Greater Plymouth, New Hampshire area. The CNHHP consists of management representatives of the member agencies which include Mid-State Health Center (Federally Qualified Health Care Center), Pemi-Baker Community Health (Visiting Nurse Association), Newfound Area Nursing Association (Visiting Nurse Association), Central New Hampshire Mental Health Center (formerly Genesis Behavioral Health and Community Mental Health Center), Spere Memorial Hospital (Critical Access Hospital), and CADY, Inc (Youth Substance Use Prevention Program) and Community Action Program (a Social Service Organization).

This partnership has been in existence since 2006 as a consortium and meets every two months.

Mid-State Health Center provided administrative support in the form of fiscal management and oversight of the full scope of the project, including reporting functions, both to the CNHHP and to the Grantor Director of Quality for these activities.

The Chief Executive officers or Directors of the CNHHP agencies signed the MOU's (Memos of Understanding) in support of the grant program. After the Nurse Care Manager was hired and designed the program, she presented the highlights of the MSHC program to the CNHHP agency management members. She then called a meeting with the Ignite Inter-Agency clinical staff from the agencies to meet and define objectives and resources for the clinical team meeting.

About nine months later, a group called the Plymouth Area Transitions Team (PATT) was meeting every month and the same clinical members attended both meetings. Since the goals of chronic care management of the two teams (PATT and Ignite Inter-Agency) were similar, the two meetings were combined and currently meet every month and are called the "PATT/Ignite Team." The PATT/Ignite team consists of the clinical or "boots on the ground" staff who were doing the direct patient care. The collaborative efforts of the combined team PATT and Ignite Interagency Team focus on sharing information about available community resources and identify high risk patients in the community. During this monthly meeting, the Ignite staff give an update about the program and review highlights and lessons learned. This combined group interactions has significantly advanced the communication and has improved the coordination of care of our local rural, underserved community members by the clinical staff who are actually working with these patients.

A. Outcomes and Evaluation Findings

The Mid-State Health Center functioned as the project lead to improve outcomes for patients over age 55 who were managing diabetes or hypertension and who were diagnosed with depression. A full-time, dedicated Care Manager based at Mid-State Health Center had the support of a full-time medical assistant to assist with the administrative and clinical portions of the program.

Outcomes of the program were measured after the initial 12 weeks of the program. These measures include a 9 question Patient Health Questionnaire and a completed Dartmouth Quality of Life Index-both of which are completed at the start of the program and at the end of 12 weeks. A Patient Satisfaction Questionnaire was mailed to the patient to complete and return to MSHC. At the 12 week mark, the patient decided how often the patient wants to be contacted. Most patients asked to be called monthly to maintain communication and support of their self-care management.

The pre and post 12 week initial program results showed a 49% improvement in the management of depression. The Dartmouth Quality of Life Index showed a 10% improvement in the patient's perception of their ability to handle activities of daily living while living with depression and chronic disease. The patient with diabetes usually has an A1C blood test every three to six months to determine the range of blood sugar levels over the past three months, and Ignite patients showed a 6% improvement in A1C levels from initial enrollment to completion of the intervention. Patient Satisfaction surveys were sent to all the patient after the initial 12 weeks of the phone contacts. All surveys were positive, and the patients stated that they enjoyed the additional support, education reinforcement, and reassurance that the Ignite staff provided.

The number of program referrals have increased steadily over the grant cycle, with a total of 175 patients who were assessed and offered the program. Staff are currently contacting 82 patients on at least a monthly basis. Patient referrals are coming from all MSHC providers and several referrals are coming from the home health agencies as they identify depression in a homebound MSHC patient. Several MSHC patients have been referred to the Central New Hampshire Mental Health Center (formerly Genesis Behavioral Health) for appointments with a Psychiatrist for medication adjustments for the complex mental health patient.

B. Recognition

Welcoming Winter Program

The Ignite staff were asked by their Project Officer to write an article about the "Welcoming Winter" Seasonal Affective Disorder pilot program and the results. The article was published in the "Aging Today", November-December 2017 newspaper (volume xxxviii number 6) which is a bi-monthly newsletter of the American Society on Aging covering advances in research, practice, and policy nationwide. The website is www.asaging.org. A copy of this article was shared with the community partners at the December, 2017 meeting.

Challenges:

- **Focusing on the patient population who would benefit from the Ignite Program**

When the Ignite program was offered to the patient and explained to them that this was a free grant program, many patients refused so the program had a 47% refusal rate. In looking into the reasons why a patient would not want to take part in this free program, the patients stated that they were "too busy" or said that "they could take care of themselves". This patient population fell into the age bracket of 55-64. The over-75 patient population had family connections, or did not want to share personal information over the phone and or had difficulty with phone calls due to hearing or cognitive issues. Therefore, the Ignite staff concentrated on the 65-75 age bracket, both male and female patients to invite to participate in the Ignite program. These patients were dealing with the increased stressors of major life changes in retirement such as limited support from former work colleagues, change in income and identity changes. Therefore, the Ignite staff focused on this population when staff scanned the daily appointment schedule. If the Ignite staff member identified a patient who met criteria for the grant, the patient's PCP was contacted to see if the patient would be a good candidate for the program.

- **Making contact with the Patients identified for the Ignite Program**

Meeting a patient in the office before leaving their scheduled appointment worked best as the patient was given a brochure about the program and could put a face to the program and would anticipate the future phone call from Ignite staff. "Cold calls" to patients were often difficult as many patients are hesitant to speak with people on the phone that they do not know and answer medical questions. What we did in the case of a reluctant patient who we had not met face-to-face was to identify ourselves

from their provider's office and say that the provider wanted us to call them because it was thought that the patient would benefit from the support. The patients were more receptive to hear the information about the program than we scheduled a phone call in the future so the patient did not feel pressured or we met the patient when they came in for their next appointment.

- **Medical Provider support of the Ignite Program**

Support by the clinicians for this program was slow in happening. What Ignite staff noticed was that when providers had a patient who gave them positive anecdotal feedback about the Ignite support, they would refer another patient. When the program brochures were completed, they were available in the exam rooms so the information was readily available and provided reminders for staff. The clinic had one provider who never referred to the program until six months ago. He sent the Ignite staff a message about a complex patient with multiple needs, and staff quickly contacted the patient and arranged several support services for him and successfully showed the provider what we could do to help his patient. He has referred several patients to the program recently

- **Educating our patients about self-care of their depression**

Developing an education plan for many of our patients was a challenge. The main goal with this patient population was to identify symptoms of depression so the patient could be pro-active in contacting their behavioral health practitioner for an appointment or making an appointment with their primary care provider to talk about how they are doing with their current medications. The patients were also told that they could call the Ignite staff if they had an issue and we could strategize together. After working with some patients for over two years now, those patients are finally taking control of their own depression and being proactive, not reactive.

- **Identifying the need for a Seasonal Affective Disorder Program**

One identified need of the Ignite Program was realizing that some of the patients suffered from "the winter blues" during low light times of the year which led to the development of the "Welcoming Winter" program which supported our patients with Seasonal Affective Disorder (SAD) or the "winter blues". This program identified patients with depression who might benefit from using a Light box every day to improve their mood and energy levels using increased broad spectrum artificial light from a light box. The "Welcoming Winter" SAD program was implemented after doing much research and work with our Behavioral Health Practitioners on the subject of the "winter blues". Referrals came from the primary care providers and the behavioral health practitioners. Ten patients were identified the first year and offered the loan of a Light box from October through April. The Ignite staff met with the patient for an orientation on the use of a light box. Staff gave them the "Welcoming Winter" guide that was written by staff after much online research. During the orientation visit, the patient signed a program consent and signed a lease agreement for the light box. Staff then called the patients weekly to ask them several questions about rating their mood and energy levels. These patients also rated whether they were experiencing day sleepiness or noted weight gain. The patients were asked to slowly increase the amount of time using the light box from 15-60 minutes as tolerated. The daily log offered a place for the patient to note any issue or problem to report to the Ignite team. Many patients were consistent in their documentation and said that the information was helpful to them when reviewed. This documentation was voluntary.

A Patient Satisfaction survey was completed at the end of April by these patients and the patients noted improvement in their mood and energy levels by sitting by the Light box. Since we had good results and an increased need for more Light boxes, ten additional light boxes were purchased for the next season.

Part VII: Sustainability

A. Structure

The current members of the Central New Hampshire Health Partnership (CNHHP) will continue to be the consortium members directing their clinical staff (members of the PATT/Ignite) in the care coordination of patients who have multiple medical challenges. Spere Memorial Hospital, Pemi-Baker Community Health, Newfound Area Nursing Association (Home Health Nursing), and the Lakes Region Mental Health Center (formerly Genesis Behavioral Health Center) continue to be a vital part of the collaborative activities among agencies involved in this program.

B. On-going Projects and Activities/Services To Be Provided

i) Will all, some or none of the elements of the program be sustainable once Outreach grant funding has ended? Please check the appropriate selection.

- All elements of the program will be sustained
- Some parts of the program will be sustained

None of the elements of the program will be sustained (i.e. the program will completely end after the grant period)

- ii) Identify the projects and activities that will be sustained beyond Outreach grant period.
Care Coordination will continue at Mid-State Health Center. With the success of the Ignite program and the support of the Medical and Behavioral Practitioners, the scope of the care coordination will expand to include all ages (not just limited to the over 55 patients) with complex medical, emotional and social needs. Mid-State management has begun investigating the use of CMS's care coordination codes for future reimbursement.

The Diabetic Support Group meets an Ignite patient and community need and will April through November support group programs will be organized. Each group meeting includes diabetic recipes to share and the participants are encouraged to bring a copy of a new recipe that they have liked to share with the other members of the group. Monthly flyers are produced and mailed to the participants as a reminder. MSHC will absorb the cost of flyers and the mailings to continue the support group in the future.

The Sole Mates walking program began as a collaborative effort between the local university and MSHC Ignite program staff and the MSHC's Health Coach. The program included a short information session by the university's Exercise Science students on the benefits of exercise, the importance of pacing oneself, keeping muscles strong to maintain balance, and adaptations to an exercise program to meet a specific patient need. The program was a closed program of six weeks and feedback was positive. The program has since been repeated several times but without the student input because student scheduling was difficult. Therefore, the Sole Mates Walking group became a self-directed walking program. The university opens up certain times for community members to use the track, and past participants continue to meet and walk together.

The Ignite staff also have developed a handout for walking sites/trails in the area for people to use.

Welcoming Winter SAD program was implemented after doing much research and work with our Behavioral Health Practitioners on the subject of the "winter blues". MSHC purchased 10 light boxes that were broad spectrum lighting and easy to use. Patients were sent a Patient Satisfaction Survey concerning the use of the light box in May. The results returned were favorable for these patients using the light boxes saying that the patients had improved moods and energy during the winters months compared with the previous winter months. Since the program was a success and more patients could benefit from the program, an additional ten light boxes were purchased for use during the next winter season.

C. Sustained Impact

The Ignite program focused on the need to identify depression by using a simple screening tool (PHQ 2) during regular contacts with patients and offer follow-up with the patient's primary care provider and potential behavioral health services. MSHC offers integrated primary care and behavioral health services under one roof so this follow-up can be seamless. Other partners in the area are now screening for depression routinely when they meet with their patients either in the office, hospital or in the home visit situations. Depression follow-up can then be provided by another partner-the Lakes Region Mental Health Center (formerly Genesis Behavioral Health) or at MSHC if the patient is already a patient here.

Care coordination is an integral part of the PATT/Ignite partners as the members meet monthly to discuss issues or barriers for our patients across the continuum of care in the region. Spear Memorial Hospital has had a care coordinator in place since MSHC's Care Transitions Grant which was completed in April, 2015. The two area home health agencies, Pemi-Baker Community Health and Newfound Area Nursing Association, have nurse care managers/coordinators on staff to assist in care coordination. Our local mental health agency, Lakes Region Mental Health Center, has a care coordinator for its patients with substance misuse. MSHC has demonstrated the importance of the need and will continue its care coordination.

MSHC's future plan will be to increase our Electronic Medical Record capacity for documenting Chronic Care Management (CCM) codes through CMS and plan that the CCM billing codes and subsequent reimbursement will offset the expense of the salaries of staff doing the Chronic Care Management at MSHC in the future and be sustainable.

Education and constant reiteration of updated diabetes information is so important for the patient with diabetes. These patients consider their disease to be a part-time job because it takes so much time to test their blood sugar, plan and shop for appropriate food, find time to exercise and keep up with new trends. Because of a need identified, a Diabetes Support Group will continue to meet six months out of the year to offer updated diabetes information and offer an opportunity to ask questions of a certified diabetic educator.

MSHC communication has improved with all providers due to patient anecdotal stories/comments about what they see as a benefit of the Ignite program. Referrals for care management now come from all staff at the center. The billing department staff have made contact with Ignite on several occasions when they discover an issue that needs to be addressed. Our patients are getting older and are requiring more time and expertise to help solve their psycho-social needs in addition to their physical needs.

Ignite staff has had the challenge of trying to find rides for our patients to get to their medical appointments. Up until six months ago, there were only two ways to get the patient to their appointment-taxi and a volunteer driving group called Transport Central. The taxi is expensive and rides through transport central had to be made in advance so there were no other options to get a patient to an emergency or same day appointment here at MSHC. Recently, a private company started in the area by one woman who was aware of the need for rides. She contacted MSHC to drop off information about her LLC and the Ignite Program has been using her services and paying for the ride with grant funds which was approved by our Project Officer.

Part VIII: Implications for Other Communities

If a similar program to Ignite were developed, you would need a means to evaluate the effectiveness of the program. Using an accepted depression screening tool, the PHQ 2, was a simple means to assess depression then follow it by using the PHQ 9 to ask additional questions to help determine the severity of the depression. This tool is a self-reporting tool which can assist in guiding treatment interventions and can be repeated at regular intervals.

Staff should measure the patient's quality of life before and after a certain amount of time to see if the program made a difference for them. The Ignite program used the Dartmouth Quality of Life Index because it was easy to administer either by a staff member or self-reported. The care coordination process depends on self-reports of verbalizing improvement in their health and/or quality of life to evaluate success for the patient.

Another measure that should be used is having the participant complete a Patient Satisfaction Survey to measure what parts of the program were beneficial and more importantly, what parts of the program did not meet the patient's need and any suggestions to improve the program.

A means of tracking the patients in the program would need to be developed. Using this tracking system would help in determining quantitative outcomes that are being tracked.

Part IX: Success, Increased Capacity, and Contributions to Change

A. Defining Success

i) How do you define "success" for your grant program? Please check the appropriate selection(s). You may choose more than one option. If other, please describe.

- Access to a new or expanded health service
- Increased number of people receiving direct services
- Improved quality of health services
- Operational efficiencies or reduced costs
- Integration of process improvement into daily workflow
- Continuation of program activities after grant funding
- Continuation of network or consortium after grant funding
- Health improvement of an individual
- Health improvement among your program participants
- Health improvement among your community
- Enhanced staff capacity, new skills, or education received
- Improved capacity to adapt to changes in healthcare

ii) Do you believe that your program has achieved success? If so, how?

Yes. Support of care management at MSHC by the clinicians developed after a change in mind-set took place. The clinicians realized that they could not take care of all the patient's needs in a short office visit. Anecdotal feedback from their patients was clearly the best way to gain provider support of the care coordination needed to meet their patients' needs.

Patients have benefited from care coordination based on positive Patient Satisfaction Surveys. There is noted improved communication among our partners with the clinical staff who continue to meet monthly to share/identify the needs of the complex patients who live in our community.

B. Organizational Capacity

How has the federal funding of your grant program increased local capacity at your organization, within your network, and/or in your community? Please check the appropriate selection. If other, please describe.

- Formalized networks or coalition
- Developed new partnerships or relationships
- Enhanced skills, education, or training of workforce
- Enhanced data collection and analysis

C. Contributions to Change

Change in individuals' lives, your organization, consortium, or community:

A 73-year-old depressed man was not compliant with his medications, and there were concerns for his safety at home. Ignite staff helped the patient to get into an assisted living facility and he is now doing well. He takes his medications on time and eats more regularly. His blood sugar is now under control and his mood has improved. He now has staff available to assist him in ambulating safely. (Safe living situation, meeting basic needs of eating, blood sugar control and medication monitoring)

A 68-year-old female patient with depression had an above-the-knee amputation and was unable to stand on her own, leaving her wheelchair bound. Since the patient could not stand to transfer into a vehicle and had no funds to pay for wheelchair transportation, she was unable to get to her medical provider appointments.

Ignite staff connected her to the local mental health center where she received her behavioral health therapy. The center had recently purchased a wheelchair van, so she now can be transported by this van to her behavioral health and medical appointments without any additional cost for wheelchair van transport. (Safe, no-cost transportation, depression care treatment.)

Change in policies, systems, and environment:

Referrals from other providers - MSHC now works closely with another primary care practice in the area as many of the members of families are shared between the two practices. Several referrals have come from the other primary care practice in dealing with a husband and wife situation which requires several coordinated referrals to area services. Referrals have come from the PATT/Ignite clinical partners as issues/needs are identified. One recent referral was from a Physical Therapist from Pemi-Baker Community Health who identified depression in a woman with whom he was working and contacted the Ignite Program to follow/support the patient.

Enhanced training of workforce - The Patient Health Questionnaire (PHQ 2) is a two question screen for depression at the annual physical. The PHQ 2 is a nationally accepted screening tool to use for screening for depression. It was not being completed consistently at MSHC. Since the Ignite staff was comfortable with asking the patient about depression, the staff met with the Medical assistants to help them get more comfortable with the questions about depression, remind them why this is being done and remind the Provider of the need for a medical plan if the depression screening is positive.

New Hampshire

Part I: Organizational Information	
Grant Number	D04RH28387
Grantee Organization	North Country Health Consortium
Organization Type	Public Health Organization/AHEC
Address	262 Cottage Street, Suite 230 Littleton, NH 03561
Grantee organization website	www.nchcnh.org
Outreach grant project title	Molar Express Expansion Project
Project Director	Name: Nancy Frank, MPH
	Title: Chief Executive Officer
	Phone number: 603-259-3700
	Fax number: 603-444-0945
	Email address: nfrank@nchcnh.org
Project Period	2015 – 2018
Funding level for each budget period	May 2015 to April 2016: \$200,000
	May 2016 to April 2017: \$200,000
	May 2017 to April 2018: \$200,000

Part II: Consortium Partners		
* Indicates consortium partners who have signed a Memorandum of Understanding/Agreement		
Partner Organization	Location (town/county/state)	Organizational Type
*Coos County Family Health Svc.	Berlin, NH	FQHC
*Ammonoosuc Community Health Services	Littleton, NH	FQHC
Northern Human Services	Berlin, NH	Social Services
*MidState Health Center	Plymouth, NH	FQHC
Indian Stream Health Center	Colebrook, NH	FQHC
North Country Home Health and Hospice	Littleton, NH	Social Services
Cottage Hospital	Haverhill, NH	Hospital
Littleton Regional Healthcare	Littleton, NH	Hospital
Weeks Medical Center	Lancaster, NH	Hospital
Upper Connecticut Valley Hospital	Colebrook, NH	Hospital
Androscoggin Valley Hospital	Berlin, NH	Hospital
North Country Healthcare	Littleton, NH	Hospital Affiliation
NH AHEC, Dartmouth Medical School	Lebanon, NH	Academic Institution
Grafton County Human Services	Haverhill, NH	Social Services
Tri-County Community Action Program	Littleton, NH (multiple locations)	Social Services
45 th Parallel EMS	Colebrook, NH	Emergency Services
Androscoggin Valley Home Care	Berlin, NH	Social Services
Morrison Nursing Home	Whitefield, NH	Elderly and Adult Services
American Cancer Society	Concord, NH	Non Profit
Plymouth State University Center for Rural Partnership	Plymouth, NH	Academic Institution
*Grafton County Senior Citizens Council	Lebanon, NH (multiple locations)	Social Services
Granite United Way-Northern Region	Berlin, NH	Social Services
White Mountains Community College	Berlin, NH	Academic Institution
Speare Memorial Hospital	Plymouth, NH	Hospital

RS Consulting	Whitefield, NH	Consulting Services serving older adults
Servicelink	Lebanon, NH (multiple locations)	Social Services
Adaptive Sports Partners of the North Country	Franconia, NH	Social Services

Part III: Community Characteristics

A. Area

Northern and Central New Hampshire:

- Coos County: All Towns
- Northern and Central Grafton County: Towns of Alexandria, Ashland, Bath, Bethlehem Bridgewater, Bristol, Campton, Danbury, Dorchester, Easton, Ellsworth, Franconia, Groton, Haverhill, Hebron, Holderness, Landaff, Lisbon, Littleton, Monroe, New Hampton, Plymouth, Rumney, Sugar Hill, Thornton, and Woodstock

B. Community description

Northern New Hampshire, often called the North Country, includes Coos and Northern Grafton Counties. The North Country suffers from relatively high poverty and population loss as the logging and paper industries decline. Like many rural areas, the North Country is underserved due to a shortage of dental and medical providers. Residents of rural areas face unique challenges in maintaining and improving health. These include physical distance between people and resources in our mountainous area, the need for health education and access to programs. Rural residents also must cope with reduced access to care arising from less insurance coverage (due to unemployment in small industries).

C. Need

The need that the Outreach grant program was designed to address has been sorted into three target populations based on local, regional, and statewide data.

Target Population 1: Grafton County 60+ Population

According to a study published by the New Hampshire Department of Health and Human Services, Oral Health Program, oral diseases disproportionately affect older adults more than any other age group and affect their nutritional status, social functioning and overall well-being. Older adults in the state face barriers to regular dental care due to lack of dental insurance, financial constraints, absence of perceived need and transportation issues. The study reported that prevalence of oral health issues was substantially higher for individuals living in New Hampshire's rural areas.

Target Population 2: North Country Under-served Student Population

The total population of the NCHC service area, comprised of Coos and Northern Grafton Counties, is approximately 86,000. Of this total, 14,372 are school-age. Between 30 percent and 50 percent of the families residing in this area have children eligible for the U.S. Department of Agriculture's Free and Reduced Cost School Lunch program. Children whose families have yearly incomes of up 185 percent of the Federal Poverty Level (FPL), which in 2014 is \$44,123 for a family of four, are eligible for this program. In 2013 the median family income for all families residing in the NCHC service area was \$49,112 within \$4,500 of 185 percent FPL. It is clear from these data that many North Country families just miss eligibility for Medicaid.

Target Population 3: Provide Training Opportunities for Dental Students

The 2011 Institute of Medicine report, *Improving Access to Oral Health Care for Vulnerable and Underserved Populations*, cites providing training opportunities for dental students in community-based settings as a best practice. The report states, "Providing students with clinical experiences in community-based settings and with patients with complex oral health care needs improves their comfort level in caring for vulnerable and underserved populations and increases the likelihood that students will care for such populations in their future careers."

Part IV: Program Services

A. Evidence-based and/or promising practice model(s)

The Expansion Project added several new components to the existing Molar Express Program. The Molar Express Program, before the Outreach Grant funding, focused care reimbursable by NH Medicaid, such as school-aged children. Expansion has enabled oral health services to older adults in senior centers, uninsured and underinsured children and dental student experiences. The ElderSmile: A comprehensive approach to improving oral health for seniors, is an initiative of the Columbia University College of Dental Medicine (CDM) and its public and private partners. Per the grant proposal, one time each year, in

conjunction with the clinical services, the Molar Express has provided a presentation or learning experience to senior center participants on oral health promotion for older adults. The program model is based on the *ElderSmile* program, which is a “comprehensive, community-based program offering prevention, transportation, and treatment services for seniors in northern Manhattan for oral health care...” (ElderSmile: A Comprehensive Approach to Improving Oral Health for Seniors, Am. J Public Health, 2009) Thus far, Molar Express has provided a variety of adaptations such as oral health presentations at each senior center site, using a variety of oral health education tools, visual aids and “bingo” game-based interactive learning methods. Treatment services for seniors were brought to the senior center sites, reducing transportation barriers.

Adding Additional Restorative Care to A Mobile Dental Program; Addition of Atraumatic Restorative Treatment (ART)/Interim Therapeutic Restorations (ITR), a promising practice by Community Health Center, Inc., New Britain, CT. was incorporate to the scope of restorative care services as the second evidence-based model. The Certified Public Health Dental Hygienist has been utilizing the equipment and materials for Interim Therapeutic Restorations to provide an expanded level of care to children and older adults. Often, the hygienist will identify a need before the dentist is scheduled to see the patient. Applying an ITR arrests the development of decay and protects the area until the patient can be seen by a dentist.

The Outreach Grant has allowed Molar Express to continue on its dental sealant initiative. The evidence-based dental sealant program will continue to include an expanded sealant initiative with Glass Ionomer materials which increases the proportion of children who have sealants on one or more permanent molars.

In line with the promising practice in the 2011 Institute of Medicine Report, *Improving Access to Oral Health Care for Vulnerable and Underserved Populations*, Molar Express has provided training opportunities for dental students in community-based settings. The Molar Express Program Director and Program Manager met with the coordinator at the University of New England School of Dental Medicine to create a one-day mobile public health dental experience for students. Dental students met with the dental team, assisted in the clinic set-up and clean-up of equipment, provided dental services with the supervision of the Molar Express dentist, and met with the program manager to learn about the vulnerable populations being served.

B. Description of Activities

This opportunity expanded the Molar Express service area and number of at-risk children to be served. The project is enhancing the service delivery model which currently includes prevention and management protocols based on caries risk assessment and a dental sealant initiative. Temporary restorations have been added as a new scope of service by the Molar Express Certified Public Health Dental Hygienist and special tracking codes were created to document the value of the procedure, as it is not yet a billable service. A positive response was received from schools and parents after Molar Express rolled-out “Seal out Tooth Decay” outreach and education initiative, with Department of Health and Human Services booklets. The project has also supported Molar Express in three new high schools and allowed uninsured students to access to Molar Express services in more than 20 additional schools. When available, University of New England School of Dental Medicine students have joined the Molar Express team and assisted in the provision of dental services. This experience was often their first with a mobile public health dental clinic, allowing for an understanding of oral health challenges that face vulnerable populations.

Care coordination services have also been enhanced for Molar Express patients, including the addition of a Molar Express Care Coordinator to assist patients and families who may have difficulty overcoming barriers to accessing oral health care and connecting them to resources that address social determinants of health. More than 20% of the children receiving Molar Express services are referred to specialists for more extensive care. Many families are confronted with significant challenges when they try to navigate an often-unfamiliar health care system. Molar Express created protocols and processes to track care coordination cases from start to finish.

For the most part, Molar Express has been the initiating provider of oral health services for seniors at the Senior Centers who do not have a dentist or a dental home. Molar Express’ Certified Public Health Registered Dental Hygienist has assessed patients to determine level of need, in five senior centers. She has provided hygiene services when appropriate and makes referrals for restorative care if necessary. The Hygienist is providing services such as oral assessments, x-rays, removal of dental plaque, calculus and stains from teeth, patient education about oral health, fluoride treatment, nonsurgical periodontal therapy, or temporary restorations. The patient then works with the care coordinator to be referred to the dental “hub” that is closest to their home (an FQHC with a dental center). Successful protocols were established at each FQHC dental center to ensure a smooth hand-off from the Molar Express program to the FQHC dental home. Several popular oral health education initiatives were provided to the senior center participants, including interactive dental focused trivia/bingo events, presentations and health fairs.

C. Role of Consortium Partners

The North Country Health Consortium and the Molar Express dental program both benefit from an established consortium and program structure. The consortium partners have all taken part in the oral health working group, a subgroup of the Board of Directors, contributing to the Sustainability Planning and Strategic Planning processes. Regular updates have also been, and will continue to be, provided to the consortium partners. Ammonoosuc Community Health Services and MidState Health Center receive referrals from the Molar Express program. We have also, with guidance from the consortium partners, been able to leverage the Outreach funding to provide technical assistance to new FQHC Dental Clinics (within three of our consortium partners). NCHC along with these three FQHC Dental programs, Ammonoosuc Community Health Services, MidState Health Center and Coos Country Family Health Services, have partnered on a statewide oral health workforce development program, in which Molar Express provided technical assistance. Grafton County Senior Citizen's Council partnered with Molar Express to promote oral health education events and dental clinics at 5 of their senior centers.

Part V: Outcomes

A. Outcomes and Evaluation Findings

The overall evaluation design was a triangulation mixed methods design in which qualitative and quantitative data are collected within a similar time period and triangulated to compare results and obtain a comprehensive overview of the program. Three primary methods with three populations were used to obtain data:

- A 7-item, iPad-based survey was developed to obtain input from students seen by the Molar Express program. Questions about self-assessed knowledge of oral health and oral health behaviors were asked prior to each visit. Feedback on the Molar Express experience was obtained immediately following their visit.
- A 5-item, postage-paid postcard survey was sent home with students seen by Molar Express to give to parents. Questions focused on feedback on the Molar Express program, parent's assessment of their child's oral health practices and one knowledge question related to oral health.
- Brief semi-structured telephone interviews were conducted in May and June with school nurses that are participating in the Molar Express project. Based on these interviews, an 11-item survey was created and administered online with school nurses to understand their experiences and obtain feedback. All nurses in each year were contacted to participate in the interviews and survey.

Overall the results of this evaluation suggest that the Molar Express Project is providing a valuable service and has been well received by all parties involved, including the children served, parents of the children and nurses in the schools. Future comparisons of children who have participated in the program over time will allow us to assess if and how knowledge and oral health behaviors change over time as a result of the program. Suggestions for changes generally included a few organizational aspects and questions about how to better engage parents and children to take advantage of the program. This may continue to be a primary challenge for the program as it continues to reach those in need. Based on responses, the features and strategies of the program that are particularly effective include:

- Responsive, professional staff
- Convenience by having program at school sites
- Referrals and follow up
- Good communication with key stakeholders (i.e., nurses)
- Updated portable equipment that maximizes efficiency and increases access to care

Evaluation process is in progress. Specific data and findings will be shared once complete.

B. Recognition

In August of 2015, the North Country Health Consortium's Molar Express was chosen and featured as NH Magazine's "2015 Top Dentists: Bringing Dental Care to the People." A full page article with color photos highlighted the vision, mission and accomplishments of the program.

Invitations to presentations at events such as the NH Legislative Breakfast series at the statehouse has allowed Molar Express to present our programming and funding strategies. Involvement in the NH Oral Health Coalition has resulted in the ability to share best practices and acknowledge the services we provide to the children of Northern NH. The Outreach grant allowed NCHC to leverage funding from a local foundation, the HNH foundation. The HNH foundation has featured the Molar Express on their website and in promotional emails.

Molar Express work with the Area Health Education Center's Health Career Summer Camps has provided recognition in the community as a source of oral health education, as we led students through "a day in the life of a dentist" simulation. Activities around health and wellness associated with proper oral hygiene were well received.

Molar Express has continuing plans to share the program's progress through dissemination of project findings through the North Country Health Consortium and Molar Express web sites. All contact information will be shared. Information will also be distributed to the NCHC Board of Directors and area Network members who are part of the Oral Health Advisory Committee.

Other venues where project findings will be shared include local, state and regional meetings. Events and meetings may include The North Country Health Improvement Summit held annually, the New England Rural Health Round Table, the New Hampshire Oral Health Coalition Annual Forum, the Governor's Commission on Primary Care Workforce, and Bi-State Primary Care Association.

Molar Express project information continues to be disseminated through press releases distributed through local newspapers, and on the NCHC Facebook page and Twitter feed.

In collaboration with researchers at The Dartmouth Institute, NCHC is working to submit an article for publication in professional journals that focus on public health. In addition to the successful Molar Express model, of particular interest may be the use of technology (iPads) as an evaluation tool for children in a mobile setting.

Part VI: Challenges & Innovative Solutions

The strategic focus area that this program is addressing is: *To improve the oral health status of uninsured and underinsured Coos and Grafton County children and older adults through a collaborative program of preventive, diagnostic and restorative care based on evidence based practice methods.*

- *improve the oral health status for children in the region by providing enhanced oral health services and care coordination*
A major barrier to access to oral health services by the target population of uninsured and under-insured children is economic. These children are not eligible for Medicaid reimbursement for oral health care; and their families do not have the financial resources to pay for oral health care nor do they have access to private sector dental insurance. Moreover, few dentists in the area are willing to take Medicaid. As a result, this target population has no access to much needed oral health care. School health nurses have reported that many of these children have never seen a dentist. The Molar Express Expansion Project will alleviate these barriers by providing oral health care coordination to the target.
- *improve the oral health status for seniors in the region*
The oral health situation for seniors is similar to the children's plight, sharing the economic struggle with additional hurdles. Medicaid, if the senior is eligible, only offers emergency treatment (extractions). Medicare offers no dental benefit at all, at this time. The opportunity to identify oral health needs, address basic preventive care, and coordinate affordable dental care options will increase access to care through newly opened dental clinics in local Federally Qualified Health Centers. Effective referral systems will be put in place to assist with access.
- *take a collaborative approach to engage the entire region in better access to oral health care*
Data reflects a regional population that suffers higher morbidity and mortality than the rest of New Hampshire and in some instances the rest of the country. The economic and geographic barriers alongside the lack of access to health care providers, poor roads, few public transportation options, and a higher incidence of unhealthy behavior (smoking, alcohol use, and low regard for preventive health/oral care) practiced by the area population all contribute to a need to address the culture and practices of our region in collaboration with other health care and educational organizations. A regional approach to improved care is central to this project.
- *use best practices in oral health to achieve superior results*
The Molar Express Expansion project, built on evidence-based and promising oral health best practices will engage a Work Group of local providers. The transference of best practices is inevitable as the program progresses in the next few years. Working with new providers will be necessary as referrals for more specialized care than can be provided in the Molar Express clinic. This outreach to other practitioners for specialized care will further communicate the evidence based practices and expand our field of influence.

- *address oral health workforce needs*

Through partnerships with local dental practices and federally quality health center dental centers, dental students will have opportunities to experience community-based dentistry in rural communities. As noted, research indicates that training opportunities in such settings increases the likelihood that students will choose to serve in rural underserved areas.

Part VII: Sustainability

A. Structure

The North Country Health Consortium as a whole will continue its work after the outreach grant ends, coordinating needs with available funding. The following partners will continue to be active in the ongoing Molar Express project:

- Ammonoosuc Community Health Services
- Weeks Medical Center
- MidState Health Center
- Upper Connecticut Valley Hospital
- Littleton Regional Healthcare
- Coos Country Family Health Services
- Cottage Hospital

B. On-going Projects and Activities/Services To Be Provided

- i) Will all, some or none of the elements of the program be sustainable once Outreach grant funding has ended? Please check the appropriate selection.

- All elements of the program will be sustained
 Some parts of the program will be sustained
 None of the elements of the program will be sustained (i.e. the program will completely end after the grant period)

- ii) Identify the projects and activities that will be sustained beyond Outreach grant period.
 The parts of the project that will be sustained include:

- Molar Express and Federally Qualified Health Centers (FQHCs) will continue to work on a model referral system. The success of the "Hub and Spoke" model will be dependent upon a commitment to the referral system between Molar Express and the FQHCs. Building upon models currently used by Molar Express and the FQHCs, a referral system for oral health care services has been put into place that will ensure a close relationship between all levels of the system and help ensure people receive the best possible care closest to home. Utilizing best practice principles, and collaborating with the health/oral health centers, the referral system includes the three components critical for success: the network of service providers; adherence to referral protocols; and transportation, communication, and other resources. For the most part, Molar Express will be the initiating provider of oral health services for those who do not have a dentist or a dental home. Molar Express' Certified Public Health Registered Dental Hygienist will assess patients to determine level of need. She will provide hygiene services when appropriate and make referrals for restorative care if necessary. The Hygienist will provide services such as oral assessments, x-rays, removal of dental plaque, calculus, and stains from teeth, patient education about oral health, fluoride treatment, nonsurgical periodontal therapy, or temporary restorations. When necessary, the patient will be referred to the dental "hub" that is closest to their home (an FQHC dental center). A referral form will be developed that, over time, will be able to be integrated into the Electronic Health Records of both Molar Express and the FQHCs. A Care Coordinator / Patient Navigator will assist patients to ensure the referral visit is complete.
- The project allowed for an expansion of the number of at-risk children to be served by supporting services for the uninsured. This activity will be continued through the integration of FQHC services, allowing for patients to apply for a sliding fee scale.
- The project enhanced the service delivery model which currently includes prevention and management protocols based on caries risk assessment and a dental sealant initiative. Temporary restorations will be continued as a new scope of service by the Molar Express Certified Public Health Dental Hygienist. Continuing temporary restorations as part of the "scope of services" offers an opportunity for the hygienist to expand essential preventive dental care,

alleviate potential pain, and provide a critical service when traditional cavity preparation and/or placement of traditional dental restoration may not be feasible or needs to be postponed.

- Care coordination services have also been enhanced for Molar Express patients, including the addition of a Molar Express Care Coordinator to assist patients and families who may have difficulty overcoming barriers to accessing oral health care and connecting them to resources that address social determinants of health. Care coordination services will also continue for Molar Express patients.
- Continued advocacy for an adult Medicaid benefit, through the NH Oral Health Coalition and other avenues.
- Molar Express will continue to provide training opportunities for dental hygiene students, and others as providers are available, to share the importance of public health dental programming in rural areas and increase recruitment efforts of dental providers over time.

C. Sustained Impact

The long-term vision for Molar Express is for the underserved children and adults in the North Country region to have a dental home providing affordable oral health services and to eliminate dental disease through completion of treatment plans. The anticipated sustainable impact of the Outreach grant is the creation of a dental home for uninsured and underinsured children in the Molar Express service area and a path to ongoing dental care for seniors. Implementation of a prevention/education component will ultimately reduce the cost for restorative care, improve the health status of the population, and require fewer resources for oral health care

Strategic development of Molar Express has well-positioned it for further growth and long-term sustainability. Molar Express will continue to focus their energy on demonstrating and communicating the value of its services to partners and other stakeholders in order to broaden support and position the program to leverage additional funds over the long term. Specifically, leaders will concentrate on: 1) integration with Federally Qualified Health Center (FQHC) and dental centers; 2) monitor implementation of the Medicaid expansion and managed Medicaid, and its impact on access to oral health services; 3) continue to search for additional funding sources, and 4) continue to identify children who are eligible for Medicaid.

North Country Health Consortium will continue to work with the FQHCs that are building dental clinics to develop of a hub and spoke model. The ideal model will have Molar Express (the spokes) in the community and the schools providing hygiene and limited restorative care similar to the current scope of services. The health center's fixed sites (the hub) will be referral sites that will serve patients needing more extensive services. The model will expand entry points into the dental care system, as well as integrate oral health and primary care which will potentially improve access to both. We are committed to continuing the role of care coordination as an integral component of successful treatment plan completion. The support and follow up that the care coordination role provides will be increasingly important as Molar Express looks towards improved integration with FQHC dental sites.

Part VIII: Implications for Other Communities

Molar Express benefits from being a program of an organization with a broad scope of public health initiatives, The North Country Health Consortium. Future grantees would benefit from utilizing current relationships and taking time to cultivate new and solid relationships with the organizations. Funding and work plans are important for achieving meaningful outcomes, however, having the capacity to nurture relationships, follow up and follow through will maximize the efficacy and sustainability of the program.

Molar Express' years of experience working with mobile and portable systems has proved a successful solution to the barrier of transportation, a model that other communities or programs may want to consider. Using iPads as a vehicle for capturing data from young patients has proved valuable to measure the success or identify challenges.

Part IX: Success, Increased Capacity, and Contributions to Change

A. Defining Success

- i) How do you define "success" for your grant program? Please check the appropriate selection(s). You may choose more than one option. If other, please describe.
 - Access to a new or expanded health service
 - Increased number of people receiving direct services

- Improved quality of health services
- Operational efficiencies or reduced costs
- Integration of process improvement into daily workflow
- Continuation of program activities after grant funding
- Continuation of network or consortium after grant funding
- Health improvement of an individual
- Health improvement among your program participants
- Health improvement among your community
- Enhanced staff capacity, new skills, or education received
- Improved capacity to adapt to changes in healthcare

ii) Do you believe that your program has achieved success? If so, how?

The program has achieved success in many ways. Most notably, Molar Express is a trusted provider of quality oral health services for children and older adults. The strong network of partners allows for creative problem solving in an area with low reimbursement rates and a challenging environment. The success lies in the ability to continue services in spite of the challenges, thanks to the Outreach Grant that has allowed Molar Express and its partners to create a durable infrastructure. Molar Express has a valued reputation in the state that is currently being reflected by our local partners as well as the state reaching out to us to help ensure on-going services and sustainability of the program.

B. Organizational Capacity

How has the federal funding of your grant program increased local capacity at your organization, within your network, and/or in your community? Please check the appropriate selection. If other, please describe.

- Formalized networks or coalition
- Developed new partnerships or relationships
- Enhanced skills, education, or training of workforce
- Enhanced data collection and analysis

C. Contributions to Change

Change in individuals' lives, your organization, consortium, or community:

An example of the work that the Outreach Grant Program has allowed Molar Express to provide begins with an 8-year-old child in a Coos County elementary school that signed up for dental care. The hygiene visit revealed the early stages of tooth decay on multiple teeth, an assessment that is part of the Certified Public Health Dental Hygienist (CPHDH) role during the appointment. Interim Therapeutic Restorations (ITR) were placed, as well as on the child's sibling later that day. At the end of the week, the school nurse shared that the children had already been withdrawn from the school and she did not know where they had moved. Thankfully, the expanded services provided through the Outreach Grant at the school were able to provide care that will likely protect the children from pain and infection resulting from the progression of cavities.

The expansion into Senior Centers brought an elderly gentleman into the program. He called with a concern for his wife, whose denture was so worn that it split in two pieces. He described her as frail and without her denture, he feared she would have difficulty eating. The Molar Express team connected the gentleman with the care coordinator whom, as she was connecting his wife with services at a local FQHC, found out that he also had many dental issues, but didn't want to complain. Thanks to the Outreach Grant funding, this couple's oral health needs were identified, supported, and ultimately connected to a dental home.

Change in policies, systems, and environment:

The Molar Express participated on the steering committee for a multi-year effort with the NH Oral Health Coalition to create a baseline survey Identifying Oral Health Resources and Promising Practices in Community-based, Non-traditional Settings. In April of 2017 a comprehensive report was released and has been instrumental in educating lawmakers, communities, and other stakeholders. The document can be found here: <http://nhoralhealth.org/blog/wp-content/uploads/2017/03/NH-Oral-Health-Baseline-Survey-I-FINAL-April-1-2017.pdf>

Ohio

Part I: Organizational Information

Grant Number	D04RH28408
Grantee Organization	Ohio Northern University (ONU)
Organization Type	University
Address	Ohio Northern University, 525 S. Main St., Ada, OH 45810
Grantee organization website	http://www.onu.edu/pharmacy/healthwise
Outreach grant project title	Multidisciplinary Rural Mobile Clinic Using Student Health Care Professionals
Project Director	Name: Steven Martin
	Title: Dean and Professor
	Phone number: 419-772-2277
	Fax number:
	Email address: s-martin.11@onu.edu
Project Period	2015 – 2018
Funding level for each budget period	May 2015 to April 2016: \$187,211
	May 2016 to April 2017: \$187,211
	May 2017 to April 2018: \$198,551

Part II: Consortium Partners

* Indicates those consortium partners who have signed a Memorandum of Understanding/Agreement

Partner Organization	Location (town/county/state)	Organizational Type
Hardin Memorial Hospital*	Kenton, Ohio (Hardin County)	Hospital
Kenton Community Health Center*	Kenton, Ohio (Hardin County)	FQHC
Kenton-Hardin Health Department*	Kenton, Ohio (Hardin County)	Health Department

Part III: Community Characteristics

A. Area

The project served Hardin County in rural west central Ohio. The most recent (2013) census data showed Hardin County had a total population of 31,641, which makes up the total target population. The county is comprised of 96.7% Caucasian, 1% African American, 0.7% Asian, 0.2% Native American, 0.1% Pacific Islander, 0.3% other races and 1.4% two or more races. Hispanics comprised 1.5% of the total population. The population is comprised of 5.8% under five years old, 23% 5 to 17 years old, 15.8% 18 to 24 years old, 23.1% 25 to 44 years old, 23.5% 45 to 64 years old, and 14.6% 65 years and older. The median household income is \$40,732. In Hardin County, the ratio of income-to-poverty level is:

- Below 100% percent of poverty level, 18%
- 100 to 199% of poverty level, 17.5%
- 200% of poverty level or more, 64.5%

The estimated payer mix is: 13.3% uninsured, 15.4% Medicaid, 15.8% Medicare, 55.5% private insurance. The number of citizens in the country that are underserved is approximately 17,600.

B. Community description

The vast majority of the county is rural, with some citizens required to drive more than 33 miles to adjacent counties to access primary care services. Hardin County is a Primary Medical Care Health Professional Shortage Area; 14.6% of the population is > 65 years and 28% is ≤ 19 years; 13% of the population does not have health insurance; 31% are insured through the Center for Medicare and Medicaid Services. According to the Behavioral Risk Factor Surveillance System, 19.6% of Hardin County residents rate their health as fair or poor compared to a state average of 15.3%. A number of factors are relevant to the county ranking 53rd

of 88 Ohio counties in overall health outcomes and 73rd for premature death. Transportation issues, lack of primary care providers, poverty, and educational and health literacy deficiencies all contribute to these poor health outcomes in the county.

The distance from primary care access requires many residents to drive or get driven to appointments, urgent care settings, or pharmacies; 49% of Hardin County's residents do not own cars and those that do struggle with escalating gas prices limiting the accessibility to physician appointments or obtaining prescriptions.

In large sections of the county, the population per primary care physician ratio is >3500 or there is no physician present. This equates to 28.1 primary care providers per 100,000 residents for Hardin County compared to 90.5 per 100,000 residents for Ohio overall.

Economic resources are also limited, with Hardin County being one of the five poorest in the state of Ohio. A majority of the population, 52%, live at or below 200% of the federal poverty level (FPL) with children being even more affected as 65% live below the 200% FPL. This is the highest percentage of children living in poverty in northwest Ohio. The average household income in Hardin County is \$40,732 compared to the state and national averages of \$48,246 and \$50,502, respectively.

Hardin County residents 25 years and older obtain a Bachelor's Degree or higher level education at a much lower rate than state and national averages; only 13.8% of adult Hardin County residents have a Bachelor's Degree or higher, whereas the percentages for Ohio and the nation overall are 24.9% and 28.5%, respectively. Table 1 shows various differences in health and wellness demographics between Hardin County and the State of Ohio.

C. Need

The top five health needs identified (see below) are also pertinent to persons who are uninsured and low income, as well as those with chronic disease needs. During the Community Needs Health Assessment meeting on November 6, 2012, representatives from the Kenton City Schools, Kenton Community Health Center, Kenton/Hardin County Soroptimist International, Ohio Northern University College of Pharmacy, Girl Scouts of Western Ohio, Hardin County Council on Aging, Hardin County Community Foundation, Hardin County Family YMCA, The Hancock, Hardin, Wyandot, Putnam (HHWP) Community Action Commission, Not By Choice Outreach, The Ohio State University Extension Office (Hardin County) and United Way of County, all of whom serve the uninsured, low---income and those with chronic diseases — considered the five health needs identified as pertinent and applicable to the populations who are residing in Hardin County. During the November 2012 meeting, community members agreed that the five health needs are relevant to Hardin County.

The top five health needs relevant to Hardin County are:

- Preventive health education (e.g., overweight, obesity, smoking) to reduce risk factors for diabetes, heart disease, stroke, certain cancers and chronic respiratory conditions. Roughly two---thirds of adults in the region are overweight or obese and one in five adults are current smokers. These and other risk factors are linked to higher rates of diabetes, heart disease, stroke, certain cancers and chronic respiratory conditions. Addressing these risk factors could significantly improve health outcomes for area residents. Although a variety of preventive health education initiatives are currently underway, hospital and community representatives identified the need for a more targeted and coordinated approach. In particular, they discussed the need to tailor prevention education and outreach efforts to the interests of specific target populations.
- Lack of strategies and tools to manage and reconcile medications among people with chronic conditions or those in poor health. More than 300,000 individuals in the north central Ohio region have been told they have high blood pressure, while more than 100,000 report having diabetes. In addition, nearly 50,000 area residents report having been diagnosed with angina or coronary heart disease. Individuals with chronic conditions, or those in poor health, may have multiple prescribing providers and are often unable to accurately communicate all the prescriptions they are taking or have been prescribed. The lack of a common electronic medical record system among pharmacies, hospitals and doctors' offices further complicates medication management efforts. The group identified several medication management strategies as well as strategies for reducing medication costs to improve treatment outcomes.
- Lack of programs to help patients with chronic diseases navigate, coordinate and access healthcare services. A significant number of area residents have been told they have high blood pressure, diabetes or coronary heart disease. Patients with these and other chronic conditions often have complex treatment plans and experience difficulty navigating healthcare services and managing their condition.

- Low participation rate and poor service coordination related to immunization, vaccinations, and health screenings for cholesterol, breast, cervical and colorectal cancer. In 2010, 34% of area residents 65 years and older had not had a flu shot in the past year and 31% never had a pneumonia vaccination. In addition, more than 180,000 north central Ohio area residents report never having their cholesterol checked, and cancer reported screening rates for breast, cervical and colorectal cancer are all below the national rate. Service coordination, low participation rates among subpopulations and issues with information sharing across organizations were all identified as barriers.
- Prevention of falls and fractures among the elderly. Falls can cause moderate to severe injuries among the elderly, such as hip fractures and head traumas, and can increase the risk of early death. Falls and fall--related injuries affect quality of life and increase healthcare costs. Almost 21 percent of the region's population is over the age of 60 years old. With an aging population, maintaining their safety by preventing falls and fractures becomes a higher priority.

Part IV: Program Services

A. Evidence-based and/or promising practice model(s)

The innovative, evidence-based practice model that was used was a mobile clinic staffed by multidisciplinary student health professionals under supervision by licensed professions. The use of a mobile clinic to increase access to care has been well described. (Lugue, Stratton, Song, Singh-Franco). Mobile clinics may provide clinical services such as health and wellness screenings, disease state and medication therapy management, preventive health services including vaccinations, and health education, to underserved populations (Lugue). Furthermore, mobile clinics are commonly joint community partnerships between a health professions school (nursing/medical/pharmacy), a county health department, and/or a federally qualified health center (FQHC).

The integration of student health professionals into the community to provide health care has been shown to improve access to care, increase childhood and adult vaccination rates, and identify previously undiagnosed chronic health conditions. (Luque, Stratton) Pharmacist-, and student pharmacist-provided mobile clinics have demonstrated increased access to health and wellness screening, and referral of patients with previously unrecognized chronic disease to primary care providers for treatment.(Stratton) To directly address the most common needs of the Hardin County community, the mobile health clinic offered

- Preventive health education focused on chronic disease
- Medication therapy management for those individuals with chronic conditions
- Immunizations
- Health screenings (BMI, cholesterol, blood glucose, blood pressure, bone density, skin lesions, and breast, cervical and colorectal cancers)

The combined practice of student nurses and student pharmacists, under supervision, in such a mobile clinic model directly addresses our community's need for increased health care providers. Improved strategies and tools to manage and reconcile medications among people with chronic conditions and those in poor health, as well as providing preventative health education, will reduce chronic disease burden in our community.

This model was chosen given the resources available to the consortium. The workforce provided by multidisciplinary student health professionals was pivotal to choosing this model, as the health professional shortage in the country is a primary barrier to health care access. The network of small rural churches, schools, and other community gathering places overcomes the transportation barrier. Mobile clinics have proven effective in improving access to care. The strong partnership of the consortium members, dedicated to improving the health care needs of the county made the mobile clinic system viable, as the consortium members serve as referral agencies in a hub and spoke manner, for the patients engaged at the mobile clinic.

B. Description of Activities

To meet the previously described community needs of Hardin County, Ohio Northern University (ONU), in conjunction with the Kenton Community Health Center (FQHC), Kenton-Hardin Health Department and Hardin Memorial Hospital, established a mobile clinic to serve the uninsured, underserved, and those individuals in the county with limited access to primary health care. This mobile clinic provides:

- Preventive health education focused on chronic disease
- Medication reconciliation and management for those individuals with chronic conditions
- Immunizations for children and adults
- Health screenings (BMI, cholesterol, blood glucose, blood pressure, bone density, skin lesions, and breast, cervical and colorectal cancers) to those people who meet the target group

- Referral into a primary medical home as needed.

The 4 main goals of this project were to:

- Increase access to care
- Improve health knowledge
- Improve health outcomes for the target group
- Connect patients to primary medical homes whenever possible

To increase access to care, mobile clinics were held at various locations (churches, community buildings, businesses and schools) around the county at least twice weekly, with convenient hours. Some locations of mobile clinics included: The Hardin County Fair Grounds, Kenton--Hardin Health Department, Forest EMS Building, Plaza Inn in Mount Victory, Dunkirk EMS Building, Roundhead Post Office, Hardin Northern Local Schools, Ridgemont Local Schools, Upper Scioto Valley Local Schools, Ada Exempt Village Schools, Ada Presbyterian Church, and ONU. Pharmacists and nurses employed by ONU, and student pharmacists and nurses enrolled at ONU staffed these multidisciplinary mobile clinics. Each visit to the clinic included a process of four patient touch points:

- Intake (collect demographic information, contact information, insurance information)
- Medical history, medication history, and review
- Assessment and intervention (preventative health education, medication reconciliation and management, immunizations, and physical assessment and screenings)
- Check out and follow-up plan (includes coordination of care and referral to/for PCP and insurance assessment as necessary)

Preventive Health Education

People in the target area were engaged at mobile clinics throughout the county. Individualized patient education regarding health risk, preventive care and strategies, chronic disease education, and medication use, and adherence were incorporated into each patient encounter. Educational services were provided by pharmacists, nurses, and student healthcare professionals from ONU, along with providers from the Kenton Community Health Center, the Kenton-Hardin Health Department, and Hardin Memorial Hospital. In addition to individualized and group classes for the management of chronic conditions, the mobile clinic has provided verbal and written education (one-on-one education and coaching, pamphlets, poster boards, etc.) through community outreach. These community outreach programs included educational sessions on diabetes, heart disease, hypertension, tobacco cessation, obesity, healthy diet, healthy exercise, and cancer prevention. In addition to live sessions, written educational materials on each topic were distributed, and a drug, health, and wellness information center has been available for call in or email questions.

Services Provided: Medication Reconciliation and Management

Patients with chronic disease (i.e. diabetes, hypertension, hyperlipidemia, heart failure, coronary artery disease, COPD, asthma) were engaged at the mobile clinic to:

- Undergo a medical and medication history
- Receive a comprehensive medication review
- Receive a personal medication record
- Receive point of care laboratory testing and monitoring (BMI, blood glucose, hemoglobin A1c, lipid panel, peak flow and FEV1 monitoring)
- Receive education (verbal and written) regarding their medications and goals for each medication (using the “teach back” method by health care providers where they ask the patient to repeat)
- Receive evaluation for medication and healthy lifestyle adherence tools
- Receive evaluation for medication access, and referral to medication access programs (FQHC, patient assistance programs)
- Receive referral for primary care services and a primary medical home (as needed)

All medication reconciliation and medication management services were provided in collaboration with a local Primary Care Practice (PCP) with appropriate coordination of care and exchange of information between the mobile clinic and the patient’s usual care provider(s).

Services Provided: Immunization Coordination

Children and adults were offered immunization coordination. Immunization history was reviewed for completeness and patients offered immunizations through the mobile clinic as appropriate for age and need, including influenza, pneumonia (pneumococcal),

shingles and childhood diseases. Administration of vaccines were provided by pharmacists, nurses, and student healthcare professionals from ONU, in conjunction with personnel from the Kenton-Hardin Health Department and the Kenton Community Health Center.

Services Provided: Health Screenings

Patients engaged at mobile clinics were provided with health and wellness screenings as recommended by the US Preventive Services Taskforce (USPSTF). Students, under supervision, provided health and wellness screenings. Consistent with the previously described needs assessment of Hardin County, individuals utilizing the mobile clinic were screened and assessed for: obesity (BMI calculation), dyslipidemia (point of care lipid panel), diabetes (point of care blood glucose and hemoglobin A1c), hypertension (medical history, blood pressure) osteopenia/osteoporosis (bone density assessed via quantitative ultrasound) and skin cancer (medical history, skin scope analysis.) People identified as at-risk for breast cancer, cervical cancer, and/or colorectal cancer were then referred for appropriate screening through their PCP, the Kenton Community Health Center, or Hardin Memorial Hospital.

C. Role of Consortium Partners

The innovative delivery model has employed a mobile clinic using a multidisciplinary team of student health care providers under the supervision of licensed professionals. The services are coordinated through a consortium of four health care agencies/organizations: ONU serving as the lead agency and providing health professional students and licensed supervisors; Hardin Memorial Hospital to allow medical referrals and advanced care, including invasive diagnostics or inpatient referrals; Kenton Community Health Center, an FQHC serving as a primary medical home referral for primary care provider (PCP) services, as well as a source of social services and childhood vaccinations; and the Kenton-Hardin Health Department, as a PCP referral agency and coordinator of outreach services for the county.

Part V: Outcomes

A. Outcomes and Evaluation Findings (do not submit your Evaluation Report in lieu of completing this section)

The following outcomes data was collected from August 2015-December 2017.

- 308 full appointments with 232 unique patients in rural Hardin County
 - 107 (46%) of these patients were referred for follow up
 - 72 of these patients that were referred had previously undiagnosed health conditions that they are now aware of
- 503 patients screened for elevated blood pressure
- 121 patients screened for sun damage with the skin scope screening
- 18 patient seen for tobacco cessation
 - 7 (39%) of these patients are currently tobacco free
- 7 patients screened for hepatitis C
 - 7 patients were found to be negative
 - The patients had, on average, 1 risk factor each for hepatitis C
- 211 patients screened for hyperglycemia
 - 126 (60%) of these patients had an elevated blood glucose
- 175 patients screened for dyslipidemia
 - 132 of these patients had a lab value that was outside ideal range

Additionally, a survey was administered in the clinic in 2017 to assess patient's satisfaction with the mobile clinic. The patients were asked to rate statements on a scale of 1-5, with 1 being "Strongly Disagree" and 5 being "Strongly Agree". The following statements were included:

- I found my participation in the ONU HealthWise mobile clinic program to be valuable because it increased my understanding of the role of my medication in my illness.
- Attending appointments for ONU HealthWise mobile clinic was convenient.
- Lab results and/or medications were obtained and explained to me in a timely fashion.
- I felt that my privacy and confidentiality were maintained in the ONU HealthWise mobile clinic program.
- Participation in ONU HealthWise increased my commitment to a healthy lifestyle and management of my disease state.
- I found the provider(s) to be courteous.
- I found the provider(s) to be knowledgeable.
- The provider(s) listened to my concerns and answered my questions in a way I could understand.
- I did not feel rushed during the appointment.

43 patients completed the survey over the year and results ranged from 3-5 for each statement. The average response was 4.92 on the 5-point scale.

B. Recognition

The mobile clinic has had several articles written in local newspapers over the last three years. There have been two articles written about the mobile clinic; one in Pharmacy Today and the other in Drug Store News. Our collaboration with Hardin Memorial Hospital was featured in their yearly newsletter. The director of the mobile clinic was awarded the Public Relations Award at the Ohio Pharmacists Association Annual Meeting in April 2018.

Part VI: Challenges & Innovative Solutions

One challenge has been following up with patients that have been identified through screenings. Though we have been referring each patient to primary care and/or the federally qualified health center, there are some patients that we also would like additional follow up with. To address this challenge, we had student volunteers make follow up phone calls to patients requiring follow up. The student pharmacists making these phone calls ensure that the patient is doing well and/or has followed up with medical care as appropriate. Additionally, marketing has been a challenge throughout the grant period. This is an on-going challenge that has been addressed continually by trying different forms of advertising and utilizing new community partnerships. We have also utilized the Communications and Marketing Department at ONU.

Part VII: Sustainability

A. Structure

Involvement of consortium members has been positive and sustaining cooperation of the member health organizations does not appear to be a concern. Since there is little competition for health care in Hardin County, it is not expected that competitive concerns among the organizations will occur moving forward. All personnel at the clinic have been managed by the lead agency, which will continue to reduce the occurrence of conflicting strategies. Finally, the relationships that have been built between the mobile clinic staff and members of the community are something that will be sustained far beyond the grant period.

B. On-going Projects and Activities/Services To Be Provided

i) Will all, some or none of the elements of the program be sustainable once Outreach grant funding has ended? Please check the appropriate selection.

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained (i.e. the program will completely end after the grant period)

ii) Identify the projects and activities that will be sustained beyond Outreach grant period.

The consortium plans to continue all activities that have been offered over the last 3 years in the areas of preventive health education, medication reconciliation and management, immunization coordination, and preventive health screenings, which have been previously described. As the data above shows, the mobile clinic has shown great impact to the health of those in Hardin County, Ohio, which all members of the consortium have clearly seen and acknowledge.

Patients will continue to be provided health and wellness screenings as recommended by the US Preventive Services Taskforce (USPSTF). Student pharmacist and nurses, under supervision, will continue to provide health and wellness screenings. Consistent with the previously described needs assessment of Hardin County, individuals utilizing the mobile clinic are provided screening and assessment for: obesity (BMI calculation), dyslipidemia (point of care lipid panel), diabetes (point of care blood glucose and hemoglobin A1c), hypertension (medical history, blood pressure) osteopenia/osteoporosis (bone density assessed via quantitative ultrasound) and skin cancer (medical history, skin scope analysis.) People identified as at-risk for breast cancer, cervical cancer, and/or colorectal cancer are referred for appropriate screening through their PCP, the Kenton Community Health Center, or Hardin Memorial Hospital

C. Sustained Impact

The health care needs of the community impacted by this project are commonly seen in other rural health care settings and include issues with access to care, insufficient numbers of healthcare providers, coordination of care, and understanding of health care-related topics. The mobile clinic has shown to improve access to care by bringing health care services directly to those in need. Additionally, the use of professional students allows the mobile clinic services to provide a dual role as a focused, high

quality learning experience in addition to providing enhanced patient care. Involvement of consortium members has been positive and sustaining cooperation of the member health organizations does not appear to be a concern. Since there is little competition for health care in Hardin County, it is not expected that competitive concerns among the organizations will occur moving forward. All personnel at the clinic have been managed by the lead agency, which will continue to reduce the occurrence of conflicting strategies. Finally, the relationships that have been built between the mobile clinic staff and members of the community are something that will be sustained far beyond the grant period.

Part VIII: Implications for Other Communities

The health care needs of the community impacted by this project are commonly seen in other rural health care settings and include issues with access to care, insufficient numbers of healthcare providers, coordination of care, and understanding of health care-related topics. The mobile clinic improved access to care by bringing health care services directly to those in need. These populations have been delineated previously in this document with appropriate statistics that discuss accessibility concerns in these populations. The student pharmacists who staff the mobile clinic provided education and referral services, in coordination with other stakeholders, with the aim of improving health knowledge, coordination and continuity of care, and improvement of overall health in Hardin County. The mobile clinic provided Hardin County residents without access or with suboptimal use of the health care network in and around the community, with means to initiate contact with a multidisciplinary group of health care providers. This essential initial contact allowed for referral for primary care services, education, and implementation of preventative health services. By working with stakeholders and providing consistent follow-up, the initial contact with health care providers via the mobile clinic fostered into an effective network of care providing chronic care, education, and preventative services. The mobile clinic provided a new service that aided a community in need of improved access and further enhances the services already available in the community by increasing referral and utilization of these services.

The target area for this project, Hardin County, Ohio, is designated as a medically underserved area (MUA) and Medical Primary Care Health Professional Shortage area (HPSA). Many rural areas across the nation are likely to experience many of the same issues encountered in the target area for this project, including problems with health care-related knowledge and proper preventative and chronic health management, and a deficiency in primary care services.

Areas with health care access issues, a poor referral network, and underutilization of health care resources would benefit from a service shown to improve access and continuity of care. The concept of “bringing health care to the people” is feasible in many settings; any outreach consistently providing care for patients outside of a medical facility would serve this purpose. Periodic, rotating mobile care sites in the community that utilize existing facilities can easily be implemented with proper supplies, personnel, and time. The workforce use in the proposed project, specifically the use of health professions students, addresses issues with health professions shortages, and sustainability of the workforce. Examples of mobile clinics using student health care professionals have been described in practice models discussed previously in a variety of settings and patient populations. Although a workforce of professional students may not be available in all rural communities, many health professions training programs exist in states with vast rural areas. It is feasible to recruit groups of students from nearby universities, such as students on clinical rotations or outreach activities, or utilizing a pool of health care volunteers to boost workforce. Additionally, use of professional students allows the mobile clinic services to provide a dual role as a focused, high quality learning experience in addition to providing enhanced patient care.

Part IX: Success, Increased Capacity, and Contributions to Change

A. Defining Success

- i) How do you define “success” for your grant program? Please check the appropriate selection(s). You may choose more than one option. If other, please describe.
- Access to a new or expanded health service
 - Increased number of people receiving direct services
 - Improved quality of health services
 - Operational efficiencies or reduced costs
 - Integration of process improvement into daily workflow
 - Continuation of program activities after grant funding
 - Continuation of network or consortium after grant funding
 - Health improvement of an individual
 - Health improvement among your program participants
 - Health improvement among your community

- Enhanced staff capacity, new skills, or education received
- Improved capacity to adapt to changes in healthcare

ii) Do you believe that your program has achieved success? If so, how?

B. Organizational Capacity

How has the federal funding of your grant program increased local capacity at your organization, within your network, and/or in your community? Please check the appropriate selection. If other, please describe.

- Formalized networks or coalition
- Developed new partnerships or relationships
- Enhanced skills, education, or training of workforce
- Enhanced data collection and analysis

C. Contributions to Change

Story 1: Diabetes education/Connecting to primary care

We had an appointment with a man in the county who had a fasting blood glucose in 300s. After speaking with him, we found that he had a known history of diabetes but didn't regularly follow up with a physician for various reasons (didn't have time, couldn't afford it, it wasn't important to him). We spent a lot of time educating the patient on diabetes and the complications, including retinopathy. The patient had been experiencing blurry vision for years, but had no idea that vision problems could be related to his diabetes. He told us that no health care professional had ever spent as much time with him as we did, and how much he appreciated our time and explanations. He let us set up an appointment at the FQHC for him. We followed up with him 2 weeks later via phone - he had started insulin and was planning to follow up regularly at the FQHC for care.

Story 2. Adherence

We saw a patient who had a high blood pressure at one of our screenings. Upon questioning her, we found that she was taking ~10 medications. She was very confused about which medications needed to be taken at what time of the day. She was under the impression that many of them had to be taken at night - but she would often forget nighttime doses of medications. Her BP medications were in the group she thought she had to take at night and frequently missed doses. The students sat with her and helped develop a medication schedule that would work for her. We followed up with her 2 weeks later in person. She had not missed any doses of her medication and her blood pressure was normal.

Story 3: New diabetes diagnosis

We saw a patient at a health fair that had no known PMH of elevated blood sugar, but she did have a strong family history of diabetes. Upon checking her fasting blood sugar, we found it to be 146 mg/dL. She did have a physician that she was following up regularly with for blood pressure, so we recommended that she follow up with her blood glucose. At her next appointment, the physician checked a fasting blood glucose and found a second reading >126 mg/dL and the patient received a diagnosis of diabetes. She started on metformin and has followed up with us several times for blood glucose checks. Her blood sugar has improved and she was so thankful that we were able to catch the disease early before she had any types of symptoms or complications.

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Ohio

Part I: Organizational Information

Grant Number	D04RH28409
Grantee Organization	Ohio University
Organization Type	University
Address	1 Ohio University, Athens OH 45701
Grantee organization website	https://www.ohio.edu/
Outreach grant project title	A Comprehensive Patient Navigation Program for Rural Appalachia
Project Director	Name: Elizabeth A. Beverly
	Title: Assistant Professor
	Phone number: 740-593-4616
	Fax number: 740-593-2205
	Email address: beverle1@ohio.edu
Project Period	2015 – 2018
Funding level for each budget period	May 2015 to April 2016: \$200,000
	May 2016 to April 2017: \$200,000
	May 2017 to April 2018: \$200,000

Part II: Consortium Partners

* Indicates consortium partners who signed a Memorandum of Understanding/Agreement

Partner Organization	Location (town/county/state)	Organizational Type
Ohio University	Athens, Athens County, OH	University
Ohio University Diabetes Institute	Athens, Athens County, OH	University
Ohio University Heritage College of Osteopathic Medicine	Athens, Athens County, OH	Medical School
Family Navigation Program	Athens, Athens County, OH	Community Health Programs
Southeastern Ohio Legal Services	Athens, Athens County, OH	Legal Aid
OhioHealth Endocrine Center	Athens, Athens County, OH	Specialty Clinic
Free Diabetes Clinic	Athens, Athens County, OH	Community Clinic
OhioHealth Primary Care	Athens, Athens County, OH	Primary Care Clinic
Diabetes Community Partners	Athens, Athens County, OH	Community Coalition

Part III: Community Characteristics

A. Area

The Comprehensive Patient Navigation Program serves patients in the Appalachian counties of Athens, Hocking, Meigs, Morgan, Perry, and Washington in Ohio.

B. Community description

Diabetes is one of the most significant health problems in the United States, affecting approximately 9.4% of the national population and an alarming 19.9% of adults in rural Appalachian Southeastern Ohio. Rates of diagnosed diabetes are extremely high in each of these six counties served by the Navigation Program (Athens (14.2%), Hocking (21.9%), Meigs (19.3%), Morgan (22.5%), Perry (19.8%), and Washington (20.0%) counties). Further, recent county health rankings show that the Southeastern Appalachian region of Ohio ranks in the bottom half of poorest health outcomes, with three of the six counties ranking in the bottom quarter (Athens #72, Morgan #78, Meigs #66 out of 88 counties). Furthermore, all six of these counties are designated as health professional shortage areas for dental care and mental health; in addition, Morgan, Perry, and Washington counties are designated as health professional shortage areas for primary care. Approximately 49,000 diabetes patients live in these six counties, the vast majority being type 2 diabetes patients.

C. Need

In rural Southeastern Ohio, diabetes rates are more than double the national average. Here, diabetes patients are more likely to have delayed diagnoses, limited access to health care, lower health literacy, and lower empowerment. Moreover, the Appalachian counties located in Southeastern Ohio are designated as economically "distressed," with nearly a third of residents living below the poverty line. For these reasons, patients are more likely to suffer from macrovascular (i.e., cardiovascular disease) and microvascular complications (i.e., retinopathy, nephropathy, neuropathy), adult-onset blindness, lower limb amputations, food insecurity, and depression.

Ohio ranks 45th in the United States for food insecurity. Approximately 16% of Ohioans or 1 in 6 adults live in food-insecure households, which includes nearly 25% of children and 18% of older adults. Athens County, where Ohio University is located, has a food insecurity rate of 20.4%, which is the highest rate in the state. Food insecurity is associated with higher risks for chronic diseases, including obesity, cardiovascular disease, nutritional inadequacies, and overall poorer health. Specific to diabetes, food insecurity is associated with increased risk for the disease as well as suboptimal glycemic control.

Comorbid depression is especially high among type 2 diabetes patients in Southeastern Ohio, with one in three adults reporting clinically significant depressive symptoms. Depression can decrease adherence to dietary, exercise, and medication regimens and lead to suboptimal glycemic control. Depression also is associated with the presence of serious complications (e.g., retinopathy, neuropathy, nephropathy, macrovascular complications of cardiovascular disease, hypertension, and sexual dysfunction), poor physical functioning, increased hospitalization, and mortality. Rates of diabetes and comorbid depression in rural Appalachian Southeastern Ohio are disproportionately high compared to other regions in the country. The substantial burden of comorbid depression may reflect barriers endemic to rural areas (e.g., poverty, income inequality, unemployment, lack of home ownership). Thus, addressing depression in diabetes care is needed in light of the economic vulnerability of this region.

The high prevalence of diabetes and comorbid conditions in our region, along with the identified needs and gaps in services, were the focus of our Comprehensive Patient Navigation Program.

Part IV: Program Services

A. Evidence-based and/or promising practice model(s)

The Comprehensive Patient Navigation Program adopted the following evidence-based practice models:

Patient Navigation Model: We selected the Patient Navigation model based on empirical evidence demonstrating reduced barriers and improved outcomes for cancer care. Created by Dr. Harold P. Freeman in 1990, patient navigation was developed to eliminate barriers to timely breast cancer care (e.g., financial barriers, communication and information barriers, medical system barriers, and emotional barriers) at the Harlem Hospital Center in New York City. The Harlem Patient Navigation Intervention improved early detection of breast cancer (stage 0 and 1) from 6% to 41% and increased the 5-year survival rate from 39% to 70%⁶³. Our Diabetes Navigation Program shares the principles of Freeman's model of patient navigation, with an intent to promote timely movement of patients through the fragmented healthcare system and eliminate barriers to diabetes care. We employed a nurse navigator given the importance of understanding the complexities of diabetes and its management. The diabetes nurse navigator addressed the financial, communication, structural, emotional, and sociocultural barriers that often prevent or delay timely care.

Medical Legal Partnership (MLP) Model: We selected the Medical Legal Partnership (MLP) model because of its ability to transform clinical systems. MLPs are flourishing nationally as innovative strategies that impact the health economics of individuals and hospitals/practices where the patient population is overwhelmingly impacted by social determinants of health. Many health disparities (e.g., housing, utilities, legal status, social security benefits) are rooted in legal problems. We collaborated with Southeastern Ohio Legal Services, a firm dedicated to providing legal help to Appalachian families with low income and limited assets, to assist patients in accessing insurance, social service benefits, disability benefits, housing, food benefits, and addressing health-related employment issues. Services that provide legal rights relating to medical practice are a promising addition to the health care field. Financial and insurance issues limit access to care, and subsequently increase health care costs and decrease patient well-being.

Community Coalition Model: We selected the Community Coalition model because of its ability to raise community awareness about diabetes, build community capacity, encourage a process of 'change-in-change agents', and advocate for community policy reform to improve diabetes resources. Patient-centered and participatory outcomes research models argue for the full inclusion of the consumers. Community Coalitions are situated in the community and accessible to multiple providers in the region, rather than

isolated within a single-practice setting or hospital. The goal Community Coalitions are to coordinate and collaborate efficiently with multiple sectors of the community to maximize limited resources. Community Coalitions have the authority to design and implement programmatic initiatives, as well as inform practice patterns by creating an effective communication channel between consumers and the professional workforce.

B. Description of Activities

We designed the Comprehensive Patient Navigation Program for Rural Appalachia to improve health outcomes and lower health care expenditures for people with diabetes. The Program consists of the components: 1) Diabetes Navigation Program; 2) Medical Legal Partnership (MLP) Program; and 3) the Community Coalition. Below we describe the activities of each component.

- The Diabetes Navigation Program expanded access to care and enhanced care coordination via nurse navigators. Our Diabetes Navigation Program shares the principles of Freeman's model of patient navigation, with an intent to promote timely movement of patients through the fragmented healthcare system and eliminate barriers to diabetes care. Diabetes navigation addresses the financial, communication, structural, emotional, and sociocultural barriers that prevent or delay timely care. We employed nurse navigators given the importance of understanding the complexities of diabetes and its management. Nurse navigators helped to connect patients with social service and benefit agencies and providers. The goal was to empower patients to participate in healthcare decisions and offer support for patients who are struggling to manage diabetes. Specific responsibilities included the following:
 - Explaining diagnostic reports
 - Accessing benefits patients qualify for
 - Helping patient access legal services
 - Providing one-on-one support
 - Advocating for the patient
 - Providing a consistent point of connection
 - Assisting family members and caregivers
- The Medical Legal Partnerships (MLP) is a new promising practice. MLPs address patients' health-harming legal needs that cannot be treated effectively without legal care. Types of assistance that MLPs provide include public benefits, public and private health insurance, wills and health power of attorneys, guardianships, landlord-tenant problems, immigration cases, domestic violence, child support and custody, bankruptcy, estate planning, and military discharge upgrades for mentally ill veterans. For this project, the MLP worked with the navigator to address a patient's legal needs in order to better treat diabetes and prevent further social barriers that negatively impacted diabetes care.
- The Community Coalition was formed to engage community members with diabetes in our program. We strongly believe that patient engagement is essential to building trust in the region. We acknowledge that personal trust is hard to gain in Appalachia, but once gained, is also hard to lose. Community member and group leaders met monthly to forth a new group name, Diabetes Community Partners (DCP), articulate a clear vision and mission statement, and select their programmatic their programmatic initiative for rural southeastern Ohio (i.e., peer-to-peer diabetes mentoring).

C. Role of Consortium Partners

The Ohio University and the Ohio University Heritage College of Osteopathic Medicine served as the lead grantee responsible for all programmatic activity and fiscal responsibilities, including contracting, budget monitoring, institutional review board approvals, implementation of proposed activities to accomplish stated objectives and goals, strategic planning, program evaluation, and progress reporting. The Ohio University Diabetes Institute provided leadership for the Community Coalition, "Diabetes Community Partners", and additional support for the Diabetes Navigation Program. The Family Navigation Program provided the nurse navigators for the Diabetes Navigation Program. Southern Ohio Legal Services provided the Medical Legal Partnership (MLP) services for the Consortium. The OhioHealth Endocrine Center, the Free Diabetes Clinic, and the OhioHealth Primary Care clinic were clinic partners on the Consortium and referred patients to the Comprehensive Patient Navigation Program. Finally, the Diabetes Community Partners was the Community Coalition that consisted of community members with diabetes who were trained in peer-to-peer mentoring.

Part V: Outcomes

A. Outcomes and Evaluation Findings (do not submit your Evaluation Report in lieu of completing this section)

The Diabetes Navigation Program has provided services to 113 diabetes patients in rural southeastern Ohio (mean age=57±16.0, 59% female, 98% white, mean A1C=9.1±2.4, mean BMI=36.7±9.5, mean depression score=9.7±7.3, mean diabetes distress

score=8.4±6.4). At baseline, 77.8% of the patients had hemoglobin A1c (A1C) levels above target or greater than 7.0%, 26.8% reported moderate to severe depression, and 52.8% reported high diabetes distress levels. The most common barriers to diabetes care included finances (86%), food insecurity (71%), transportation (41%), housing (35%), legal issues (33%), domestic violence (14%), and literacy (12%). At 6-month follow-up, patients (n=25) showed a significant improvement in A1C from baseline to 6-month follow-up (mean change: -1.3 points, t=3.096, p=0.005); however, we observed no improvements in depression (mean change: -3.6 points, t=1.910, p=0.074) or diabetes distress (mean change: -2.3 points, t=1.893, p=0.078). The lack of significant findings in depression scores and diabetes distress levels is likely attributed to the small sample size at 6-month follow-up (n=17, n=16 respectively). We are continuing to collect 6-month follow-up data and expect to see differences as the sample size increases over time. The nurse navigator provided increased insurance coverage (59%), food stamps (50%) and emergency food boxes (16%), permanent or temporary housing (23%), diabetes education (21%), reduced hospital bills (14%), diabetes medication (17%), and emotional support (71%). These data are promising though more data are necessary to evaluate the clinical effectiveness. The next step is to design a randomized controlled trial to test the efficacy of navigation as compared to usual care. In the long term, this work has the potential to reduce health disparities and improve access to care for in Appalachian Ohio. Lastly, the cost-effectiveness analysis is underway; we expect to see decreases in emergency department utilization, hospital admissions, and hospital readmissions.

The MLP works in tandem the navigator to address a patient's legal needs in order to better treat diabetes and prevent further social barriers that negatively impact diabetes care. Over the course of this project, the MLP provided advice or brief service to 21 individuals and extended representation in 8 cases. An example of the extended representation cases is described as follows: Mr. C was referred to the MLP for help with housing. He was facing foreclosure: recently widowed, with the loss also of his wife's income he could no longer afford his house payments or the upkeep on the home. He was hoping to get into subsidized housing, but he had a past criminal conviction that barred his admission. With help through the MLP, Mr. C. learned he was eligible to have his criminal record sealed. An application for expungement was filed with the Court. The MLP attorney represented Mr. C. at a full hearing and presented evidence showing that Mr. C. had rehabilitated himself fully, including from his Nurse Navigator about his current needs. The sealing of his criminal record was granted by the Court. The MLP also represented Mr. C. at an informal hearing with the landlord who had initially denied his housing application based on his criminal record. With extensive advocacy by both the MLP and his Nurse Navigator, Mr. C. was able to move into decent housing that he could afford, better able to manage his diabetes with secure housing.

The Diabetes Consumer Coalition was created to mobilize community members with diabetes along with key healthcare personnel to make southeastern Ohio more diabetes friendly. Coalition members put forth a new group name, Diabetes Community Partners (DCP), articulated a clear vision and mission statement, and selected peer-to-peer diabetes mentoring as their programmatic initiative for rural southeastern Ohio. Ten coalition members completed six two-hour training sessions in peer-to-peer diabetes mentoring. To assess members' experiences with DCP, we conducted a qualitative case study to evaluate the program. Qualitative case studies allow researchers to gain insight into the best practices of a program. All coalition members participated in in-depth individual interviews. Three themes emerged from the analysis: 1) A Helping Spirit: When asked why they became involved in DCP, leaders and members explained that they saw themselves as helpers, supporters, and peers to individuals living with diabetes in the community. Participants agreed that DCP was necessary to give support to diabetes patients who might not have support at home. 2) The Value of Emotional Support: Participants readily acknowledged the importance of emotional support and talking to others about how diabetes makes you feel. For many of these participants, DCP gave them hope because they were helping others and themselves at the same time. 3) The Power of Mentorship: Leaders and members enjoyed learning more about diabetes while supporting each other through the six-week program. Participants recognized that if an individual was receptive, mentorship could be very powerful. Importantly, they noted the significance of being non-judgmental and being honest with mentees that they did not have all the answers. To date, the DCP members have mentored 20 individuals with diabetes.

B. Recognition

Findings from the Comprehensive Patient Navigation Program for Rural Appalachia have been featured at regional, national, and international scientific conferences:

Beverly EA, A Comprehensive Patient Navigation Program for Type 2 Diabetes Program in Southeastern Ohio, 2016 Ohio Rural Health Conference and Flex Annual Meeting, Columbus, OH, August 25-26, 2016.

Beverly EA. A Comprehensive Patient Navigator Program for Diabetes Patients Living in Rural Appalachia. Poster presentation, Society of Behavioral Medicine, San Diego, CA, March 29-April 2, 2017.

Beverly EA. Comprehensive Patient Navigation Program for Rural Appalachia. Oral presentation, 2017 Ohio Osteopathic Symposium, Columbus, OH, April 19-23.

Beverly EA. Comprehensive Patient Navigation Program for Rural Appalachia. Panel Presentation, Ohio University Diabetes Summit, Athens, OH, May 10, 2017.

Beverly EA, Jensen, L. Troike K. The Feasibility and Efficiency of a Diabetes Navigation Program in Rural Appalachia. Poster Presentation, University of Kentucky Barnstable Brown Diabetes and Obesity Research Day, Lexington, KY, May 18, 2017.

Beverly EA, Jensen, L. Troike K. The Feasibility and Efficiency of a Diabetes Navigation Program in Rural Appalachia. Poster Presentation, American Diabetes Association 77th Annual Scientific Sessions, San Diego, CA, June 9-13, 2017.

Beverly EA, Meeks S, Preston J, Rubin A, Cook K, Standley M. Diabetes Patient Navigation: A Promising Model to Improve Communication between Patients and Providers. Oral Presentation, Communication, Medicine, and Ethics (COMET) Conference, Indianapolis, IN, June 26-28, 2017.

Beverly EA. A Comprehensive Diabetes Navigation Program to Help Address Food Insecurity in Rural Southeastern Ohio", Ohio University Heritage College of Osteopathic Medicine Diabetes Coalition Quarterly Meeting, Athens, OH. September 20, 2017.

Beverly EA, Cook K, Kerwin K. Diabetes Community Partners: A Case Study of a Diabetes Community Coalition in Rural Appalachian Ohio. Poster Presentation, Society of Behavioral Medicine, San Diego, CA, April 11-14, 2018.

Beverly EA, Guseman EH, Cook K, Standley M. A Nurse-Led Diabetes Navigation Program for Rural Appalachian Ohio. Poster presentation, American Diabetes Association 78th Annual Scientific Sessions, Orlando, FL, June 22-26, 2018.

Part VI: Challenges & Innovative Solutions

The referring providers and navigators served the same population; however, the differences in organizational culture and vision contributed to difficulties with cross-system integration of services. Both providers and navigators identified the referral system, lack of access to electronic health records (EHR), patient documentation, and physical location as ongoing challenges to the program. The navigators were employed by the University and not the providers' practices; and therefore, were not located in the clinics and did not have access to the EHR. These two logistical barriers contributed to challenges with the referral system and documentation of patient visits. To refer patients to the navigator, providers and staff at the clinics had to fill out a form and submit medical chart information via facsimile (fax) machine in order to protect sensitive patient data. This process created additional work and frustration for the providers and office staff.

The fax referral system also led to noticeable delays in receiving referrals. Navigators often received referrals three to five days after the order was placed in the EHR. Moreover, navigators did not always receive medical chart information or the reason for the referral, which left them wanting more information. Navigators explained that they needed to know why providers were referring patients to them so that they could prepare and plan for patient intakes.

The other main challenge identified by the participants was documentation of patient visits. Providers wanted frequent updates detailing the navigators' progress with each patient, following the SOAP (Subjective, Objective, Assessment, and Plan) note format. However, the navigators collected information that was not typically discussed or observed in a clinic setting, and therefore did not conform to standard patient record documentation.

Further, patient documentation was faxed to the clinics to be scanned into the EHR. Similar to the referral system, the fax documentation system resulted in delays in receiving and updating documentation of navigation visits. All participants agreed that access to the EHR would improve communication and timeliness of the documentation.

While we were not able to provide access to the EHR or co-locate the navigator in the clinics, we were able to resolve the issues with the referral system and documentation of navigation visits. We revised the referral form to include the reason the provider was referring the patient, health disparities the provider would like the navigator to address, and current hemoglobin A1c level and blood pressure. For the documentation form, we included the social determinant needs, the services provided, the diabetes education that was reinforced, progress that was made, number of visits with dates, next schedule appointment, and status of the case. These forms have been well received by the providers and navigator and we will continue to use them indefinitely.

Part VII: Sustainability

A. Structure

Members of the Diabetes Consortium include Ohio University, the Ohio University Heritage College of Osteopathic Medicine, the Ohio University Diabetes Institute, Southeastern Ohio Legal Services, the OhioHealth Physician Group Heritage College Diabetes Endocrine Center, the Free Diabetes Clinic, OhioHealth Physician Group Heritage College Primary Care, and Diabetes Community Partners (Community Coalition). The Family Navigation Program, which was responsible for the Diabetes Navigation Program in the grant, will continue to be a supportive presence but will not be an active member of the ongoing operations. The Family Navigation Program is transitioning from a Diabetes focus to a Maternal, Infant, and Child health focus beginning in May 2018. From now on, navigation services will be delivered by the Ohio University Diabetes Institute. Members of the Diabetes Consortium will continue to meet on an as needed basis. New community partners will be encouraged to join.

B. On-going Projects and Activities/Services To Be Provided

i) Will all, some or none of the elements of the program be sustainable once Outreach grant funding has ended? Please check the appropriate selection.

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained (i.e. the program will completely end after the grant period)

ii) Identify the projects and activities that will be sustained beyond Outreach grant period.

Diabetes Navigation: Diabetes navigation will continue with some modifications. Diabetes navigation services will be delivered by the Ohio University Diabetes Institute. In addition, we will be adding community health workers to provide navigation services as they may be a more cost-effective strategy in the long-term. The number and extent of navigation services will be determined by external grant funding.

Medical Legal Partnership (MLP): Our MLP provider, Southeastern Ohio Legal Services (SEOLS), a civil legal aid practice, which is sustainable in nature by public and private donations. We will continue to work with the Managing Attorney as the MLP and refer clients in need of legal services to SEOLS. She will provide help with health benefit issues, school problems, housing issues, employment problems, utility questions, family law problems, consumer problems, cash benefit issues and other issues. We will continue to submit grants to local foundations to support the MLP program.

Diabetes Community Partners (DCP): The community coalition is situated in the community and accessible to multiple providers in the region, rather than isolated within a single-practice setting or hospital. The goal of DCP, as articulated by the members, is "to coordinate and collaborate efficiently with multiple sectors of the community to maximize limited resources." The peer-to-peer diabetes mentoring training program, developed with the HRSA grant, was a critical component of our sustainability strategy. We will continue to focus our efforts on expanding the reach of DCP well as train additional community members in the peer-to-peer mentoring program. Ten community members have been trained as peer mentors and will continue to mentor people in the community with diabetes. The group leader will continue to lead DCP and her time and effort will be covered by the Ohio University Diabetes Institute. We will explore external grant funding to extend the reach of the DCP; we know there is great interest from funders in using patient engagement models as a sustainable approach for improved health outcomes.

C. Sustained Impact

The Comprehensive Patient Navigation Program for Rural Appalachia has been integrated into the way care is delivered in Southeastern Ohio, which will have many sustained impacts. Our efforts have improved the health outcomes of our most underserved diabetes patients by addressing the social determinants that contribute to health disparities. The diabetes navigator improved diabetes care by providing culturally and developmentally appropriate education, offering support and advocacy, increasing access to care, screening for depression and self-care practices, and serving as a consistent point of connection to address questions and needs in a timely manner. The Medical Legal Partnership (MLP) provided legal help to assist patients in accessing insurance, social service benefits, disability benefits, housing, food benefits, and addressing health-related employment issues. The Diabetes Community Partners (DCP) community coalition developed a formal peer-to-peer training program for community members; ten members were trained in mentoring and 20 community members have received mentoring.

As a result of this program, providers recognize the value and impact of collaborating with navigators to perform outreach services in the patients' homes and act as a health care extender for the provider to accomplish in the field.

We have established an extensive list of community resources that we will continue to maintain and update for future navigation programs. In addition, this information will be made available to other health providers in the region via the Ohio University Diabetes Institute. Specifically, we plan to create an online dashboard that organizes and stores the list of community resources for future navigation programs as well as for health care providers so that they have a central source for resources in the region. The online dashboard is a sustainability strategy because future programs will not need to invest the time and man power to identify resources in the community.

The written peer-to-peer curriculum that was developed for the Diabetes Community Partners (DCP) community coalition is a sustained impact because it provides training to future community members interested in becoming peer mentors to people living with diabetes. In addition, the written curriculum is a sustainability strategy because it will not require additional costs for future trainings because the material is already prepared and will not require additional time or man power to develop. The curriculum will be available to train any new community members interested in joining DCP and becoming a peer mentor. Further, the training that has been given to these diabetes patients will have a lifelong impact on helping them manage their disease. All of the DCP members have made lifestyle changes that will not only improve their diabetes control, but will also help them prevent microvascular and macrovascular complications. The DCP members are taking the information they have learned and are sharing it with their mentees to assist them with their diabetes self-care and glycemic control. The DCP coalition has increased awareness about diabetes in our region and knowledge of diabetes management.

We have developed collaborations with the Ohio University Psychology and Social Work Clinic that we will sustain. We used carryforward money from the grant to pilot a referral program for patients that screened high for depressive symptoms and/or other mental health issues. The Clinic will begin accepting Medicaid insurance in May 2018 so we will be able to send referrals for patients in need of mental health services. Southeastern Ohio is health professional shortage area for mental health in all six counties serviced by the grant. The addition of free mental health visits from the carryforward money resulted in 166 appointments and an average improvement in 11.25 points over the course of treatment individuals via the Outcome Questionnaire-45 (Note. A 14 point improvement in mental health outcomes is considered clinically significant on this scale).

Part VIII: Implications for Other Communities

Poverty, rural isolation, lack of public transportation, limited specialty providers, fragmentation of care, and a general lack of access to services continue to separate Appalachian families from the services they need. Our program highlights the importance of identifying strategies that complement standard medical care to mitigate health disparities for diabetes patients in rural Appalachia. We demonstrated the value in adopting evidence-based practice models to guide and inform the delivery of the Diabetes Navigation Program, the Medical Legal Partnership, and the Community Coalition. Further, we demonstrated that efficient and effective use of existing and expanded resources may be accomplished through enhanced coordination and collaboration via a Comprehensive Patient Navigation Program.

The process evaluation we conducted identified important challenges for other communities that are interested in implementing a similar program to consider; specifically, a mutually beneficial referral and documentation system to facilitate open lines of communication. We will be publishing these findings in 2018 and the referral and documentation forms will be available to interested organizations.

Finally, we showed the importance of creating new paradigms to evaluate the success and document systems changes. In our original grant, we did not plan to incorporate the Comprehensive Patient Navigation Program into the University's undergraduate curriculum or pre-clinical medical education curriculum. However, when the opportunities presented themselves, we were open to them. Both opportunities extended the reach of our programs' efforts and led to education innovations that will be sustained in the foreseeable future. Other communities should consider highlighting their efforts in K-12, undergraduate, and/or graduate education as a potential sustainability strategy.

Part IX: Success, Increased Capacity, and Contributions to Change

A. Defining Success

- i) How do you define "success" for your grant program? Please check the appropriate selection(s). You may choose more than one option. If other, please describe.
 - Access to a new or expanded health service
 - Increased number of people receiving direct services
 - Improved quality of health services

- Operational efficiencies or reduced costs
- Integration of process improvement into daily workflow
- Continuation of program activities after grant funding
- Continuation of network or consortium after grant funding
- Health improvement of an individual
- Health improvement among your program participants
- Health improvement among your community
- Enhanced staff capacity, new skills, or education received
- Improved capacity to adapt to changes in healthcare

ii) Do you believe that your program has achieved success? If so, how?

Our program achieved great success by expanding health care services to six counties in rural southeastern Ohio. One hundred and thirteen patients received diabetes navigation services to address the financial, communication, structural, emotional, and sociocultural barriers that prevent or delay timely health care. Specific services included explaining diagnostic reports to patients, accessing insurance benefits by filling out paperwork and making phone calls, referring patients to legal services at a civil legal aid firm, referring patients to mental health providers and specialty providers, increasing food stamps by filling out paperwork, delivering emergency food boxes, finding permanent or temporary housing by contacting Housing and Urban Development agencies, contacting Home Energy Assistance Program programs, providing diabetes education, reducing hospital bills through Hospital Care Assurance Programs, distributing diabetes medication at no or reduced cost, obtaining transportation services through public insurance programs, attending medical visits, serving as a consistent point of connection, and offering emotional support. These services resulted in a decrease in Hemoglobin A1c, which is a measure of an individual's diabetes control. Thus, Comprehensive Patient Navigation Program led to an improvement in the health of the individuals served by the program. In addition, the MLP program provided legal services to 29 individuals - advice or brief service to 21 individuals and extended representation in 8 cases. Lastly, the Community Coalition, Diabetes Community Partners, developed a peer-to-peer mentoring program for the community that will continue after the grant funding period ends. Ten mentors were training during the grant period and 20 community members were mentored. The continuation of Diabetes Community Partners demonstrates the importance of building community capacity in rural Appalachia and encouraging group agency to advocate for reform to improve community resources.

B. Organizational Capacity

How has the federal funding of your grant program increased local capacity at your organization, within your network, and/or in your community? Please check the appropriate selection. If other, please describe.

- Formalized networks or coalition
- Developed new partnerships or relationships
- Enhanced skills, education, or training of workforce
- Enhanced data collection and analysis

C. Contributions to Change

Change in individuals' lives, your organization, consortium, or community:

Mr. S. is an older man with multiple serious health problems, including diabetes and cardiovascular disease. His wife has cancer. Together they live in a very rural part of Meigs County. His wife's weekly chemotherapy sessions are in Lancaster, Ohio, which is over 60 miles one-way from their home. The couple was getting the minimum food assistance/SNAP allotment, \$15 per month. They were referred to the Medical Legal Partnership (MLP) provider who informed them that their medical travel expenses were deductible from their countable income. Their food assistance was increased to \$78 per month prospectively. In addition, the MLP filed an appeal on the issue of whether their household was entitled to restoration of lost benefits for retroactive months. The court ruled in their favor and they won the appeal. As a result, Mr. S is able to purchase healthier food to better manage his diabetes.

Ms. R., who has diabetes, was represented by the MLP when she sought help to escape from domestic violence in her long-term marriage. She had filed a petition for a civil protection order. Her husband appeared for the full hearing and contested the case. After testimony from both parties, the Court issued a full five-year civil protection order which included provisions that Mr. R. continue to maintain health insurance coverage for his wife. As a result, Ms. R. was able to get out of a violent situation that was threatening her physical well-being and to continue to have health insurance which covered her necessary medications. She has been better able to care for herself; and is now working with the MLP to terminate the marriage with an equitable division of assets.

Ms. H. is 76-year-old woman with type 2 diabetes. She has a fasting glucose of 227, a BMI of 38, high triglycerides, and a history of neuropathy. She wanted to enroll in Medicare Part D but had to pay a large penalty. She had been paying for all of her medications out of pocket. She applied for a medical card 3 times and was denied each time. Also, she was struggling with her diabetes diet and felt isolated because she had no support system. She was referred to the patient navigator and met with her multiple times. The navigator was able to increase her food stamp assistance from \$16/month to \$169/month. In addition, the navigator enrolled her in the Social Security Extra Help program that provides Medicare Part D coverage at no cost and her monthly medications cost \$7 each, saving her \$800/month. Finally, the navigator worked with three different agencies to grant Ms. H a 100% discount on medical bills saving her \$300. Over the next few months, Ms. H increased her physical activity, lowered HbA1c by 0.4%, decreased her triglycerides, and improved her cholesterol.

In December of 2016, we conducted a process evaluation to assess the how the Comprehensive Patient Navigation Program was delivered as well as how it was experienced by the navigators, providers, health administrators, and office staff of the Diabetes Endocrine Center in rural Appalachian Ohio. Understanding the key components of a program is critical to ensuring its effectiveness and sustainability over time. Thus, to support the advancement of the Comprehensive Patient Navigation Program, we conducted this evaluation to learn about its successes and challenges in its first year of implementation. From this evaluation we identified two logistical barriers that challenged the organization and efficiency of the program: the referral process and documentation of navigation visits. In response, we developed a new referral form to reduce barriers to accessing the navigator as well as a new documentation form to streamline communication with providers. Both forms will be used indefinitely by our organization as we continue our efforts with patient navigation in Appalachian Ohio.

Changes in policies, systems, and environment:

We incorporated the program design and outcomes in a new certificate course offered at Ohio University entitled, T3 4400 Seminar in Wealth and Poverty. This is an interdisciplinary capstone seminar course for undergraduate students who are interested in issues related to poverty, inequality, and wealth distribution. The principal investigator of the HRSA grant taught the health content and incorporated the Comprehensive Patient Navigation Program for Rural Appalachia as an online module to educate students about social determinants of health and rural health disparities in Southeastern Ohio. Educating future generations about the benefits of patient navigation, MLPs, and community coalitions will help ensure the sustainability of these models in the years to come.

In January 2018, the Diabetes Community Partners members participated in a patient panel to educate second year medical students about diabetes. People with diabetes report high rates of stigma. The most common stigma is the perception that people are responsible for developing their diabetes. Thus, innovative educational interventions are critical to dispel diabetes stigma, particularly for future physicians, as the number of people with diabetes continues to rise. We conducted a feasibility study to evaluate the impact of a contact-based educational approach in an Endocrine and Metabolism course. We measured changes in the Diabetes Attitudes Scale and explored students' diabetes stigma. Two hundred and eight students (25.6±3.2 years, 45.2% women, 72.0% white; response rate 85.6%) completed the survey. Fifty-five (29.4%; total n=187) reported diabetes stigma, primarily towards type 2 diabetes. After the panel, we observed positive improvements in diabetes attitudes for all five subscales: "Need for special training" (t-value= -2.215, p=0.028, n=177); "Seriousness of type 2 diabetes" (t-value= -4.461, p<0.001); "Value of tight glucose control" (t-value= -2.054, p=0.042); "Psychosocial impact of diabetes" (t-value= -5.577, p<0.001); and "Attitude toward patient autonomy" (t-value= -3.061, p=0.003). We observed the largest magnitude of change with the "Psychosocial impact of diabetes" subscale, with a Cohen's d of 0.60 indicating a medium effect.

Following the panel, 106 students (77.4%, total n=137) showed a positive change in their attitudes toward diabetes with most noting an increase in empathy and understanding of the disease. The contact-based education patient-panel positively changed students' attitudes toward diabetes. Qualitatively, many students acknowledged their biases prior to the panel and many reported changing their views after listening to Diabetes Community Partners members' stories. This is the first study to explore diabetes attitudes and diabetes stigma in medical students. Importantly, this study showed that diabetes stigma can be changed with a simple and time-efficient education intervention using community members with diabetes.

Ohio

Part I: Organizational Information

Grant Number	D04RH28379
Grantee Organization	Trinity Hospital Twin City
Organization Type	Critical Access Hospital
Address	819 N. First Street, Dennison, OH 44621
Grantee organization website	www.trinitytwincity.org
Outreach grant project title	Trinity Hospital Twin City Comprehensive Diabetes Prevention Project
Project Director	Name: Timothy McKnight, MD Title: Fit for Life Project Director Phone number: 740-922-7450 ext. 2198 Fax number: 740-922-8038 Email address: care of jdemuth@trinitytwincity.org
Project Period	2015 – 2018
Funding level for each budget period	May 2015 to April 2016: \$200,000 May 2016 to April 2017: \$182,131 May 2017 to April 2018: \$173,425

Part II: Consortium Partners

* Indicates consortium partners who have signed a Memorandum of Understanding/Agreement

Partner Organization	Location (town/county/state)	Organizational Type
Chrysalis Counseling Center*	New Philadelphia, Tuscarawas County, Ohio	Mental Health Provider
New Philadelphia City Health District*	New Philadelphia, Tuscarawas County, Ohio	Health Department
Tuscarawas County General Health District*	Dover, Tuscarawas County, Ohio	Health Department
Tuscarawas County YMCA*	Dover, Tuscarawas County, Ohio	Non-profit Organization

Part III: Community Characteristics

A. Area

Services are being offered at Trinity Hospital Twin City at Dennison, Tuscarawas County, Ohio, and at consortium member locations at New Philadelphia and Dover. Services are offered to adults who are at-risk for diabetes or have been diagnosed with diabetes within the past year. Tuscarawas County has a population of 71,288 adults, and 68.2% are overweight or obese (weight is a prime indicator for diabetes risk).

B. Community description

While the Trinity Hospital Twin City Comprehensive Diabetes Prevention Project has contributed significant positive healthy lifestyle changes in the 467 adults who have participated in the project's educational programming since the project's inception, the need to continue this valuable program remains strong. 48,618 adults in Appalachian Tuscarawas County are suspected to be at-risk of developing diabetes due to being overweight or obese. Second, in Tuscarawas County, there are currently no other facilities or programs that provide a comprehensive diabetes prevention program. Third, there are few affordable gyms that adults can access for exercise in Tuscarawas County. Unfortunately, the number of adults with sedentary lifestyles and poor dietary habits (key factors leading to obesity) in our area is increasing every year. As a result, the number of at risk for contracting obesity-related illnesses and diseases such as heart disease, type 2 diabetes, high blood pressure, stroke, limb amputations, liver and gall bladder disease, sleep apnea, respiratory problems and osteoarthritis is increasing. Finally, poverty and lack of economic opportunity is a substantial challenge in this region. In Tuscarawas County, 13.6 % of the population is at or below the federal

poverty line and more than 65,000 people live at less than 200 percent of the federal poverty line. In 2010, per capita income was \$21,724 in Tuscarawas County, compared to \$25,857 in Ohio and the national average of \$28,051. (All data from US Census Bureau 2010)

C. Need

There are no comprehensive diabetes prevention programs in our area other than our grant-funded program. With 36.2 % of Tuscarawas County adults overweight and another 32% obese, the number of adults (48,618 as listed above in the community description section) who are at risk for diabetes is high. Diabetes is one of the top causes of death in Tuscarawas County, killing 44.9 of every 100,000 residents from 2006 to 2008. Unhealthy lifestyles increase the risk for diabetes; and the Centers for Disease Control report that without lifestyle changes to improve their health, 15% to 30% of people with prediabetes will develop type 2 diabetes within 5 years.

Our project consortium has been positioned to effectively address the need for diabetes prevention education through a unique multi-agency approach including lead agency, Trinity Hospital Twin City; Chrysalis Counseling Center (a mental health provider); two local health departments (New Philadelphia City Health District and The Tuscarawas County General Health District); and the Tuscarawas County YMCA. Together, the consortium works to achieve the project's goal to reduce the number of rural Tuscarawas County residents who are at risk for diabetes by providing an innovative, comprehensive approach to diabetes prevention through diet, exercise and behavior modification classes.

Part IV: Program Services

A. Evidence-based and/or promising practice model(s)

Through the current grant project, we provide a diabetes prevention education focus by adapting the Fit for Life promising practice model. The Fit for Life curriculum is adapted to cater more specifically to those at-risk for diabetes, including the addition of supplemental lifestyle coaching from trained mental health and fitness professionals. Additionally, the model has been adapted to provide class members with three monthly meetings after the initial 12 weekly meetings, making the entire course a 6-month course rather than the 3-month course of the original Fit for Life.

Trinity Hospital Twin City's Comprehensive Diabetes Prevention Project is based on the hospital's own Fit for Life promising practice model from its first five years in operation. According to most academic publications, promising practices or emerging best practices are defined as programs proven to be successful, but for which there may not yet be enough evidence to prove it has resulted in a positive outcome.

Fit for Life has produced results consistent with being a promising practice due to the positive results of reduced weight, blood pressure and cholesterol levels experienced by past Fit for Life participants. Thanks to funding from HRSA's Rural Health Care Services Outreach Program, Fit for Life programming was offered in the community setting between May 1, 2006 and April 30, 2009. Then, thanks to another HRSA Rural Health Care Services Outreach Program grant, beginning on May 1, 2009, Fit for Life programming was able to expand into actual worksites in an effort to reach more of the working poor citizens of Tuscarawas County. Community sessions also continued while the worksite Fit for Life sessions were in progress.

On May 1, 2012, the hospital received another HRSA Rural Health Outreach Program grant that enabled the formalization of the Fit for Life curriculum by being expanded and replicated by grant partner organizations in neighboring counties. Data compiled and analyzed by independent evaluation experts at the Ohio University Voinovich School of Leadership (who conducted a rigorous evaluation process) showed that the results achieved by participants at the partner locations were consistent with the original Fit for Life site (Trinity Hospital Twin City). Achieving similar results across different locations and facilitators provides evidence to establish Fit for Life as a best practice model. The experts from the Ohio University Voinovich School of Leadership and Trinity Hospital Twin City are beginning the work necessary to publish the Fit for Life data in an academic journal.

As of May 2015, more than 1,700 adults have completed Fit for Life programming. Data collected from past Fit for Life participants (any adult in the community is eligible to participate in Fit for Life) demonstrates that the average participant achieved the following results: lost 7 pounds from starting weight, lowered systolic blood pressure by 7 points, lowered diastolic blood pressure by 2.5 points, lowered total cholesterol by 13 points, and lowered triglyceride levels by 20 points. Additionally, pre- and post-behavioral surveys of the participants revealed that the number of participants exercising regularly increased by 40%, the number of participants exercising at least three days a week increased by 60%, and the number of participants eating four or more servings of fruits and vegetables daily increased by 37%. Furthermore, the average session attendance rate for Fit for Life is 81%.

The Fit for Life curriculum was developed by Project Director, Dr. Timothy McKnight, who is a Board-Certified Family Practitioner who also possesses a Master's Degree in Nutrition. Dr. McKnight utilized data from the following sources when developing the curriculum: National Heart, Lung and Blood Institute; Centers for Disease Control; American Diabetes Association; American Heart Association; National Weight Loss Control Registry and more. Fit for Life focuses on changing lifestyle behaviors to promote weight loss. Fit for Life is a behaviorally-based program designed for adults of all ages. Fit for Life emphasizes a modified DASH eating plan with moderate caloric restriction to promote a 2-4 pound per week weight loss and 150 minutes of moderate physical activity per week. Fit for Life consists of 12 weekly sessions.

Dr. McKnight's Fit for Life program's promising practice model has been very effective in fulfilling the needs of the community and has made a tremendous impact by improving health status. With a population of a little over 90,000 people in Tuscarawas County, more than 1,700 have completed Fit for Life and most with positive, life-changing results. Tuscarawas County's obesity rate is 32% compared to the state of Ohio adult obesity rate of 30% (which places Ohio as the 13th most obese state population in the nation). Literally, if Tuscarawas County were a state, it would be ranked second only to Mississippi (the U.S.'s most obese state with a rate of over 34.4%).

Overweight and obese adults are at increased risk of developing chronic diseases and suffering from psychological issues like low self-esteem, depression and behavioral problems. Over the nine years before the current diabetes prevention grant project began, the Fit for Life promising practice model had made a significant impact in reaching Tuscarawas County residents.

Now that our program has rigorous evaluation data available from 9 years of the original Fit for Life program and nearly 3 years of the current diabetes prevention Fit for Life program, we are in the process of submitting two articles for possible publication in peer-reviewed academic journals.

B. Description of Activities

The Comprehensive Diabetes Prevention Program goal is to reduce the number of Tuscarawas County, Ohio residents who are at risk for diabetes by providing an innovative, comprehensive approach to diabetes prevention through diet, exercise, and behavior modification classes. The curriculum used is a modified version of *Fit for Life*, developed by Timothy McKnight, M.D.

Dr. McKnight adapted the *Fit for Life* curriculum to cater specifically to those at risk for diabetes, including the addition of supplemental lifestyle coaching from trained mental health and fitness professionals. Trinity Hospital Twin City hired Ohio University's Voinovich School of Leadership and Public Affairs to conduct an evaluation of the Comprehensive Diabetes Prevention Program for three years, beginning in 2015.

The *Fit for Life* curriculum involves a twelve-week session that meets once a week for about 90 minutes, followed by three classes that meet once a month. The purpose is to teach participants in a lecture format (with some interactive demonstrations and hands-on activities) how to eat and exercise properly while considering personal health issues they might be dealing with and physical limitations they may have. In addition to learning about nutrition and physical activity as ways to wellness, the *Fit for Life* curriculum also addresses mental health by covering reasons for emotional eating and ways to overcome the stress that leads to emotional eating and other eating disorders. In the *Fit for Life* curriculum, individual instruction is provided by the Program Director and curriculum creator, Dr. McKnight, who is a Board-Certified Family Practitioner. Professional guest lecturers, such as a psychologist and a chiropractor, are also often included in *Fit for Life's* curriculum.

The program offers participants three visits with mental health and fitness professionals. Additionally, the group conducts at least two community diabetes prevention and awareness mini-seminars per year to reach those who cannot commit to the full-length program. Finally, free community hemoglobin A1c screenings are offered through this grant.

C. Role of Consortium Partners

The project consortium members are as follows: Trinity Hospital Twin City (lead agency), Chrysalis Counseling Center (mental and behavioral health provider), New Philadelphia City Health District (health department), Tuscarawas County General Health District (health department), and Tuscarawas County YMCA (non-profit fitness organization).

Chrysalis Counseling Center (CCC) has a long-standing history of meeting the behavioral health needs in Tuscarawas County. The organization has been serving the area for more than 25 years and has retained most of their original staff as well as added staff to their group of experienced and competent mental health professionals. CCC works with many agencies (the two health departments, the county court system, private physician offices, Job & Family Services, etc.) meet mental health needs in the county. CCC was chosen as part of the consortium because the hospital had an established working relationship with their staff, and their staff brought a level of behavioral health expertise that was lacking among hospital staff and other consortium members.

The two health departments were selected because they are the only health departments that serve residents in Tuscarawas County. Additionally, the health departments have vast experience working with the low-income population. It was felt that their involvement would provide the hospital with valuable help in effectively reaching the low-income population and also for getting our diabetes prevention class information into the hands of health department patients who are at risk for diabetes. Typically, it is very challenging to get information about hospital programs to members of the low-income population because they are less likely to have access to traditional media resources where hospital news releases might be printed. The health departments filled the gap in communication by identifying their patients who are at risk for diabetes and referring them to the THTC diabetes prevention project.

The Tuscarawas County YMCA was chosen because they are the only non-profit provider of fitness programming in the area, and the hospital had an established working relationship with them through past grant projects. Additionally, the YMCA does offer some scholarship help to community residents unable to afford fitness programming.

Each consortium member was significantly involved in the planning and implementation of the diabetes prevention project. Their roles and responsibilities were clearly defined in detail in the Memorandum of Agreement that were signed by the authorizing official of each partner agency. Numerous meetings were held with each partner prior to the submission of the original application. Once grant funding was received, consortium members attended monthly business meetings, annual half-day planning meetings, and communicated regularly via telephone and e-mail with lead agency staff. Additionally, consortium members and/or a designee participated in many of the actual diabetes prevention Fit for Life classes.

Specifically, Trinity Hospital Twin City served as lead agency to direct all diabetes prevention project activities and staff; Project Director Dr. McKnight administered the project. All consortium members attended most of the full consortium meetings which were held at least 10 times during each year of the project (monthly meetings, one month included a half-day planning meeting, and the group opted not to meet in December). Attendance at the meetings (where key project decisions were made and where the progress of the project was assessed) guaranteed significant involvement by each member. Participation in most of the consortium meetings was a specific stipulation of the Memorandum of Agreement that each agency signed.

Moreover, each agency agreed to, and carried out, specific grant project responsibilities. CCC provided one representative to attend most of the Comprehensive Diabetes Prevention Project Consortium meetings and one representative to assist in group presentations at most of the diabetes prevention classes. CCC provided psychological services for program participants that included small group therapy sessions, one-hour individual therapy sessions, or some combination of individual and small group therapy sessions for the three years of the grant project period. CCC also provided consultation services for the proposed project as an in-kind contribution.

New Philadelphia City Health District (NPHD) provided one representative to attend and consult at most of the Comprehensive Diabetes Prevention Project Consortium meetings. NPHD supported and promoted the project at community outreach activities and among employees. NPHD referred clinic clients to the project through a formal referral process. Additionally, NPHD provided free Hemoglobin A1C health screenings at their location to county residents in need.

Tuscarawas County General Health District (TCHD) provided one representative to attend and consult at most of the Comprehensive Diabetes Prevention Project Consortium meetings. TCHD supported and promoted the project at community outreach activities and among employees. TCHD referred clinic and WIC clients to the project through a formal referral process. Additionally, TCHD provided free Hemoglobin A1C health screenings at their location to county residents in need.

Tuscarawas County YMCA provided one representative to attend and consult at most of the Comprehensive Diabetes Prevention Project Consortium meetings. The YMCA supported and promoted the project at community outreach activities and among employees. The YMCA also provided fitness classes, personal fitness trainings, and fitness equipment for diabetes prevention class members.

The Project was directed by the Project Director who reported directly to and met with the Consortium Members in a monthly board setting (10 times per year, skipping December and one summer month with a half-day meeting) during each year of the grant period.

The Consortium Member Advisory Board is comprised of a member of the Trinity Hospital senior management team (either the hospital President, Chief Nursing Officer or Chief Finance Officer), the Project Director, the Project Coordinator, the Patient Navigator, the Grant Coordinator, the Certified Diabetes Educator and a representative from each Consortium Member agency.

Consortium members are required to provide input and offer suggestions for continuous improvement to the comprehensive diabetes prevention project.

The Trinity Hospital Twin City Fit for Life Grant Coordinator (with assistance from the Project Coordinator) was primarily responsible for coordinating consortium activities and communication. She provided regular e-mail updates with project information to all consortium members and kept consortium members apprised of upcoming meetings. She talked personally with each of the consortium members at least once a month (by phone and/or at consortium meetings). The Grant Coordinator also coordinated work with the Project Coordinator who communicated several times a week with project director Dr. Tim McKnight to assist in the preparation of class materials and help with his speaking schedule.

All Consortium Members were regularly involved in meetings of the Consortium Board for the Fit for Life Program. Project status information was readily available to all Consortium Members at meetings and via e-mail. Project status information was also made available to Consortium Members at any time upon their request.

Important decisions regarding the project were made with the participation of the entire Consortium when possible. If an urgent issue arose, the Project Director worked with an appointed Executive Committee out of the full Consortium Member Board to arrive at a decision. When an important decision had to be made between meetings, the Grant Coordinator communicated the issue to consortium board members via e-mail and asked for an electronic vote. If a decision had to be made immediately, it was made by the Project Director and the majority vote of the available members of the Consortium's Executive Committee.

Communication with Consortium Members occurred on an ongoing basis. Such communication was facilitated through frequent telephone conversations, faxes, email, and in Consortium Board meetings. The Project Director was readily available and accessible to Consortium Members at least twice weekly. Through this regular consortium member communication, program feedback was collected in a timely manner so that modifications could be made if necessary.

Consortium Member satisfaction was assessed twice a year (once a year at the annual planning meeting and once a year through interviews by our contracted outside evaluators).

Part V: Outcomes

A. Outcomes and Evaluation Findings

A rigorous evaluation plan was developed and executed by contracted evaluators from the Ohio University Voinovich School of Leadership. The Comprehensive Diabetes Prevention Project has seen great success in terms of positive changes in participant behaviors and indicators. The average participant lost weight, lowered their BMI, and saw a decrease in total cholesterol. Participants made statistically significant improvements in fruit and vegetable consumption and the number of days per week they exercise for 30 minutes or more. All participants responding to surveys would recommend the programs to others, and very high levels of satisfaction are reported overall. Consortium partner sites also express high levels of satisfaction with the partnership.

Below are the results that program graduates experienced in year two of the grant project (Year 3 data has not yet been cleansed and analyzed by our contracted evaluators; however, year 3 data is looking very positive thus far as well):

- 79% experienced weight loss (average of 11 pounds per person); 36% lost 5% of the starting weight or more;
- 34% of participants reduced their A1C level, and 48% reduced their cholesterol;
- 59% had an improved response on how many servings of fruits and vegetables they eat daily;
- 66% had an improved response on how many days per week they engaged in at least 30 minutes of exercise with 31% indicating they exercise 150 minutes or more each week;
- 82% of participants took advantage of the motivational counseling and fitness training offerings as part of the program.

Progress made toward overall project goals as of April 9, 2018:

- We have reached 467 adults through our diabetes prevention Fit for Life classes and mini seminars. The goal was 540 adults for the three years. We have two more mini seminars schedule in April 2018, so we feel that we will meet our goal. Each mini seminar averages 40-50 adults in attendance.
- We have provided free Hemoglobin A1C health screenings to 948 adults. The goal was 180 adults for the three years. Thanks to the work of the health department consortium members, we have really been able to exceed our goal in this area.

- We have reached 87 low-income adults (200% of poverty level or below) through our classes and mini seminars, but this does not yet include any data for year three. Our goal is to reach 120 low-income adults; we feel that we have a good chance of meeting this goal once year three data is included.

B. Recognition

Other overall program achievements include:

- Project Director, Dr. Tim McKnight, was invited to speak at a county-wide health forum in November 2016, and he was also invited to serve on the county-wide Obesity committee task force.
- Our consortium partner agencies are phenomenal. They are engaged and active in every aspect of the project. One of our partners attended the October 2016 grantee meeting with us.
- The Fit for Life program was featured in a video and article in the August 24th issue of RHI Hub's "Rural Monitor" e-newsletter. The story was listed as one of their top 10 stories for 2016.
- Trinity Hospital Twin City earned 3 national awards and one county-wide award in 2016. The hospital received the highest award from the local Chamber of Commerce, the Twin City Award, for exemplary service to the community. Recognition was also received from the National Organization of the State Offices of Rural Health for Excellence in Patient Satisfaction and Excellence in Patient Outcomes. The Studer Group awarded the hospital their Excellence in Patient Information Award.
- Our team is currently in the process of submitting two journal articles to peer-reviewed journals.

Part VI: Challenges & Innovative Solutions

As with the beginning of any large and worthwhile endeavor, we experienced several challenges during our three-year grant period. Thankfully, thanks to our robust evaluation process, the hard work and support of our staff and consortium, and the helpful advice and resources provided to us by our technical assistance provider, we saw our way clearly through the challenges.

- One of our biggest challenges was that few of our class participants took advantage of the counseling sessions and fitness training sessions we offered. Thanks to the dedication of our grant consortium member partners, we offer three counseling sessions (through Chrysalis Counseling Center) and 90 minutes of fitness training (through the Tuscarawas County YMCA). Unfortunately, during year one of our grant program, only 34% of class members did the fitness training and only 33% did the counseling sessions. Additionally, we noticed that many class members were not attending the three, monthly meetings after they completed the first 12 weekly classes. At a summer 2016 half-day meeting facilitated by our technical assistance provider, our consortium met to brainstorm ways to increase participation in the counseling and fitness offerings. Here are the solutions we decided to implement for our fall 2016 class: 1. We started referring to the counseling sessions as motivational coaching sessions and the fitness trainings as exercise coaching or sessions. 2. Counselors and fitness professionals from our partner agencies came in person at the beginning of each weekly class to meet with class members and tell them about their services. 3. YMCA trainers started offering exercise activities 30 minutes before each weekly class, which made it easier for class members to participate. 4. We created a "punch card" that listed all the sessions and all the monthly meetings. When participants completed the cards, they were entered in a raffle drawing. Our efforts paid off. Participation in counseling sessions has gone from 33% to 82% of participants, and participation in fitness training has increased from 34% to 82%. Additionally, about 70% of class members are now attending at least two of the three, monthly sessions.
- We noticed that members of our classes were not able to communicate and support each other as often after the weekly classes ended. We created private Facebook groups for each class where class members and staff can exchange messages that only the group can see. We have seen the use of the Facebook group really be helpful as a way for our staff to keep the class encouraged and for class members to encourage each other and share tips and healthy recipes. The Facebook project has helped build a sense of community and increased peer support.
- Unfortunately, throughout the three-year grant, we were unable to keep the same Project Coordinator (the lead agency staff member who works on a personal basis with each class member to register the members, weigh them, greet them, give them encouraging reminders and phone calls, and coordinate class handouts, and etc.). We had three different people work in the position of project coordinator. This lack of consistency at the position negatively affected the class registration process for 3 of our 6 class sessions, which resulted in less people in those 3 class sessions. Because of having less people in the classes, by the end of year two, we had only provided classes and mini seminars to 340 adults (our goal for the three-year grant was 540). So, prior to year three, we brainstormed at our consortium's annual half-day summer planning meeting about how to get more class members and also how to continue to reach low-income class members (we needed to reach at least another 33 low-income adults in year three). Here are the actions our consortium decided to take, and our actions have proven successful thus far: 1. To get a class with nearly 50 people, accept 60 registrants. It's been our experience that a certain number of people who register never show up to the first class and

actually take the course, so we decided to “overbook” in order to arrive at a higher total class number. 2. Host free Hemoglobin A1C screenings at local food pantries in order to identify low-income adults at-risk for diabetes and invite them to participate in our class. This process resulted in about 10 adults actually registering for and coming to class. 3. Host a mini seminar exclusively for low-income seniors. We hosted this mini seminar on April 4th and reached 41 seniors, many of whom were low-income.

Part VII: Sustainability

A. Structure

The Comprehensive Diabetes Prevention Project consortium has already started to look beyond the current grant funding. With Trinity Hospital Twin City continuing in the role of lead agency, the consortium has applied for another HRSA grant opportunity for an entirely new project that, if funded, would allow the group to create an integrated behavioral and primary health program. Additionally, the hospital and two health departments have pooled resources to apply for a local United Way grant to fund the continuation of free Hemoglobin A1C screenings. We expect to learn the outcomes of the HRSA and United Way grant applications in April 2018.

After grant funding ceases and if no further grant funds are received, our consortium (with all grant partners potentially remaining active in some way as their agency resources allow) will likely not meet in person very frequently; however, we will continue to communicate regularly via e-mail and through various planning committees. We will share ideas and continue to pursue opportunities for future collaboration on projects that benefit the community. Additionally, it is anticipated that all grant partners will be involved in the continuation of the Fit for Life classes either through providing information to their clients and/or through directly working with class members.

B. On-going Projects and Activities/Services To Be Provided

i) Will all, some or none of the elements of the program be sustainable once Outreach grant funding has ended? Please check the appropriate selection.

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained (i.e. the program will completely end after the grant period)

ii) Identify the projects and activities that will be sustained beyond Outreach grant period.

Trinity Hospital Twin City plans to continue offering Fit for Life health and wellness classes for the community two times a year. The hospital and health departments will also continue to offer Hemoglobin A1C screenings at a nominal cost (or free when funding allows) for community members. Trinity Hospital Twin City plans to sustain the Fit for Life classes and health screenings by pursuing funding from the following:

- Trinity Hospital Twin City Hospital's Community Benefit Program, a program that all non-profit hospitals are mandated to provide by the IRS
- A wellness program grant from Catholic Health Initiatives (CHI). CHI offers grants for up to \$100,000 for projects like FFL
- Additional HRSA/FORHP grant funding when available
- Explore the option of hosting an annual fundraising event like a fun run or healthy meal
- Fees collected from FFL participants to cover the cost of the workbooks and handouts
- In-kind donations from partner agencies when possible/feasible
- Grants from local foundations and organizations
- Sponsorships from local businesses
- Reimbursement from health insurance companies for those participants who have insurance that covers disease prevention and health promotion activities like FFL
- The provision of FFL for worksite wellness for companies that are able to pay for the services

C. Sustained Impact

The Trinity Hospital Twin City Comprehensive Diabetes Prevention Program has multiple sustained impacts. First, as noted by the numbers of adults reached through our classes, mini seminars and screenings in the previous section, more Tuscarawas County adults have an increased awareness of their own health and the impact that making healthy or unhealthy choices have on their bodies. Second, the strength of the program would not have been possible without the strong support and engagement of

consortium agency partners. The group worked extremely effectively together and have built working relationships that will continue to benefit the community for years to come as the group collaborates on future projects. Third, the three health agency partners (the hospital and two local health departments) acquired important lab testing supplies as part of the grant project. These portable supplies and lab testing machines have a typical shelf life of about 10 years and will enable each agency to continue providing low-cost Hemoglobin A1C health screenings for the community. Fourth, we are presently working with our evaluators to increase our chances of being published in two future peer-reviewed journal articles. Being published in a journal will generate recognition that will help us with sustainability. Finally, and probably most importantly, there are many success stories from those who have completed the diabetes prevention Fit for Life classes. They are living healthier lifestyles comprised of positive behavior changes, improved health status, and family management.

Part VIII: Implications for Other Communities

There is great potential for our project experiences and outcomes to benefit other communities that would like to implement a similar program. Through our project, we have seen tremendous positive changes in class participants. By taking the course, adults have the potential to lower their weights, increase the amount of healthy food consumption, increase their levels of activity and reduce their risk of developing diabetes and other chronic diseases related to obesity such as heart disease, hypertension, stroke and more. We recommend that other communities measure these same health indicators (weight, rate of healthy food consumption, frequency and duration of exercise, weight, BMI, blood pressure, and Hemoglobin A1C and/or blood sugar levels) as well as participant satisfaction rates.

Our comprehensive diabetes prevention project could be easily replicated in other communities, particularly those rural areas served by the nation's more than 700 critical access hospitals. Any rural community would have the potential of offering a diet, exercise and behavior modification curriculum (rather it be the Fit for Life promising practice curriculum or one of the diabetes prevention curriculums freely available through the Diabetes Prevention Program on the Centers for Disease Control website), if not in whole but in part, building the diabetes prevention program in stages. For instance, they might begin with just six weeks of classes for adults and based on those results, they can then determine if they want to add more classes. By obtaining sponsorships, any community hospital or health organization could provide community diabetes awareness seminars and health screens as well.

Part IX: Success, Increased Capacity, and Contributions to Change

A. Defining Success

- i) How do you define "success" for your grant program? Please check the appropriate selection(s). You may choose more than one option. If other, please describe.
- Access to a new or expanded health service
 - Increased number of people receiving direct services
 - Improved quality of health services
 - Operational efficiencies or reduced costs
 - Integration of process improvement into daily workflow
 - Continuation of program activities after grant funding
 - Continuation of network or consortium after grant funding
 - Health improvement of an individual
 - Health improvement among your program participants
 - Health improvement among your community
 - Enhanced staff capacity, new skills, or education received
 - Improved capacity to adapt to changes in healthcare
- ii) Do you believe that your program has achieved success? If so, how?
- Yes, we have achieved success because we have made a deep impact with this program through the education of more than 467 adults through our diabetes prevention classes and mini seminars, the provision of Hemoglobin A1C screenings for more than 948 adults which raised awareness for risk factors for diabetes and also helped some adults realize they had diabetes or were at risk for diabetes, the ability to provide education to more than 87 low-income adults, and through learning about the individual successes of our class members.

B. Organizational Capacity

How has the federal funding of your grant program increased local capacity at your organization, within your network, and/or in your community? Please check the appropriate selection. If other, please describe.

- Formalized networks or coalition
- Developed new partnerships or relationships
- Enhanced skills, education, or training of workforce
- Enhanced data collection and analysis
- Other: The Federal funding enhanced the reputation of our hospital and the Fit for Life program (halo effect). Community members concluded that Fit for Life must be a good program if the Federal government was willing to support our efforts.

C. Contributions to Change

Change in individuals' lives, your organization, or community:

A 50-year-old woman lost 50 pounds during the beginning of the second year of the project and now comes back to share her testimonial with current class members. She credits the class with helping her achieve her wellness goals and said she really appreciated the counseling services which helped her improve her mindset and recover from emotional experiences that began in her childhood. She has maintained her weight loss and has even lost more weight since completing the course. Another 50-year-old woman came to one of our free A1C health screens and had a result consistent with pre-diabetes. She said she had no idea she was at risk for diabetes, so she signed up for the diabetes prevention Fit for Life class. She just completed the 6-month course. She lost about 15 pounds and lowered her A1C.

A 62-year-old woman had tried and failed to lose weight many times. She said this is the first time she has been successful. She has lost close to 40 pounds and now is able to walk without her cane most of the time.

Changes in policies, systems, and environment:

Trinity Hospital Twin City is part of a larger system of hospitals. After learning of the success of our Fit for Life programming, our sister hospital in Steubenville, OH created a wellness program for their hospital system staff members based on the basic tenets of Fit for Life. The new wellness program began in January 2018.

Due to Fit for Live having reached hundreds of Tuscarawas County residents, the program has been widely recognized as an effective program for decreasing obesity. As such, we provided information needed by the Tuscarawas County commissioners to obtain funding for the county's community health improvement plan (combating obesity is one of the primary goals of the plan). A member of the Fit for Life staff co-chairs the county's obesity task force.

Oklahoma

Part I: Organizational Information

Grant Number	D04RH28430
Grantee Organization	Rural Health Projects, Inc./Northwest Area Health Education Center (NWAHEC)
Organization Type	AHEC-Outreach Education
Address	2929 E Randolph, Room 130 Enid, OK 73701
Grantee organization website	www.rhp-nwahec.org
Outreach grant project title	Community Diabetes Education Outreach Program
Project Director	Name: Allison Seigars
	Title: Executive Director
	Phone number: 580-213-3177
	Fax number: 580-213-3167
	Email address: agseigars@nwsu.edu
Project Period	2015 – 2018
Funding level for each budget period	May 2015 to April 2016: \$200,000
	May 2016 to April 2017: \$200,000
	May 2017 to April 2018: \$200,000

Part II: Consortium Partners

* Indicate those consortium partners who have signed a Memorandum of Understanding/Agreement

Partner Organization	Location (town/county/state)	Organizational Type
*St. Mary's Regional Medical Center	Enid, OK	Hospital
*Oklahoma State University Center for Rural Health	Tulsa, OK	University Center for Health Sciences
*Great Salt Plains Health Center	Cherokee, OK	Federally Qualified Health Center
*Enid Community Clinic	Enid, OK	Free Clinic
Rural Health Projects, Inc./NWAHEC	Enid, OK	Fiscal Agent

Part III: Community Characteristics

A. Area

Garfield, Grant, and Alfalfa counties in Northwest Oklahoma.

B. Community description

Our service area is a Health Professional Shortage Area: Grant, Alfalfa, and part of Garfield. Medically Underserved Area (MUA): Grant, Alfalfa and part of Garfield. Primary Care Shortage: Grant, Alfalfa and part of Garfield. There are only two Certified Diabetes Educators (CDEs) in the three county target area in rural Northwest Oklahoma (Garfield, Grant, and Alfalfa counties). The two CDEs, contribute 1.25 FTE to referral-only education to patients with diabetes. The combined effort of the two CDEs at 50 hours per week is not enough to cover Garfield County alone, much less the other two counties that have no CDE education or support available. In addition to provider shortages we also serve a primarily rural population. Studies have shown that diabetes is more prevalent for those with lower incomes and lower education levels, among other indicators, and those with lower incomes were more likely to forgo care (Towne, 2017). For Oklahomans, one in two children will develop Type 2 diabetes in their lifetime, versus the national trend of one in three children who will develop Type 2 diabetes in their lifetime (CDC, 2014). Although Oklahoma is ranked 38th by America's Health Rankings in 2016 for the number of those diagnosed with diabetes (11.7 percent of adults), research has shown that nearly 30 percent of people with diabetes are undiagnosed (Oklahoma Health Care Authority, 2017). Oklahoma ranked 46th for the number of uninsured individuals, 43rd for the number of obese individuals, 48th for physical inactivity, 42nd for preventable hospitalizations, 38th for diabetes, and 36th for the number of primary care providers per 100,000 (America's Health Rankings, 2016).

C. Need

The purpose of the project is to implement a community-based diabetes education program combined with clinical quality improvement support for rural primary practices in the area of diabetes patient self-management support. This program is a response to the crucial need for diabetes education in the target area, identified by both state health statistics and a community health needs assessment. The Tri-County Health Improvement Organization (Tri-CHIO) proposed to launch the Community Diabetes Education Outreach Program (CDEOP) to contract with an Academic Detailer(s) to help primary care clinicians identify best practices to implement within their clinics to improve diabetes care and maintenance. Additionally the use a Practice Facilitator (PF) position to help primary care practices implement those identified best practices for diabetes care and maintenance within those primary care practices. We also employ a Certified Diabetes Educator to provide community diabetes education for patients and patient self-management support (which the clinicians “prescribe” to their patients), based on the best practices National Diabetes Education Program, endorsed by the CDC and NIH and the seven self-care behaviors from the American Association of Diabetes Educators. This combination of community and primary care practice efforts, based in best practices, help improve diabetes patient outcomes in the three county area of Garfield, Grant, and Alfalfa Counties in rural Northwest Oklahoma.

Part IV: Program Services

A. Evidence-based and/or promising practice model(s)

Based on the Chronic Care Model the CDEOP provides 1) diabetes self-management support through the evidence-based DEEP™ curriculum, as well as resource coordination and support for those diagnosed with diabetes or pre-diabetes and their families, and 2) clinical quality improvement support for rural primary care practices to improve diabetes self-management and clinical outcomes. The lead applicant, along with the Tri-CHIO board and Oklahoma State University-Center for Rural Health, have identified a specific and serious gap in health services in Northwest Oklahoma: the absence of diabetes education programs. The addition of diabetes education could have a significant positive effect on the health of persons living in the service area since risk factors for diabetes were identified in both state health data and survey data as the region’s most critical health challenge. The proposed initiative is unique in that it includes a clinical quality improvement component through the Tri-CHIO. Together these components form a comprehensive diabetes wellness initiative.

B. Description of Activities

The CDEOP is a dual approach to diabetes care and maintenance. CDEOP offers free diabetes education classes and outreach education to primary care providers. To participants we offer free and convenient evidence-based diabetes self-management education program for those with diabetes or pre-diabetes using the DEEP™ curriculum. We offer follow-up with participants at the one, three, and six month and one year marks. Likewise, one on one education is available at the request of the participants. We also meet monthly for a healthy cooking class that teaches a health recipe but also acts as a support group for participants.

For providers, we assist rural-based providers with educational needs and adopting quality improvement clinical guidelines and benchmarks regarding current clinical best practice guidelines for patients with diabetes or at risk of developing diabetes.

An unintentional activity was the creation of a community team of diabetes educators that meets monthly for and lunch and learn, and resources sharing meeting. We meet with other healthcare facilities and service providers to coordinate and ensure services are meeting the needs of the population without duplication of efforts and to create buy-in for network sustainability.

C. Role of Consortium Partners

The Tri-County Health Improvement Organization (Tri-CHIO) was developed to improve the health of the populations of three contiguous counties in Northwest Oklahoma, Alfalfa, Garfield, and Grant counties. The Tri-CHIO’s mission is “partnering to improve and expand access to healthcare and social services...through disease prevention, education, and influence of public policy.” Four organizations from the Tri-CHIO have partnered to become the consortium of the Community Diabetes Education Outreach Program: Great Salt Plains Community Health Center, Enid Community Clinic, St. Mary’s Regional Medical Center, Oklahoma State University’s Center for Health Sciences, and Rural Health Projects, Inc./Northwest Area Health Education Center (RHP/NwAHEC) as the fiscal agent. The consortium is a committee of the Tri-CHIO and will report to the Tri-CHIO.

By developing and implementing the proposed Community Diabetes Education Outreach Program (CDEOP), the Tri-CHIO will, in addition to providing comprehensive, community-based diabetes education through a CDE and support continuous quality improvement (QI) in primary care practices in Alfalfa, Grant, and Garfield counties. These initiatives will improve health outcomes for persons with diabetes and those at risk of developing diabetes and ultimately improve the health of the residents in these three counties.

Part V: Outcomes

A. Outcomes and Evaluation Findings

The CDEOP is a dual approach to diabetes care and maintenance. CDEOP offers free diabetes education classes and outreach education to primary care providers. We have had numerous positive outcomes. In addition to the data that will follow, we have had a real impact on the participants' quality of life. One participant said "It changed my life". Likewise, CDEOP were able to provide 27 Diabetes Empowerment Education Program (DEEP) classes in the first two years with 207 participants, as well as 15 cooking classes with 128 attendees. In addition, with the assistance of a community health worker for the Micronesian community, funded through another source, we were able to bridge the gap that prevented people from getting the education that they needed to manage diabetes. In the past the community had been labeled "non-compliant" however, that was not the case, and rather we found a hunger for the information and support. Likewise, CDEOP was also able to provide academic detailing to seven clinics and 18 providers.

B. Recognition

The CDEOP was selected to present during a breakout session at the Oklahoma Nurses Association conference in 2016 and an Award winner of the Rural Health Association of Oklahoma Program of the Year 2015.

Part VI: Challenges & Innovative Solutions

There were unique barriers when implementing the activities of the Community Diabetes Education Outreach Program (CDEOP). For the quality improvement prong of the CDEOP, barriers include gaining access to and engaging primary care providers in improving how they treat diabetes; encouraging primary care providers to invest the time needed to implement practice improvements, overcoming "initiative fatigue" from too many outside groups wanting to try new initiatives in primary care, and encouraging primary care providers to refer patients to the DEEP™ classes. Solutions have been to be resilient and continue to approach practices that show interest. To tailor messages to each provider about how our services can benefit their practice. Additionally, provide Diabetes and community resources, thereby providing value, with each visit.

Barriers and challenges for the other prong of the CDEOP, holding the evidence-based DEEP™ classes in the community are: recruiting and keeping a qualified individual with a CDE. Solutions are to recruit in appropriate medical trade sources. Additionally, recruiting and keeping participants for classes is a challenge, our solution has been to use community champions and clinicians to help recruit and then to call participants each week prior to class to remind them about the class. Finding locations and times for classes that are convenient to the population is often a challenge but we have employed our existing partners to help in this task. Finally, we have encountered challenges in encouraging participants to release their primary care provider information in order to obtain baseline clinical data, the solution that we have found is to wait to ask for this information at the end of the six week class after we have built a relationship and trust from participants.

Part VII: Sustainability

A. Structure

The CDEOP through the Tri-CHIO organization was able to partner with St. Mary's Regional Medical, Enid Community Clinic, Great Salt Plains Health Center, Oklahoma State University's, Center for Health Sciences and Rural Health Projects, Inc., who serves as the fiscal agent. St. Mary's Regional Medical Center is one of the two largest hospital systems in all of northwest Oklahoma and is located in Enid, in Garfield County and patients from northwest Oklahoma come to Enid for services not available in their respective counties. Enid Community Clinic is one of very few entirely free clinics, serving only those who do not have insurance. Great Salt Plains Health Center is the regional Federally Qualified Health Center and hosts four locations in four counties: Garfield, Grant, Alfalfa, and Blaine. Rural Health Projects, Inc. has served as a fiscal agent for many grants and activities in its almost 30 year history as a non-profit serving northwest Oklahoma. Oklahoma State University's, Center for Health Sciences, have an extensive and successful collaborative history on multiple projects. All of these organizations are members of the Tri-CHIO and have worked very well together on multiple projects. This consortium will continue to serve as a committee and report to the Tri-CHIO Board.

New to the partnership is INTEGRIS Bass Baptist Health Center, the second large hospital in the area, the Tri-CHIO has always maintained a representative from INTEGRIS on the board and worked very well with the CDEOP. The Tri-CHIO felt this partnership should be formalized in the future and INTEGRIS has agreed to sign a MOU.

B. On-going Projects and Activities/Services To Be Provided

i) Will all, some or none of the elements of the program be sustainable once Outreach grant funding has ended? Please check the appropriate selection.

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained (i.e. the program will completely end after the grant period)

ii) Identify the projects and activities that will be sustained beyond Outreach grant period.

The current program activities that will be continued are the two main components of our program the first of which is Diabetes Self-Management Education (DSME) through our Diabetes Empowerment Education Program classes. Even though in addition to Rural Health Projects Inc. there are some evidence-based diabetes education classes being done in the communities, CDEOP classes are the only ones provided by a CDE, provide one-on-one follow-up with attendees, are specifically targeting low-income, un- or underinsured individuals, and provide evening and weekend classes for the working population. CDEOP is unique in these areas filling in gaps in services.

Secondly, the other key activity that will continue is Academic Detailing and Practice Facilitation. Academic Detailing is often said to follow the Pharmaceutical sales model, however, rather than selling a product we are ambassadors of the information. The goal of academic detailing is to close the gap between best available evidence and actual clinical practice. The peer to peer education provided to clinicians through Academic Detailing, ensures patients receive appropriate tests and examinations, manage and control patients' risk factors through medications, educate and assist patients with self-management and adherence to treatment regimens, promote patients' adoption of healthy behaviors and lifestyle choices (e.g., improved diet, increased physical activity, cessation of smoking) improve patients' quality of life and prevent diabetes-related complications.

In looking to the future and at ways to stay viable, in addition to continuing successful program activities we also plan to expand to additional contiguous counties, continue to work towards accreditation allowing CDEOP to bill for some DSME and Diabetes Prevention Program (DPP) services, as well as local fundraising opportunities.

C. Sustained Impact

One of the ongoing sustained impacts is collaboration. The CDEOP had a part in building, membership recruitment and development of the Community Diabetes Team. This voluntary coalition formed in December 2015 by longtime educators in the field welcoming new agencies and providers who serve persons in Northwest Oklahoma who have diabetes and pre-diabetes. The common thread that brought the group together is that all members provide free diabetes education to the communities they serve. Their mission is "A team of diabetes educators empowering diverse communities to flourish through diabetes education and support". This group of Diabetes Educators, whose combined experience equals more than 56 years, offers a unique perspective to the lunch and learn format of the meetings. Each month a new topic is presented by the coalition on the current trends in diabetes care, treatment, and education. In addition to the educators group CDEOP is a member of the Diabetes Caucus (workgroup) held at the state capitol to address diabetes in the State of Oklahoma sponsored by Senator Frank Simpson, in order to help form new policies to sustain impact.

Equally important to sustained impact is our service model used, the CDEOP uses the DEEP™ curriculum, developed at the Jane Adams School of Social Work at the University of Illinois at Chicago, which has been proven to help those who graduate from the program "gain knowledge and skills to facilitate short- and long-term behavioral change; increase knowledge of diabetes and its risk factors; increase self-management skills, and increase knowledge about psycho-social issues of diabetic patients." DEEP™ reduces poor health outcomes for those with diabetes. The curriculum was developed for use in racial and ethnic minority populations and low-income individuals. ("Deep," 2017)

Finally, the CDEOP will continue to utilize the Primary Health Care Extension model to disseminate the most up-to-date practice tools and provide academic detailing to assist busy clinical practices in implementing evidence-based care for persons with diabetes. This model uses a two-step process for quality improvement: Academic Detailing followed by Practice Facilitation. Academic Detailing is peer-to-peer learning, based on the pharmaceutical sales model, which provides a one-hour learning session at a time convenient for the clinician. The CDEOP contracts with a PharmD, CDE, who provides the up-to-date standards of care for diabetes, as well as any pre-identified topics which the clinician has requested for diabetes care and maintenance.

Similarly but on an individual basis, sustained changes in knowledge, attitudes, and behaviors can be seen by our participants by goals set and followed through by 28 percent of participants in year 1 and in the same way those who in year 2 set goals 42

percent focused on healthy eating, 38 percent on being active, and 14 percent of monitoring blood sugar, these changes in behavior all leading to the lowering of participants A1C.

Part VIII: Implications for Other Communities

Community Health Workers have been the key to reaching our populations who speak a language other than English as their primary language. Community Champions and word of mouth have been our biggest marketing tools for referral of participants to our classes. Holding classes at time that are convenient to participants and locations that are familiar to them assist in getting participants to classes. Working with our local free clinic also allowed us to reach participants without health insurance who would otherwise miss out on this opportunity. Additionally having a Certified Diabetes Educator who was not employed by either hospital system allowed us to reach participants in neutral and subjective way.

Quality measures that might be beneficial for other programs to consider are ways to collect clinical data such as A1c data and Blood Pressure numbers. The down side to outreach education was not belonging to an EMR that already had this data for participants. Our solution to this was to multilevel with clinicians in that we sent referral forms to clinicians that ask for this data, secondly we asked participants for a volunteer release that would allow to ask their clinician for the data, and finally we send a letter to the clinician after a participant had graduated from our class so that they may add it the patient's medical record therefor encouraging a mutually beneficial relationship with providers.

Part IX: Success, Increased Capacity, and Contributions to Change

A. Defining Success

- i) How do you define "success" for your grant program? Please check the appropriate selection(s). You may choose more than one option. If other, please describe.
- Access to a new or expanded health service
 - Increased number of people receiving direct services
 - Improved quality of health services
 - Operational efficiencies or reduced costs
 - Integration of process improvement into daily workflow
 - Continuation of program activities after grant funding
 - Continuation of network or consortium after grant funding
 - Health improvement of an individual
 - Health improvement among your program participants
 - Health improvement among your community
 - Enhanced staff capacity, new skills, or education received
 - Improved capacity to adapt to changes in healthcare
- ii) Do you believe that your program has achieved success? If so, how?
- Yes, the CDEOP has been able to utilize our unique skill set, expertise, and programming features to set ourselves a part from other organizations that provide similar curriculum. The CDEOP in the past two years has allowed us to see a measurable impact on health in the communities we serve in Alfalfa, Garfield and Grant counties. Specifically through our participants, by goals set 62 percent of those who graduated set goals for their diabetes care and followed through with, 42 percent focused on healthy eating, 38 percent on being active, and 14 percent of monitoring blood sugar, these changes in behavior all leading to the graduates with an average reduction of 2.06 percent in A1c rates. Finally, I think it is best summarized in the words of one of our participants who said about the DEEP Class, "It changed my life".

B. Organizational Capacity

How has the federal funding of your grant program increased local capacity at your organization, within your network, and/or in your community? Please bold/highlight all that apply. If other, please describe.

- Formalized networks or coalition
- Developed new partnerships or relationships
- Enhanced skills, education, or training of workforce
- Enhanced data collection and analysis

C. Contributions to Change

We have had numerous personal stories of how the classes had a positive impact on a person's life. We often hear about how "I didn't even know what I didn't know" from a person with diabetes, the classes help provide a basis so that when participants spend time with their clinician they can make better use of that brief time. Likewise, we teach week that diabetes affects all of your body and during week six of a series a participant said "what you are saying is diabetes affects me from my head to my toes!", that is exactly what we teach but it was exciting to see the participate digest that information.

In addition 62 percent of those who graduated from classes set goals for their diabetes care and followed through with, 42 percent focused on healthy eating, 38 percent on being active, and 14 percent of monitoring blood sugar, these changes in behavior all leading to the graduates with an average reduction of 2.06 percent in A1c rates.

The CDEOP is a member of the Diabetes Caucus (workgroup) held at the state capitol monthly to address diabetes in the State of Oklahoma sponsored by Senator Frank Simpson, in order to help form new policies to sustain impact.

Oregon

Part I: Organizational Information

Grant Number	D04RH28421-01-00
Grantee Organization	Yellowhawk Tribal Health Center
Organization Type	Tribal Health Center
Address	P. O. 160; Pendleton, OR 97801
Grantee organization website	www.OWhN.org
Outreach grant project title	Yellowhawk Rural Health Outreach Grant
Project Director	Name: Jim Wallis
	Title: CFO
	Phone number: 541-240-1973
	Fax number: 541-278-7579
	Email address: jimwallis@yellowhawk.org
Project Period	2015 – 2018
Funding level for each budget period	May 2015 to April 2016: \$197,852
	May 2016 to April 2017: \$198,804
	May 2017 to April 2018: \$199,449

Part II: Consortium Partners

* Indicates those consortium partners who signed a Memorandum of Understanding/Agreement

Partner Organization	Location (town/county/state)	Organizational Type
*Yellowhawk Tribal Health Center	Pendleton, Umatilla, Oregon	Tribal Health Center
*CHI St. Anthony Hospital	Pendleton, Umatilla, Oregon	Hospital
*Good Shepherd Hospital	Hermiston, Umatilla, Oregon	Hospital
*Providence St. Mary Medical Center	Walla Walla, Walla Walla, Washington	Hospital
*Morrow County Health District	Heppner, Morrow, Oregon	Health District
*Morrow County Health Department.	Heppner, Morrow, Oregon	County Health Department
*Umatilla County Health Department	Pendleton, Umatilla, Oregon	County Health Department
*Walla Walla Department of Community Health	Walla Walla, Walla Walla, Washington	County Health Department
*Blue Mountain Community College	Pendleton, Umatilla, Oregon	Community College
*Lifeways, Inc.	Pendleton, Umatilla, Oregon	Mental Health Provider

Part III: Community Characteristics

A. Area

The four counties served by the Oregon Washington health Network (OWhN) are Umatilla, Union, and Morrow Counties of Oregon and Walla Walla County, Washington. Major communities served are Hermiston, Pendleton, La Grande, Heppner, and Boardman, Oregon and Walla Walla, Washington. Many smaller rural communities (Pilot Rock, Lone, Athena) in the four county service area of the network are also served by OWhN.

B. Community description

The community served by the Oregon Washington health Network might be characterized as being comprised of rural agricultural counties that are in the process of rapid growth. Over the past 20 years the economy of the NE Oregon and SE Washington has expanded dramatically to include a number of high tech businesses, a major retail distribution center, and tourism. Umatilla and Union Counties are located in the Northeast corner of Oregon. The City of Pendleton (population 16,612) provides much of the region's health care. Umatilla County and Union Counties also comprise the federally designated service area of the Confederated Tribes of the Umatilla Indian Reservation (CTUIR). Based on 2015 U. S. Census data, the population of these counties equals

173,849 individuals of which 76,531 (or 44%) resided in Umatilla County; 25,790 resided in Union County (15%); 11,190 lived in Morrow County (6%) and 60,338 lived in Walla Walla County, Washington (35%). The CTUIR are the only Federally Recognized Indian Tribe in the project's service area having an enrolled membership of 2,927. Based on census data, there are 5,276 American Indians and Alaskan Natives residing in these four counties of the OWhN service area which equal about 3% of the total population. The 172,000 acre Umatilla Indian reservation is located 10 miles east of the City of Pendleton, Oregon which is the County Seat of Umatilla County. Based on tribal and census data, approximately 17% of county residents (13,010) lived in poverty in 2015 including 26% (or 920) of Native Americans. A total of 11% of Umatilla County residents were uninsured in 2015 with 9% of Union County and 11% of Morrow County residents having no health coverage.

Each of the counties served by OWhN have unique needs, but there is some commonality in the overall population served by the network. The median age of the four counties served by OWhN is 36 and this age is increasing as additional retirees are moving into the region. Historically, most of Eastern Oregon was comprised on white residents, but this is changing. Due in large part to expanding agricultural jobs opportunities, Morrow and Umatilla County now comprise the fastest growing Hispanic population the State of Oregon. The current population served by the network is now approximately 70% White, 24% Hispanic, 3% Native American, with 3% being Black or Asian. The region also has a large veteran population with 11% of residents being Veterans compared with 7% of the general population. The median family income of residents in the OWhN service area is approximately \$54,000. Based on census data, approximately 15% of families and 19% of children currently live in poverty.

Using data from County Health Ranking.Org, and DHHS Community Health Status Indicators, Umatilla, Union and Morrow Counties currently rank in the bottom 20% of counties within the State of Oregon for access to clinical care and have high rates of chronic disease. In 2014, the ratio of primary care physicians to the population served was 1,871 to 1 for Umatilla County; 1,209 to 1 for Union County; and 2,792 to 1 for Morrow County. These are far above statewide averages of 1,115 to 1. In that same year only 57% of women in Umatilla County 62% in Union, and 42% of women in Morrow County received mammography screenings. Umatilla County was also far below statewide averages for health behaviors having a teen birth rate that was almost double the statewide rate (55 per 1,000 population versus 32) and much higher rates of adult obesity (34%) and adults who smoked (22%). Death rates for colon cancer (24 per 100,000 versus 17 nationally in 2009) and stroke (67 per 100,000 vs. 47 nationally) have remained consistently high in the county. All counties served by the network have significantly higher death rates for stroke and suicide.

C. Need

The primary factors that influence life in the community are poor access to health care and numerous gaps in existing services. The community served is predominately rural, but also has the fastest growing Hispanic population in the state. All counties in Eastern Oregon are Mental Health Shortage Areas and a majority are designated as primary care shortage areas. In 2018, Oregon was identified as having the worst mental health system in the nation. Much of the reason for this is related at lack of state program funding and the inability of communities to recruit and maintain mental health professionals. All three of the Oregon Counties served by the network have significant problems in accessing health care services and limited preventative services. As a result, behavioral-related health issues (e.g. smoking, lack of physical activity, substance abuse) are significant health concerns across the network's service area. High rates of diabetes, heart disease, and cancer, are directly impacted by poor access to primary care, insufficient community education, and inadequate follow-up care. Current gaps in services include: youth treatment, adult elder day care services, behavioral health treatment, detox, services for incarcerated individuals, and specialty care.

Figure: Percentage of Adults with Chronic Diseases by Oregon County

Chronic Condition	Umatilla County	Union County	Morrow County	State of Oregon
Cancer	6.2%	11.2%	11.5%	8.5%
Arthritis	23.9%	28.5%	24.8%	24.5
Angina	2.2%	7.2%	6.8%	3.6%
CVD	8.0%	9.7%	9.6%	7.0%
Diabetes	7.4%	8.7%	14.8%	8.2%
Heart Attack	5.0%	6.4%	8.1%	3.4%

Source: 2014 Oregon Department of Health data

As shown in the table above, rates for cancer and heart disease are generally much higher in Northeast Oregon counties. Based on the findings of the OWhN cancer study completed in 2016, Oregon was found to have the highest rates of cancer in 2012 of the eleven western states. There were a total of 8,459 new cancer cases in the ten year period between 2003 and 2012 with the highest rates in the OWhN service area occurring in Morrow and Union Counties. As described in this study, cancer death rates among

Oregon's rural counties between 2009 and 2013 (per 100,000 residents) equaled 241 deaths compared to 193 statewide. Heart disease death rates equaled 201 per 100,000 residents compared to statewide rates of 157. Again it must be emphasized that during these same years, Oregon's cancer death rates were the highest of all 11 western states.

Based on data from 2015 OWhN strategic health plan, residents of the OWhN service area had much higher deaths rates for a number of diseases when compared with national averages. Mortality Rates for all causes in 2014 equaled 731 nationally vs. 853 in Umatilla County, 785 in Union County, and 830 in Morrow Counties. Very high rates were determined for lower respiratory disease (25 per 100,000 nationally versus 64 in Morrow and 61 in Umatilla Counties), stroke (36/100,000 – U.S. vs. 54 in Umatilla and Walla Walla Counties) and diabetes (21/100,000 in the U. S. versus 33 in Umatilla and 31 in Union Counties.) Suicide rates prior to 2014 were also high across the service area but have been reduced significantly through the work of the CTUIR and the OWhN network. Thus, addressing the chronic health needs of residents of NE Oregon and SE Washington while at the same time reducing health care costs and increasing access remains the most significant challenge of the Oregon Washington health Network.

As described in the approved strategic plan for the network, the work activities of the network currently focus on four key areas. These are:

- 1.) To continuously recruit health professionals through contacts with residency programs in the region to provide information about job opportunities, to establish local residency placements, and over time to establish a regional training track program;
- 2.) To hold quarterly network meetings, train network agencies based on an approved training plan, and establish by-laws and policies;
- 3.) To address high death rates for chronic diseases in the region through community education, health screenings and health coaching, including hands only CPR;
- 4.) To address the behavioral health care needs of the region through training of entry level professionals, development of a regional action plan, and development of crisis services.

Part IV: Program Services

A. Evidence-based and/or promising practice model(s)

The following is a list of evidence based practices used during the Yellowhawk Rural Health Outreach Grant.

- PHQ-9 Screening tool for Depression.
- American Heart Association standards for management of health disease
- American Heart Association standards for management of stroke
- U. S. Preventative Services Task Force recommendations for breast cancer
- U. S. Preventative Services Task Force recommendations for lung and stomach cancer
- Stanford Model for Chronic Disease Management

The evidence based models used throughout the grant were initially approved by a work group established by Yellowhawk Tribal Health Center. These were approved by the full network during the second year of the outreach grant. Training on implementing and evaluating evidence based practices was held in May 2017. The presenter was Oregon Health and Science University.

B. Description of Activities

The work activities completed during the three year Yellowhawk Rural Health Outreach Project are described below. These are broken down into the five major project areas of the grant.

- 1.) Network Development
 - a. Established the health network; held quarterly meetings over the past 4 years;
 - b. Training was completed in the areas of cultural sensitivity, evidence based practices, value based care, homelessness, and medical based team management. All training was evaluated.
 - c. An OWhN website (OWHN.org) was developed which provided ongoing public information;
 - d. Draft bylaws and policies and procedures were developed for the network;
 - e. A training survey was developed and used for training throughout grant;
 - f. A lactation support project funded through a state grant facilitated implementation across the network;
 - g. Papers on options for organizational development, and network service models were completed.

- 2.) Recruitment of Health Professionals
 - a. Nine (9) physicians, NP's, and PA's completed placements within OWhN member facilities (2 were retained by members of OWhN);
 - b. Five family practice preceptors were recruited and oriented;
 - c. Agreements were established with Western University and University of Portland for ongoing placement of students;
 - d. Direct recruitment of residents through Legacy Health Systems, Western University, and Oregon Health and Science University was continuous during the second and third years of the grant.

- 3.) Chronic Disease
 - a. Heart disease education was provided to 500 individuals and in eight rural communities;
 - b. A regional cancer study was completed which is now being implemented;
 - c. Heart disease coaching services were provided to over 50 patients;
 - d. Evidence based practices for cancer and heart disease were determined and implemented. Training on evidence based practices was provided for all network members);
 - e. Local resources for management of heart disease and cancer were documented.

- 4.) Behavioral Health
 - a. A Behavioral Health Action Plan was completed including recommendations from the first regional patients' forum held in November 2017 and homelessness training in April 2018;
 - b. A total of 36 Peer Support Mentors were trained; many have been placed in jobs with regional agencies;
 - c. A plan for crisis services in Umatilla County was developed;
 - d. Depression screening was implemented across all members of the network;
 - e. Mental health crisis services using YTHC staff were implemented.

- 5.) Telehealth
 - a. A regional telehealth network was established involving four hospitals and Yellowhawk Tribal Health Center
 - b. Telehealth coordinators were appointed and trained for each facility
 - c. Policies and Procedures and a business plan for the regional telehealth network were completed

C. Role of Consortium Partners

The ten members of the Oregon Washington health Network provided ongoing support for completion of the work activities of the grant throughout the past three years. This include participation in the project's training activities, collection of data for grant benchmarking, and hosting various work activities of the project. For example; Blue Mountain Community College hosted the network's behavioral health patient's forum and training of certified peer mentors. The college will also host the network's April 2018 homelessness training. The county health departments that are members of the network have also been actively involved in chronic disease community education activities throughout the grant. Participation by the hospital members of the network has also been extensive. Providence St. Mary Medical Center arranged the network's contract for telehealth services with Kadlec Medical Center of Richland, Washington. Each of the hospitals have also appointed a telehealth coordinator to operate these services on a long term basis. Lifeways, has also coordinated the use of the PHQ-9 depression screening tool and has collected and reported data on the use of this evidence based practice throughout the grant. Yellowhawk Tribal Health Center has and continues to serve as lead agency for the project to include human resource, accounting, and other areas of support.

Part V: Outcomes

A. Outcomes and Evaluation Findings

The outcomes that were achieved during the three year HRSA outreach grant are described below. There were a total of seven performance measures used during the grant. The first of these was to place a total of 18 physician residents, nurse practitioners, and physician assistants with organizations in the network. To date a total of 14 students have been hosted for 3 to 4 week placements within the member organizations of the network or have agreed to work for member facilities following graduation. A total of five students are anticipated to complete placements during year three of the outreach grant or by July 27, 2018. The second measure established in the grant related to depression screening using the PHQ-9 instrument. The performance measure used in this case was to assess 450 patients over the three years of the grant. To date, members of OWhN have screened in excess of 1,000 patients for depression. Concerning measure number 3, Yellowhawk Tribal Health Center provided crisis services to 50 patients exceeding the established benchmark of 46 included in the grant. Telehealth services were in the process of development during years two and three of the grant using funds provided by the Cambia Foundation. To date the number of

telehealth services provided is 40 for this fourth performance measure. This number is expected to double or triple by July 2019 with implementation of the networks' regional telehealth network which will be fully implemented by June 2018.

Heart disease and cancer have been well documented as the most serious health concerns within the network's service area. These services which include cancer and heart disease coaching and community education were major work activities during the grant. During years one and two of the grant, Yellowhawk provided heart disease coaching services to 34 patients and cancer coaching to 25 which were performances measure six and seven of the project. During year three of the grant, 40 patients received heart disease and cancer coaching services. Thus, the project exceeded the benchmarks established for these services which was 55 for cancer coaching and 60 for heart disease. In regards to heart disease community education, to date the project has provided healthy heart and hands only CPR training to over 500 residents and students in nine separate communities. The established performance measure of 220 was exceeded by more than double.

B. Recognition

The work of the Oregon Washington health Network over the three-year period of the HRSA Outreach Grant has been covered by local media (the Eastern Oregonian) on several occasions. Most recently a feature article discussed the network's mental health patient's forum and peer mentor classes. In 2017, an article on the network's healthy heart program was covered by the Milton Freewater Argus Leader. The network was also recognized by the Oregon Rural Health Association and asked to provide a presentation on the network's regional telehealth program at the statewide rural health conference. OWhN is currently working with the RHI Hub on a profile of the organization that will be disseminated nationally.

Part VI: Challenges & Innovative Solutions

The major challenges faced by the Oregon Washington network during the three year outreach grant are described below. Also included is information on how these challenges were addressed.

- 1.) Throughout the first two years of the grant, the network's major challenge was governance. The members of the network consistently stated their desired to retain Yellowhawk Tribal Health Center as the lead agency for the network and were unwilling to elect officers, appoint subcommittees, or approve bylaws or policies. During the February 2018 meeting of the network, the membership appointed a Board of Directors, agreed to retain the network manager for a minimum of one year, and directed the manager to complete applications for state and profit non-profit designation, which are now in-process. Over time the majority of network members saw the benefits of the network and were unwilling to see the organization go out of the business.
- 2.) A second major challenge to completion of the project related to staffing. The project's outreach nurse worked half time in support of the grant for the first 14 months of the project and abruptly resigned. After several recruitment efforts, Yellowhawk Tribal Health Center was unsuccessful in refilling this position after, the project's outreach nurse resigned in June of 2016. As a result, the network was required to utilize consultants to complete the heart disease and cancer community education activities of the grant. The unavailability of an outreach nurse to assist with the project did not impact completion of the project's scope of work, but did limit to some degree the number of collaborative work activities that were completed. Northeast Oregon now has a documented shortage of nursing staff, which will need to be a consideration for future projects involving the network.
- 3.) Organizations within the network's service area have generally had a poor track record in acquiring federal, state, and foundation grant funding. By providing grant writing support to its members, OWhN has provided a significant opportunity to increase funding and services across the region. Over the three years of the outreach grant, nine or more grant applications were not submitted due to the lack of a lead agency. This problem will be corrected with approval of non-profit status for the network.
- 4.) Arguably, the biggest single problem faced by the communities served by OWhN is poor access to primary health care and behavioral health services. During the past three years, the network has been partially successful in arranging placements of primary care physicians and nurse practitioners. In addition, there is a strong potential for arranging many additional placements. However, it has proven difficult in some instances to work with medical schools and residency programs primarily located on the western side of the state who preferred to place their students in urban areas. In order to resolve this problem, OWhN has begun looking at establishing its own rural training track or residency program. The membership of the network is currently split on how to move forward concerning this greatly needed activity.

- 5.) A lack of preventative services in the service area of the network has been well documented. In order to address the most significant problems in the network's service area which are heart disease and cancer, the network was required to contract with skilled consultants from outside the area. Building expertise in these areas will take time; however, the current process being used has generally worked well.
- 6.) Similar to recruitment of health professionals, Northeast Oregon has a significant shortage of paraprofessional substance abuse treatment and mental health professionals. The network decided to address this problem by training additional entry level counselors (peer mentors). To date, it has trained over 36 new certified peer mentors, most of which have been hired to fill vacancies within existing programs.

Part VII: Sustainability

A. Structure

The work of the Oregon Washington health Network is expected to continue after grant funding ends. In February 2018, all ten current member organizations agreed to continue their affiliations with the network and signed the organization's approved sustainability plan. The partners of the network: are Yellowhawk Tribal Health Center, Providence St. Mary Medical Center, CHI St. Anthony Hospital, Good Shepherd Hospital, the Morrow County Health Districts (which operates Pioneer Memorial Hospital and three clinics), the Morrow County Health Department, the Umatilla County Health Department, the Walla Walla County Department of Community Health, Lifeway, Inc. (a regional mental health provider), and Blue Mountain Community College. Affiliation agreements have also been approved with the Oregon Office of Rural Health and the Northeast Oregon Network (located in La Grande, Oregon).

B. On-going Projects and Activities/Services To Be Provided

- i) Will all, some or none of the elements of the program be sustainable once Outreach grant funding has ended? Please check the appropriate selection.
 - All elements of the program will be sustained
 - Some parts of the program will be sustained
 - None of the elements of the program will be sustained (i.e. the program will completely end after the grant period)
- ii) Identify the projects and activities that will be sustained beyond Outreach grant period.

As described previously, the Yellowhawk Rural Health Outreach Grant involved four major work activities (Network Development, Recruitment, Chronic Disease Management, and Behavioral Health). Based on the network's sustainability plan, all of these activities are expected to be continued once the outreach grant is completed. However, the focus or scale of these activities will likely change due to a lack of funding. A brief description of the activities to be continued starting on August 1, 2018 are listed below.

 - 1.) A regional telehealth network involving Providence Health Systems, three regional hospitals and Yellowhawk Tribal Health Center which will begin service delivery by 6/1/18. OWhn was able to secure additional funding through the Cambia Foundation based in Portland, OR to support the development of telehealth in the network;
 - 2.) A lactation support program for Umatilla, Union, and Morrow Counties (operated by CHI St. Anthony) began on 1/2/17 and will continue;
 - 3.) Recruitment and placement of primary care providers will be ongoing using the Kadlec Family Practice Residency Program or through establishment of a rural training track program within three years.
 - 4.) A mental health recovery center is currently being planned with the Umatilla County Health Department and Grande Ronde Recovery of La Grande. This center is expected to open by the fall of 2019.
 - 5.) Funding for the network's peer support counselor training program is in the process of being requested. The program will be expanded to include other areas of behavioral health training.
 - 6.) The network's regional cancer intervention plan will be implemented;
 - 7.) Evidence based depression screening will be continued by all network members,

The methods and strategies used for continuation of the network are described below. First, the network has continued to seek outside funding support involving partnering agencies. The Manager of the network has targeted four regional health grants that will be submitted prior to October 1, 2018. The St. Anthony mobile lactation program will continue using state grant funds 2019 at which time it will become part of the hospital's ongoing services. Continuation of healthy heart and hands only CPR training in local schools is expected to be continue. OWhN has or will train school and county health

department staff to continue these services once grant funding ends. Most likely the longest lasting impact of the grant will be the training and certification of 36 peer mentors to serve as the entry point for patients with substance abuse and mental health concerns. Many of these individuals have been hired to jobs and many more will be over the next nine months. This training and certification process has had a significant impact on services in the region.

C. Sustained Impact

The sustained impacts of the Oregon Washington health Network were in a number of areas. First of all, the network manager has built strong working relationships with most of the medical schools and residency programs in the Pacific Northwest. This should help the members of OWhN to recruit additional health professionals and will directly address access to care issues. Secondly, the network's telehealth program, will improve access to emergency and specialty medical care, reduce travel costs, and allow better coordination of services between the members of the network. Third, the project's community education activities have improved the emergency care capacity of the region by teaching 500 individuals and students in hands only CPR. Four, the network was able to train 36 peer mentors who are expected to have significant impacts on the delivery of substance abuse treatment services in the region. Fifth, and possibly most importantly, the project built strong working relationships between the region's hospital and county health departments. This will be important for future projects involving the membership.

Part VIII: Implications for Other Communities

Several factors relating to the project's outcomes may be of relevance or of interest to other rural communities. Due in large part to the size of the membership and the service area of the network, providing public information on the grant's activities and outcomes were found to be important to the success of the project. The network's website and posting of public information by its members helped to maximize participation in training and community activities. Secondly, the fact that the OWhN network had completed a comprehensive strategic plan, gave both its members and the communities served a roadmap for improving and expanding services. Third, including all of the major hospitals in the region and working to address their needs proved to be important to the success of the project. This proved especially true in areas of recruitment.

Part IX: Success, Increased Capacity, and Contributions to Change

A. Defining Success

- i) How do you define "success" for your grant program? Please check the appropriate selection(s). You may choose more than one option. If other, please describe.
- Access to a new or expanded health service
 - Increased number of people receiving direct services
 - Improved quality of health services
 - Operational efficiencies or reduced costs
 - Integration of process improvement into daily workflow
 - Continuation of program activities after grant funding
 - Continuation of network or consortium after grant funding
 - Health improvement of an individual
 - Health improvement among your program participants
 - Health improvement among your community
 - Enhanced staff capacity, new skills, or education received
 - Improved capacity to adapt to changes in healthcare

- ii) Do you believe that your program has achieved success? If so, how?
- The Yellowhawk Rural Health Outreach Project has in the opinion of its project manager and membership been highly successful. During the February 2018 meeting of the network, organizations in attendance were asked to discuss the benefits of maintaining the network. One indicated that the training arranged through the network had been especially helpful to them. Another cited the telehealth project as the most significant activity completed to date. A third organization felt that having an opportunity to plan services and resolve policy issues with the leadership of the major health providers in the region had proven invaluable to him. Although the project did experience several problems (inability to hire an outreach nurse, difficulties in placing residents, etc.) the project had numerous successes. It also provided an excellent opportunity for organizations in the region to collaborate to address gaps in services.

B. Organizational Capacity

How has the federal funding of your grant program increased local capacity at your organization, within your network, and/or in your community? Please check the appropriate selection. If other, please describe.

- Formalized networks or coalition
- Developed new partnerships or relationships
- Enhanced skills, education, or training of workforce
- Enhanced data collection and analysis

C. Contributions to Change

Change in individuals' lives, your organization, consortium, or community:

Two stories might be described as contributing to change. First, during its peer mentor training, two members of the Confederated Tribe of the Umatilla Indian Reservation were trained and hired as peer mentors. These individuals are now playing a significant role in delivering behavioral health services to the tribal community and are very happy to be doing so. Secondly, through an outside grant the network was able to install and train telehealth coordinators in all member hospitals and YTHC. The network's telehealth program will save lives, reduce travel times, and make better use of the limited number of providers practicing in the region.

Change in policies, systems, and environment:

A good example of how the project contributed to policy change would be in areas of telemedicine. Because telehealth development had been mostly limited to the Western side of the state, many of the issues affecting telemedicine development in the more rural portions of the state had remained unresolved. The network is currently working with the State of Oregon to increase telehealth billing, resolve issues of licensing of providers, and contracting with out of state physicians. These issues would likely not have been raised (or resolved) had the network not decided to establish a regional telehealth network. A related example of the impact of the network would be in areas of training. Much of the training provided by the network (cultural sensitivity, value based care, providing services to the homeless) had never before been provided in eastern Oregon. This training should help to improve services and over time is expected to lead a number of system changes that are long overdue in the region.

Pennsylvania

Part I: Organizational Information

Grant Number	D04RH28382
Grantee Organization	Armstrong-Indiana-Clarion Drug and Alcohol Commission
Organization Type	501 (c)3 Non-profit organization
Address	10829 U.S. Route 422, Shelocta, PA 15774
Grantee organization website	www.aidac.org
Outreach grant project title	Addiction Recovery Mobile Outreach Team (ARMOT)
Project Director	Name: Kami Anderson
	Title: Executive Director
	Phone number: 724-354-2746 ext. 302
	Fax number: 724-354-3132
	Email address: kanderson@aicdac.org
Project Period	2015 – 2018
Funding level for each budget period	May 2015 to April 2016: \$200,000
	May 2016 to April 2017: \$200,000
	May 2017 to April 2018: \$200,000

Part II: Consortium Partners

* Indicates consortium partners who signed a Memorandum of Understanding/Agreement

Partner Organization	Location (town/county/state)	Organizational Type
Armstrong County Memorial Hospital*	Kittanning/Armstrong/Pennsylvania	Hospital
Indiana Regional Medical Center*	Indiana/Indiana/Pennsylvania	Hospital
Clarion Hospital*	Clarion/Clarion/Pennsylvania	Hospital
The Open Door*	Indiana/Indiana/Pennsylvania	Drug & Alcohol Treatment Center
Family Services of W. PA*	Kittanning/Armstrong/Pennsylvania	Drug & Alcohol Treatment Center
Cen Clear Services*	Clarion/Clarion/Pennsylvania	Drug & Alcohol Treatment Center

Part III: Community Characteristics

A. Area

Armstrong, Indiana, and Clarion Counties in Pennsylvania.

B. Community description

Prior to this grant, Western Pennsylvania had experienced an epidemic of heroin and opiate abuse since 2001. Due to the reduction in the mining, logging, and manufacturing industries in our area, we saw family-sustaining incomes decrease and an increase in unemployment, under-employment, store closings, drug abuse, upkeep and maintenance on businesses and homes, etc. In 2015, Pennsylvania had the 7th highest drug overdose mortality rate in the United States, with over 3,000 deaths being heroin-related overdoses. Armstrong County was ranked #2 in Pennsylvania and Indiana County was ranked #4 in fatal heroin overdoses in 2015. Drug overdose deaths in Pennsylvania had then exceeded the number of deaths from automobile accidents. The heroin epidemic spread to rural and suburban communities previously unharmed by such widespread heroin abuse, and instead of this upward trend flat-lining or decreasing, abuse and overdose continue to escalate, resulting in the loss of life across every age group and demographic. Locally, Armstrong County Memorial Hospital (ACMH) treated 77 overdose patients in 2013. Indiana Regional Medical Center (IRMC) treated 109 overdose patients in 2013, more than has ever been reported at IRMC in the past. In November 2014, Citizen's Ambulance Company of Indiana County reported that they have responded to an average of 90 overdoses in the past 90 days. We saw the EMT response to overdoses increase in 2016 to two to three per day.

C. Need

The target population for the Addiction Recovery Mobile Outreach Team (ARMOT) program are adults and adolescents who are struggling with addiction issues or co-occurring substance abuse and mental health issues that have been admitted to either emergency departments, psychiatric inpatient units, or physical health units of local hospitals. These individuals are in need of a level of care assessment, referral to appropriate treatment providers, and recovery support services from the substance abuse service system. As stated above, substance use disorders are spread across every age group and demographic. All demographic populations presenting with substance use disorders will be served, regardless of their race, ethnicity, gender identity, sexual orientation, geography, socioeconomic status, disability status, primary language, health literacy, and any other relevant dimension. Persons with disabilities, language barriers, limited health literacy, and LGBTQI populations will be accommodated by the hospital and treatment providers. Based on data collected by the area hospitals and treatment providers, the majority of persons presenting with substance use disorders in the three Counties are primarily white males, between the ages of 19 and 54, with drugs of choice being alcohol, followed by heroin and prescription drugs, and are enrolled in medical assistance or have no insurance coverage.

ACMH reports that approximately two thirds of their emergency department visits involve individuals that have used alcohol or other substances of abuse. Primary substances of concern at ACMH include alcohol, opioids, and psycho-therapeutics.

IRMC reports that over the past five years, an average of five patients per day present in the emergency department with behavioral health treatment needs. In October 2013, that average increased to seven patients per day. In 2013, the total number of patients presenting to the Emergency Department with substance abuse as a factor in their visit was 642. The age ranges of those patients were as follows: 11-18 years = 65; 19-25 years = 223; 26-54 years = 297; and 55 and older = 57. Mondays and Tuesdays are the days of highest utilization of the emergency department for behavioral health patients. The data shows that 43% of patients (276 patients) presenting at the emergency room with substance use disorders were admitted to inpatient providers or the hospital physical health units. Patients presenting to the hospital are suffering from more acute symptoms than in the past.

Rural County hospitals are not prepared to treat the substance abuse disorder clients. The need that our ARMOT program addresses is the ability of the hospital to assess and treat clients with substance use disorders and refer them to an appropriate treatment modality.

Part IV: Program Services

A. Evidence-based and/or promising practice model(s)

The program will utilize the components of the Care Coordinator/Manager Model which has been identified as a promising practice and is noted in the Rural Assistance Center Community Health Workers Toolkit as a program model. This model suggests the use of case management services for those with chronic health conditions to better navigate the complex health care systems. As suggested within the Community Health Workers toolkit, the Addiction Recovery Mobile Outreach Team program follows the Care Coordinator/Manager Model to pair the expertise of a Mobile Case Manager with a peer Certified Recovery Specialist who better understands the substance use disorder treatment system and the resources that are needed and available within the rural communities with area hospital and clinic staff for patients identified with substance use disorders. The only modification from the Care Coordinator/Manager model is the specific emphasis on the addiction population.

The Addiction Recovery Mobile Outreach Team program will encompass all aspects of the Care Coordinator/Manager concept in a hospital setting including screening, assessment, client education, provider education, and coordination between a client's physical health and behavioral health providers inclusive of Primary Care Physicians, Drug and Alcohol Treatment Providers, Mental Health Treatment Providers, and Emergency Services. This service will assist clients and treatment providers in bridging the gap between the provision of physical and behavioral health care.

B. Description of Activities

The ARMOT program is a collaboration between AICDAC, Wesley Family Services, ACMH, IRMC, TOD treatment agency, Clarion Hospital, and Cen-Clear Outpatient services and is intended to enhance the linkage between rural hospital emergency department/inpatient units and substance abuse treatment service delivery to individuals with substance use disorders in Armstrong, Indiana, and Clarion Counties in Western Pennsylvania.

The ARMOT program serves as an intercept point for individuals accessing local hospital emergency services, psychiatric units, or inpatient physical health care units that may be in need of substance abuse services. This intercept point would provide identification and linkage services to substance abuse treatment for individuals struggling with addiction. The hospital staff screen clients for substance use disorder symptoms then refer patients to the ARMOT team. The ARMOT's Mobile Case Managers will

offer comprehensive level of care assessments for substance abuse treatment services, with referrals and linkages to treatment providers and support services. The Certified Recovery Specialists are peers in long term recovery that serve as part of the ARMOT team that provide peer-based recovery support services before, during, and after treatment to the patient and their family members.

The goal of the ARMOT program is to streamline patient access for individuals with substance use disorders accessing hospital emergency services, psychiatric unit or physical health care units utilizing the Community Health Worker Care Coordinator/Manager Model. The program utilizes the components of the Care Coordinator/Manager Model which has been identified as a promising practice and is noted in the Rural Assistance Center Community Health Workers Toolkit as a program model. This model suggests the use of case management services for those with chronic health conditions to better navigate the complex health care systems. As suggested within the Community Health Workers toolkit, the ARMOT program follows the Care Coordinator/Manager Model to pair the expertise of a Mobile Case Manager with a peer Certified Recovery Specialist who better understands the substance use disorder treatment system and the resources that are needed and available within the rural communities with area hospital and clinic staff for patients identified with substance use disorders. The only modification from the Care Coordinator/Manager model is the specific emphasis on the addiction population.

C. Role of Consortium Partners

The Addiction Recovery Mobile Outreach Team program is a collaboration between the Armstrong-Indiana-Clarion Drug and Alcohol Commission, Inc. (AICDAC), Family Services of Western PA, the Armstrong County Memorial Hospital (ACMH), Indiana Regional Medical Center (IRMC), Clarion Hospital, Cen Clear Services, and The Open Door (TOD).

Family Services of Western PA: Kelly Austin, Executive Director, will represent Family Services of Western PA in the Consortium and will provide consultation, statistics, referrals, and coordination of substance abuse treatment services. This will be done at no charge to the grant.

ACMH: Dr. Rod Groomes, Emergency Room Director, will represent the Hospital in the Consortium and will provide consultation, statistics, referrals, and coordination of physical health care. This will be done at no charge to the grant.

IRMC: Cindy Virgil, Director of Patient Services, will represent the Hospital in the Consortium and will provide consultation statistics, referrals, and coordination of physical health care. This will be done at no charge to the grant.

Clarion Hospital: Tex Crider, Social Work Department Supervisor, will represent the Hospital in the Consortium and will provide consultation statistics, referrals, and coordination of physical health care. This will be done at no charge to the grant.

The Open Door: Vincent Mercuri, Executive Director, will represent The Open Door in the Consortium and will provide consultation, statistics, referrals, and coordination of substance abuse treatment services. This will be done at no charge to the grant.

Cen Clear Services – Kathleen Barefield-Painter, Clinical Supervisor, will represent Cen Clear Services in the Consortium and will provide consultation statistics, referrals, and coordination of substance abuse treatment services. This will be done at no charge to the grant.

AICDAC: The Executive Director, Kami Anderson, will serve as the Project Director. The governing board of the AICDAC supervises the Executive Director, who reports directly to the Board President. Kami Anderson was also the Project Director for the HRSA FY 12 Rural Health Care Services Outreach grant, the Nurse Navigator and Recovery Outreach program. Ms. Anderson will be responsible for monitoring the project and ensuring the grant activities are carried out.

The development of the ARMOT program was first identified in the Recovery Oriented Systems of Care (ROSC) action planning meetings of the Armstrong-Indiana-Clarion Drug and Alcohol Commission (AICDAC). These meetings involve past and present consumers of substance use treatment services in the development of a full continuum of care and recovery planning. In addition, this program has been discussed at the local drug and alcohol Recovery Advocacy Meetings in both Armstrong and Indiana County. The Advocacy Group (TAG) is a grass-roots organization that meets monthly in Armstrong County and is made up of persons in recovery, family members, persons employed in the human services field, and any others with an interest in advocacy and changing the stigma around addiction. These meetings afford those individuals involved with the local recovering communities a chance to offer their feedback. AICDAC currently employs Certified Recovery Specialists who also attend the ROSC planning meetings and the TAG meetings on a regular basis. Certified Recovery Specialists are persons in long term

recovery that have participated in training and educational activities, have passed a certification test administered by the PA Certification Board and provide recovery support services to clients in all phases of recovery.

AICDAC's Executive Director, Case Management Supervisor, and Certified Recovery Specialist Supervisor have also participated in the Armstrong-Indiana County Co-Occurring Disorders meeting, where the management staff of the local behavioral health providers meet bi-monthly to discuss treatment service delivery for individuals with co-occurring substance use and mental health disorders. AICDAC currently is in the third year of a Health Resources and Services Administration (HRSA) grant for ARMOT services at the county substance abuse treatment facilities in Armstrong, Indiana, and Clarion Counties and holds monthly consortium meetings at the area hospitals to discuss the improvement of the delivery of physical and behavioral health services in the Counties. The need for this program has been discussed at length at both of these meetings with stakeholders from the various agencies: IRMC, ARC Manor, ACMH, Clarion Hospital, Family Services of Western PA, Cen Clear, and The Open Door (TOD).

Part V: Outcomes

A. Outcomes and Evaluation Findings

The outcomes that the ARMOT program works to achieve are: increase in the number of individuals being identified as in need of substance abuse services during their interface with hospital-based services; increase in the number of individuals receiving substance abuse assessments and treatment referrals as a result of screenings by the hospital staff; education of area hospital staff on substance use disorders; increase in the number of individuals engaging and completing the appropriate treatment services and accessing recovery support services; an increase in compliance and follow-up with substance abuse treatment; and a decrease in the number of emergency department visits and inpatient department visits and inpatient admissions of individuals with substance use disorders. Outcomes were measured following the ORHP program-specific PIMS measures as well as specific measures added by the applicant, such as patient and hospital staff surveys to measure satisfaction outcomes at the completion of services. The measures that were used include access to care; population demographics; staffing; network/consortium; sustainability; health promotion and disease management; mental/behavioral health; care coordination; and integration of care. The ARMOT team also collected statistical data and follow-up survey data at 30/60/90 and 180-day intervals after initial contact with the patient.

Using baseline data compared to data collected to date, we have documented a 9% increase in the number of individuals in our target population and a 433% increase in the number of unique individuals who received direct services. To date, substance use disorder education has been provided to 1,300 area hospital staff and over 87,000 other individuals through trainings, presentations at conferences, published articles in newspapers, websites, medical publications, and social media. Through current date, the ARMOT staff have received 734 referrals. Of those 734 referrals, 473 agreed to receive a screening and 350 participated in a level of care assessment. After receiving an assessment, the individual can choose whether to enter treatment, which 256 individuals have done and 160 of these individuals have successfully completed treatment. One hundred and eighty-one of the referred individuals chose to utilize the recovery support services offered to them. With two months remaining in the grant year, we anticipate that all of these results will continue to increase.

A. Recognition

Leader Times spotlight article (9/30/2016), Rural Health Monitor Abstract, Article, Video (11/30/2016), CCAP Newsletter Article (11/30/2016), PRO-A spotlight newsletter article (12/31/2016), Indiana Gazette spotlight article (4/28/2017), HRSA Rural Health National Conference San Diego, CA (5/10/2017), Communitynewsgroup.com article (5/12/2017), Drugaddiction.com article (5/22/2017), ClearbrookInc.com article (5/24/2017), CCAP Overdose News Bulletin (5/26/2017), IRMC House Call Magazine (5/31/2017), Association of American Indiana Physicians Conference in Oklahoma (7/30/2017), Indiana Gazette article (2/11/2018), Indiana Gazette article (2/12/2018)

Part VI: Challenges & Innovative Solutions

Stigma of patients with substance use disorders – ARMOT program uses people in long-term recovery, Certified Recovery Specialists to put a positive face on recovery and show that recovery is possible. CRS staff provide education about addiction and recovery for medical professionals, patients, family members, and general public to reduce the stigma of substance use disorders. CRS staff sharing their personal experience has been very effective in changing perceptions of patients with substance use disorders.

Transportation in Rural PA – AICDAC maintains contracts with independent transportation providers in the event a patient does not have health insurance to pay for transportation to drug and alcohol treatment and case management/recovery support appointments.

Lack of inpatient drug and alcohol treatment beds across PA – AICDAC has built relationships with Detox/Inpatient Drug and Alcohol providers to expand access to inpatient facilities. Through HealthChoices Reinvestment funds, the AICDAC has partnered with various providers to open two non-hospital detox units and two non-hospital residential programs and one male halfway house. One of the 3 hospitals that we are working with is planning to add hospital-based Drug and Alcohol detox beds to their facility in the summer of 2018.

Part VII: Sustainability

A. Structure

The Consortium will continue after the grant funding has ended. The success of the ARMOT program has been exceptional and all partners wish to continue their involvement. The programs will be sustained by State Targeted Response (STR) funds from the PA Department of Drug and Alcohol programs, fee-for-service billing from the HealthChoices program and State Base funds, if needed. All current partners have agreed to continue to be a part of the consortium. The hospitals are also making changes to continue Drug and Alcohol services beyond the grant period, such as a hospital-based detox program being implemented in one County hospital.

B. On-going Projects and Activities/Services to Be Provided

i) Will all, some or none of the elements of the program be sustainable once Outreach grant funding has ended? Please check the appropriate selection.

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained (i.e. the program will completely end after the grant period)

ii) Identify the projects and activities that will be sustained beyond Outreach grant period.

All of the Outreach activities of the Consortium will continue, and the program will be sustained through:

- Grant funding: The Consortium will continue to meet on a monthly basis to continue communication and collaboration on services and methods of improving service delivery. Data on the program's activities will continue to be collected and reviewed on a quarterly basis. Consortium members will continue to identify needed areas of training and combine their efforts to provide those trainings. The Consortium has also applied for a third HRSA grant to expand the ARMOT team in each hospital and to add a warm line for people to be able to reach Certified Addiction Specialists 24 hours a day.
- State Targeted Response Funds (STR): The ARMOT Teams will continue to be employed at each hospital and will continue to provide on-site assessments and recovery support as needed.
- HealthChoices Fee for Service Funding: Continue to identify and refer client at the area hospitals who have drug and addiction problems to the ARMOT team for further assessment. Continue to identify or enroll MA-Eligible Patients into the HealthChoices Program. ARMOT has been very successful and has served many clients in all three hospitals. The program has shown improvement in client identification, MA-eligibility and transfer to an addiction facility.
- HealthChoices Administrative Funds: The ARMOT Team will continue to provide addiction treatment training to the medical staff in all three hospitals.

C. Sustained Impact

The sustained impacts of the Outreach grant include the following:

- The knowledge and awareness of the existence of the ARMOT program for the targeted population. As more people use the ARMOT program and become healthier, there will be more communication available to the target population through treatment programs, twelve-step programs, media, PCPs, hospital staff, etc.
- The likelihood of more clients being involved in the continuum of treatment if they participate in the ARMOT program.
- Improved communication between the Hospitals, EMTs, Treatment Agencies, and Case Management units in the three counties
- An increase in the use of the 24-hour warmline for Recovery Support Services
- A reduction in fatal overdoses, and hopefully, a reduction in all overdoses
- A reduction in the prescriptions of opioids due to the public concern and the new Pharmacologic Data Management Program used by doctors and pharmacies

Part VIII: Implications for Other Communities

The Addiction Recovery Mobile Outreach Team has already proven to be beneficial to other communities across Pennsylvania. Several other Counties and Hospitals across the state have reached out to Armstrong-Indiana-Clarion Drug and Alcohol Commission for technical assistance in setting up a similar program in their area. ARMOT staff have done several presentations in different communities to assist other programs with duplicating or setting up a similar program. AICDAC was chosen by Pennsylvania Department of Health and Department of Drug and Alcohol Programs as the "Warm Hand-Off Champion" to do a presentation of a successful program at the Regional Warm Hand-Off Summit in our area. Our staff have also been asked to make presentations at health care conferences in California, Oklahoma, Washington, DC, etc. The qualitative measures to review when considering this program would be the number of opioid and alcohol overdoses that are seen at your local Emergency Department, the number of calls related to fatal and non-fatal overdoses from your county EMT services. The trend of overdoses in your area – are they increasing or decreasing? Will you have the beds available to send clients for treatment? Is your budget able to handle at least one shift of the ARMOT program, and possibly two shifts, and optimally, three shifts?

Part IX: Success, Increased Capacity, and Contributions to Change

A. Defining Success

- i) How do you define "success" for your grant program? Please check the appropriate selection(s). You may choose more than one option. If other, please describe.
- Access to a new or expanded health service
 - Increased number of people receiving direct services
 - Improved quality of health services
 - Operational efficiencies or reduced costs
 - Integration of process improvement into daily workflow
 - Continuation of program activities after grant funding
 - Continuation of network or consortium after grant funding
 - Health improvement of an individual
 - Health improvement among your program participants
 - Health improvement among your community
 - Enhanced staff capacity, new skills, or education received
 - Improved capacity to adapt to changes in healthcare
 - Other: Reduction in fatal opioid overdoses in all three counties!

- ii) Do you believe that your program has achieved success? If so, how?

The ARMOT program has been a success. The ARMOT program had over 700 referrals in the 3 years that the program has been operational. More than 73% of the individuals that met with one of our ARMOT staff went to Drug and Alcohol Treatment directly from the hospital and more than 62% of them completed treatment. In the United States less than 10% of people with a substance use disorder ever receive any treatment in their lifetime.

ARMOT staff have provided education and information on substance use disorders and the recovery process to patients, family members, and medical professionals and as a result we have seen improved attitudes and beliefs about patients with substance use disorders in the hospital setting.

The number of fatal overdoses in the three Counties that we serve; Armstrong, Indiana, and Clarion had been steadily rising since 2013 but in 2017 for the first time in years we saw a 25% overall reduction in the number of fatal overdose deaths in our three Counties despite a continued rise in fatalities in surrounding Counties. The ARMOT program has linked patients with treatment, case management, recovery support, and other resources like Naloxone and overdose prevention education which has had an impact on the number of overdoses in our area.

The ARMOT program has been touted as the "model warm hand-off" program by the PA Department of Drug and Alcohol Programs (DDAP). All Counties and Hospitals are being urged to adapt a form of the "warm hand-off" program that we developed here in our three Counties. DDAP is granting \$100,000 to Indiana University of Pennsylvania's Mid-Atlantic Addiction Research and Training Institute (MAARTI) to conduct research on the program in Indiana County and directly correlate the ARMOT program (among others) to the outcomes in the reduction of fatal and non-fatal overdoses. We hope to

utilize the ARMOT program to create a tool box for rural counties with heroin epidemics and possibly classify the program as an Evidence-Based Program of its own. DDAP also referred staff from the Dutch Embassy to our program in February because the Netherlands region wants to be prepared for the programs they need to implement if a heroin epidemic were to begin in their country. We hosted three Dutch Embassy Officials for one day in Indiana County to review all of our opioid programs, such as ARMOT, Drug Court, Jail Interventions, Narcan Distribution, etc.

B. Organizational Capacity

How has the federal funding of your grant program increased local capacity at your organization, within your network, and/or in your community? Please check the appropriate selection. If other, please describe.

- Formalized networks or coalition
- Developed new partnerships or relationships
- Enhanced skills, education, or training of workforce
- Enhanced data collection and analysis

C. Contributions to Change

The ARMOT Program has made a difference in individuals' lives, our organization or Consortium, and our community. Here are some stories to illustrate:

The first story is a female in her early 30's referred by the ICU of Indiana Regional Medical Center on 5-19-17. The individual was admitted into IRMC due to an overdose on heroin. The individual refused the Level of Care Assessment at that time. However, on 5-22-17 the individual called the ARMOT Case Manager and requested treatment. The ARMOT Case Manager met with her that day and she was admitted into a hospital based residential treatment program due to medical complications which were a result of her current use. The individual completed her residential treatment stay and entered a long-term halfway house upon her discharge. The individual contacted the ARMOT Case Manager while in the halfway house and informed the Case Manager that she had past legal issues that she has been running from. The individual stated that she wanted to address her legal issues even if it meant some jail time. The individual stated that she wanted to start her recovery with a clean slate. She contacted her probation officer, turned herself in and was incarcerated. The individual was released from jail and remains clean and sober today and is doing very well. The individual is now a manager of a fast food restaurant and is involved with the recovery community and has a positive relationship with her family. The individual is approaching her one-year recovery anniversary.

The second is a male individual in his early 60's who was referred to the program from the ICU of Indiana Regional Medical Center on 3-4-16. The individual was a daily drinker for many years and was admitted into IRMC due to severe alcohol withdrawal. The individual was assessed and entered residential treatment once he was medically stable. He completed his residential treatment stay and followed through with all of his treatment recommendations, completing all levels of his outpatient treatment program. The individual now has over two years of continuous recovery, he participates in AA on a weekly basis and has a good support system and family involvement.

The third is also a male individual in his early 40's who was referred to the ARMOT Program from the Emergency Department of Indiana Regional Medical Center on 10-26-16. The individual was a daily drinker for years but had several attempts at treatment in the past. The individual was admitted into a detox center the same day he came to the hospital. He completed detox and residential treatment. The individual followed through with his recommended outpatient programs and completed them as well. He became employed within six months of his assessment and is gainfully employed full time. The individual continues to participate in AA Meetings, has a sponsor and has support from family and the recovery community. He currently has a year and a half of continuous recovery.

The ARMOT program has certainly contributed to policy changes, systems changes, and environmental changes. The Program has been touted as the "model warm hand-off" program by the PA Department of Drug and Alcohol Programs (DDAP). All Counties and Hospitals are being urged to adapt a form of the "warm hand-off" program that we developed here in our three Counties. DDAP has requested that the ARMOT team assist other Counties in duplicating their program. Regional summits are being coordinated by DDAP and the PA Department of Human Services to provide other Counties and Hospitals information on the "warm hand-off" program and ARMOT is considered their "Champion" program that will be highlighted. DDAP is granting \$100,000 to Indiana University of Pennsylvania's Mid-Atlantic Addiction Research and Training Institute (MAARTI) to conduct research on the program in Indiana County and directly correlate the ARMOT program (among others) to the outcomes in the reduction of fatal and non-fatal overdoses. We hope to utilize the ARMOT program to create a tool box for rural counties with heroin epidemics and possibly classify the program as an Evidence-Based Program of its own. DDAP also referred staff from the Dutch Embassy to our program in February because the Netherlands region wants to be prepared for the programs they need to

implement if a heroin epidemic were to begin in their country. We hosted three Dutch Embassy Officials for one day in Indiana County to review all of our opioid programs, such as ARMOT, Drug Court, Jail Interventions, Narcan Distribution, etc.

Most importantly, we are seeing a change in the acceptance of patients with opioid use disorders in our area hospitals, Emergency Departments, Emergency Medical Technicians, Medical Personnel, PCPs, etc. because of the reduction of stigma and education about the substance use disorder and the need to treat it properly. One hospital is building a hospital-based detox on their grounds, along with their Emergency Departments Director and other medical professionals educating themselves on Medication Assisted Treatment (MAT) and applying for waivers so that they can start to provide MAT services in the local hospitals and PCP offices.

Pennsylvania

Part I: Organizational Information

Grant Number	D04RH28396
Grantee Organization	Butler Health System
Organization Type	Health System
Address	Butler Health System, One Hospital Way, Butler PA 16001
Grantee organization website	https://www.butlerhealthsystem.org/
Outreach grant project title	Rural Healthcare Services Outreach Grant Program
Project Director	Name: Erin Stewart
	Title: Program Officer
	Phone number: 724-284-4411
	Fax number: 724-284-4645
	Email address: erin.stewart@butlerhealthsystem.org
Project Period	2015 – 2018
Funding level for each budget period	May 2015 to April 2016: \$200,000
	May 2016 to April 2017: \$200,000
	May 2017 to April 2018: \$200,000

Part II: Consortium Partners

* Indicates consortium partners who signed a Memorandum of Understanding/Agreement

Partner Organization	Location (town/county/state)	Organizational Type
Butler Healthcare Providers DBA: Butler Memorial Hospital *	Butler, Butler County, PA	Community Hospital
Clarion Hospital *	Clarion, Clarion County, PA	Community Hospital
Seneca Medical Center of Butler Health System *	Seneca, Venango County, PA	Physician Practice
BHS Primary Care, Butler Medical Associates *	Butler, Butler County, PA	Physician Practice
BHS Primary Care, Primary Care Associates *	Butler, Butler County, PA	Physician Practice
Clarion Hospital and Health Services of Clarion, Inc. *	Clarion, Clarion County, PA	Physician Practice

Part III: Community Characteristics

A. Area

The service area is in western Pennsylvania and encompasses the Pennsylvania counties of Clarion, Venango, and Lawrence, the rural town of Titusville, Pennsylvania and the rural tracts of Armstrong County, Butler County and Mercer County.

B. Community description

More than 365,000 persons live in the target service area and it is estimated that 14,000 people have been diagnosed with diabetes. Our service area has a 2.3% higher prevalence of diabetes than the state average across all demographic groups. The service area also has a higher rate of persons over 65 than the state or national average and a disproportionate amount of people are employed in low wage jobs. The percentage of people with public coverage such as Medicaid is higher than the state average. Access to DSME programs in the service area are limited and there are a number of existing barriers to accessing the few services that are offered.

C. Need

In conducting the needs assessment, we considered data from: US Census Bureau, Healthy People 2020, Centers for Disease Control and Prevention (CDC), Pennsylvania Department of Health, Rural Health Information Hub and other validated sources. Also, local physician surveys and patient satisfaction data were considered. As detailed below the needs assessment discovered:

- Diabetes has a high prevalence in the area across all demographic groups.
- DSME is recognized as a critical care component by the ADA
- Access to DSME programs in the area is limited and barriers to accessing what limited services there are exist
- Physicians and patients do not understand the value of DSME

Those with lower income and less education are more likely to develop diabetes than those in higher income brackets and people, statistically, have less opportunity for quality health care and supportive care. According to the CDC, 29.1 million (9.3%) Americans have diabetes. Our target service area has a diagnosed diabetes prevalence of 11.4%. In both the northwest and southwest regions of the state (where our counties are located) those in the 65 years and older age range make up the largest percentage of diagnosed diabetes and our health indicators for most of our counties is in the middle to lower ranges for the state.

Part IV: Program Services

A. Evidence-based and/or promising practice model(s)

The Diabetes and Health Management Program is a DSME program and uses the National Standards for Diabetes Self-Managed Education from the American Diabetes Association and the American Association of Diabetes Educators (AADE) Guidelines for the Practice of Diabetes Self-Management Education and Training (DSME/T). Both the standards and the guidelines are built upon strong evidenced-based models and have led to successful projects in a variety of settings. No modification to the standards or guidelines were made for this project. The current DSME program at Butler Memorial Hospital (BMH) is recognized by the ADA and has been since 1999. Through our grant program, we provided the support for our consortium member to also develop a recognized ADA DSME program. In addition, it should be noted that Motivational Interviewing (MI) and blended learning are also evidenced based practices that have been used with great success with rural populations matching our target population. Our program included both MI and blended learning to aid in the success of our initiatives.

B. Description of Activities

Strategies included promoting diabetes self-management education to clinicians and patients from participating clinical sites and providing a hybrid (online education blended with one-on-one health coaching and support groups) DSME program to patients with diabetes in the service area. The program used distance education best practices and strategies to improve patient knowledge, motivate them to remain engaged and remind them of important milestones, such as having HbA1c checked or having a foot exam. All patients also had the opportunity to have one-on-one health coaching sessions which they could choose to do either in person at one of the hospitals or over videoconferencing.

The program provided, created, tested and implemented Care Pathways – an online Guided Episode Management tool. To support this online component, the program created a project specific online demo of the Care Pathway online patient education system to be used to engage clinicians, referral staff and patients. Each clinical practice was visited by a member of the project team to engage clinical staff, provide a demo of Care Pathway, answer questions, and provide feedback to the Care Pathway development and DSME teams. Marketing materials were delivered by a member of the project and each office had the opportunity to engage with the online demo via the project provided iPad. This gave them the opportunity to visualize the patient experience, enabling them to better explain the project to patients and bolster engagement. Direct mailings (email and US Mail) were also sent to patients with an HbA1C >9 from participating practices who were newly diagnosed. The project was also promoted on all partner websites. The program also offered support groups, both in person and over videoconferencing. The groups were led by Diabetes Nurse Educators (DNEs), the Project Director, or nutritionists and included guest speakers for some sessions.

C. Role of Consortium Partners

Butler Memorial Hospital (BMH), Seneca Medical Center of Butler Health System, Primary Care Associates, Butler Medical Providers, Clarion Hospital and Health Services of Clarion, Inc. all engaged in the planning and implementation of the Diabetes and Health Management Program. As part of its commitment to the health and wellness of the community, all consortium members had a clear defined vision to improve the health outcomes among patients with diabetes through better self-management and improved knowledge and behaviors. The following frame work describes the roles and responsibilities of each consortium partner.

- **Strategic Vision.** Each consortium member supports the vision to improve health outcomes for those patients with diabetes. All members are in agreement, that program activities must be aligned with this vision.

- **Collaboration.** Each consortium member has a shared interest in the outcomes of the program. Our partners are the stakeholders and included in the planning and execution of program activities.
- **Leadership.** Our consortium members inspire each other to create both short and long term activities that will achieve the shared vision.
- **Evaluation.** Each consortium member understands the value in monitoring and measuring outcomes to generate the data necessary to obtain the knowledge to effectively manage the program and demonstrate the benefits to the community it serves.
- **Communication.** The consortium will create awareness through effective communication. Information is exchanged among partners through both structured and informal channels.
- **Program Effectiveness.** Partners have experience with similar program and utilize existing community resources. Each member will adequately staff the program with personnel with necessary skills and knowledge.

The consortium consisting of the main health care providers in the service area, leveraged existing resources to provide an effective, efficient, and sustainable project that addresses the community need for convenient and accessible DSME education.

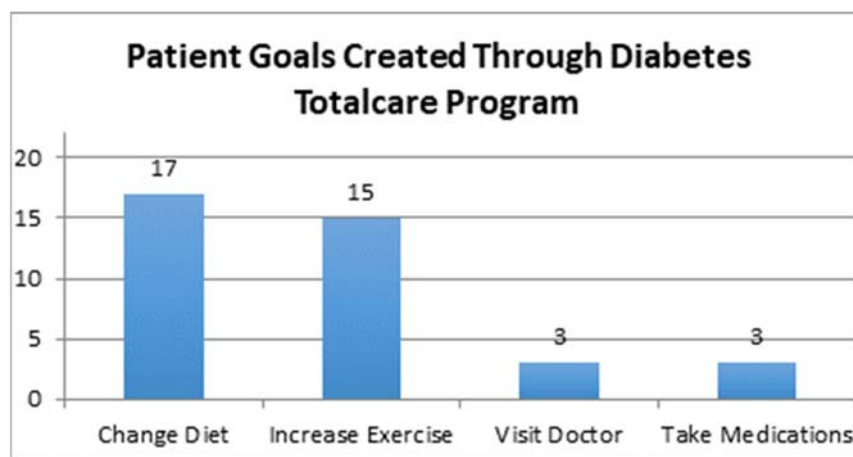
Part V: Outcomes

A. Outcomes and Evaluation Findings

As a part of the grant award, Butler Memorial Hospital has retained an external evaluation team to provide process and summative evaluation of the program. The evaluation team's findings demonstrate that the diabetes self-management education (DSME) component is the most utilized program intervention and that DSME is effective in positively impacting glycemic control. The Year 2 findings also demonstrate that the program continues to be effective from Program Year 1 to Program Year 2 and that all offices achieved significant improvement in managing diabetes among their populations. The data in Table 3 shows that program-wide, Diabetes TotalCare is on track for meeting a key program objective - Improve health outcomes (measured by glycemic control improvement of 20% among patients with unmanaged Diabetes Type 1 and 2) who participate in the program.

The survey team contacted Butler Health System patients in order to evaluate the overall patient experience in the Diabetes TotalCare program. Among all the respondents who participated in the program, 73.9% indicated that the program helped them set goals to change diet, and 26.1% indicated that the program helped them set goals to increase exercise. The results of the patient goals analysis are presented in Figure 3.

Figure 3. Patient Goals Created Through Diabetes TotalCare Program



Additionally, 91.3% of respondents indicated that the Diabetes TotalCare program helped them review their medications, while 8.7% were not sure. Moreover, 95.6% of respondents strongly agreed or agreed that the program was a good use of their time, while only 4.3% neither agreed nor disagreed. About half, 43.4% of patients stated that the program helped them to lose weight, with self-reports from five patients noting that their weight loss ranged from 10 pounds to 26 pounds. Patients were also asked what they felt was the most important part of the program - the most frequent response being that the program had a positive influence on changing their diet. Many patients expressed that Diabetes TotalCare services helped them change their diet, implement portion control, and watch their intake of sweets like snacking on carrots instead of cookies. When patients were asked how they would like to participate in diabetes education in the future, 82.6% reported they prefer in person, 56.5% prefer telephone, 13% prefer video conference, 4.3% prefer online real-time chat, and 4.3% prefer e-mail.

The evaluation also provided yearly key stakeholders interviews. The discussion of the interviews included diabetes awareness, patient engagement, and program sustainability. The key stakeholders identified the strengths of the Total Care program as:

- Diabetes TotalCare has raised attention on diabetes overall in the community. Stakeholders noted that the “big picture” is excellent and that third-party payers have been impressed with higher awareness and overall performance on diabetes by the partners.
- The Diabetes TotalCare program provides people hope that over time they can start to feel better.
- The range of Diabetes TotalCare program services are broad enough to meet the needs of diverse patients who vary by engagement, knowledge, technological savviness, and health and wellness concerns.
- The program team continues to be flexible, looking for program enhancements that are creative and that meet the needs of a diverse group of people with diabetes in terms of knowledge, ability to be engaged and social and financial challenges.
- Though labor-intensive, mailings have had some success in engaging people with diabetes in support groups and other diabetes programs in the New Wilmington and Seneca regions.
- Calling patients one at a time also has had some success in engaging high-risk patients in programs.
- Collaborating with the Penn State collaborative to offer Dining with Diabetes continues to provide support for people with diabetes.
- Weight loss classes have been successful for engaging people in TotalCare Diabetes and with spreading knowledge about diabetes. Currently there is a waiting list for the weight loss classes.
- A diabetes registry was developed to track patients with diabetes mellitus across all partners (9,000 patients with diabetes) and to support interventions and monitoring of population health.
- The Diabetes TotalCare program supported DSME accreditation at consortium partner Clarion.
- Stakeholders continue to indicate that the increased awareness of diabetes in the communities they serve supports a positive culture change.

The consortium will continue to offer the Care Pathways – an online Guided Episode Management Evaluation. The online program with no other diabetes education proves to be ineffective for reducing HbA1C however in collaboration with DSME a greater reduction in A1C is found. The consortium will continue to engage clinical staff, provide demo of Care Pathway, answer questions, and provide feedback to the Care Pathway development and DSME teams.

The consortium will continue to offer DSME and identify program participants. Each partnering group practice office will refer all newly diagnosed patients to the program as well as patients who have uncontrolled diabetes. Office staff will describe the program to the patient. Once a patient has accepted enrollment, DSME staff will be forward the appropriate Certificate of Medical Necessity. Patients who choose not to enroll in the Care Pathway will still have the option to participate in one-on-one Health Coaching either in person or over videoconferencing. The videoconferencing equipment enables patients to connect via a secured link using any web enabled device.

During the DSME appointment the educator will review patient health status, discover what patient knows about diabetes and how they have been self-managing their condition. The educator will also talk to the patient to discover the patient's goals of DSME (e.g. increase knowledge, connect with support systems, avoid insulin dependence). The educator will help the patient set Personal goals, develop an individual care plan, and will provide referrals to support services (e.g. support groups, weight loss groups, etc.).

The educator will develop an individualized meal plan, problem solve, and address any other concerns or questions, including the option to request additional meetings with the diabetes education team. Patients will additionally have the option of meeting in person or over videoconferencing. Those who choose to meet over video will be able to do so from a personal device or from a participating clinical office. Continuation of the DSME appointments and continuing to outreach to clinical staff on the outcomes of the DSME is crucial to the program as the evaluation thus far shows DSME to be the greatest in reducing HGBA1C which is the goal of the program.

Support groups will continue both in person and over videoconferencing. These groups will be led by the diabetes nurse educators, the Project Director, or nutritionists and may include guest speakers such as endocrinologists or other specialists. The support groups are recommended in conjunction with DSME.

DSME staff will continue to undergo 20 hours of behavioral and Motivational Interviewing training (MI) so that they may incorporate these skills into their health coaching and interviewing skills. Annual follow up training to monitor and reinforce skills will remain in the program design.

The program director will continue to meet with clinical staff to explain the value of DSME. The program director will use outreach materials and digital materials suitable for electronic distribution explaining the value of DSME, the enrollment process and the potential impact on an individual patient's health status.

B. Recognition

The consortium was awarded a grant from the Butler Health System Foundation to provide Diabetes Lifestyle Coaching and Diabetes Weight loss classes in the amount of \$8,000.00 for the fiscal year 2018. The Lifestyle Coaching for Diabetes and Diabetes Weight loss class is a 4-week program tailored for any patient with type 2 diabetes or pre diabetes. The health coaching classes are designed to improve patient care through lifestyle changes and include hands on activities in a supportive, non-judgmental atmosphere.

A poster presentation representing the Butler Health Systems outreach grant was presented at the Nova Southeastern University's College of Osteopathic Medicine, medical school/residency competition and won 3rd place. A poster presentation was also presented at the 2017 Florida Osteopathic Medical Association's (FOMA) Student/Intern/Resident/Fellow Scientific Research Poster Competition

Part VI: Challenges & Innovative Solutions

Currently Butler and Clarion Hospital have an ADA recognized DSME program. Prior to the award of the grant the DSME programs experienced low enrollment, low attendance for group education classes, and no strong referral process. The grant has allowed us to improve barriers such as referrals, locations, scheduling, and costs that were identified as challenges.

In July of 2016, Butler Health System successfully started a new endocrinology practice filling a gap that existed in the community for many years. With the new presence of Endocrinology, we moved the current hospital based DSME program to reside in the same location as the Endocrinologist. We also changed electronic documentation from the hospital based Meditech system to the outpatient platform Medent. During the start-up phase of our new Endocrinologist, office staff, and Electronic Health Record, a slight decrease in appointments was noticed, however, after the initial implementation referrals began to rise. This colocation of services has removed the barrier of parking for patients as the new location is easier to access. Changing to the outpatient electronic health record has streamlined communication between providers and the diabetes educator.

Cost to an individual can be a significant barrier to enrolling in a DSME program. As a result of the DSME grant, Butler Health System was able to offer free programs to our diabetes patients. Both the online program and video conferencing options have been available and have reduced cost barriers. In addition, health coaching classes were added to support the community in better understanding nutrition and weight loss and its impact on diabetes. The challenge we continue to face is access and use of technology. To counteract these challenges, the program offered group education classes through video conferencing. This allowed patients in rural areas to have convenient access to quality services in a group setting, while eliminating the hassle of technology. We provided the technology and expertise to connect the community to valuable information to promote healthy lifestyles. Some patients continued to decline this option, however, we continued to work with our consortium to increase the use of video and to think of new ways to use and promote the technology.

Initial surveys indicated that physicians and their staff did not understand the benefits of DSME and therefore were not referring newly diagnosed persons with diabetes or persons with uncontrolled diabetes (HbA1C >9) consistently. To address this, the program created highly visual printed outreach materials and digital materials suitable for electronic distribution explaining the value of DSME, the enrollment process, and the potential impact on an individual patient's health status.

Part VII: Sustainability

A. Structure

The Diabetes and Health Management Program plans to continue with the following consortium partners: BMH, Seneca Medical Center of Butler Health System. Butler Medical Associates, Primary Care Associates, Clarion Hospital and Health Services of Clarion, Inc. The purpose of our consortium is to: 1) encourage creative and lasting collaborative relationships among health providers in rural areas; 2) ensure regular input from relevant and concerned entities within the health sector. There are no plans to add additional consortium members to the program at this time.

The Diabetes Health and Management Program Director will continue program oversight as well as work directly with the existing Diabetes Education Program and its staff to ensure the successful sustainability of this program and improved health outcomes for

patients. The Program Director will also work in collaboration with DSME staff at Clarion Hospital, and the Practice Manager at each of the partnering primary care practices. Ongoing communication with the Diabetes and Health Management Program Steering Committee will be important to gain regular input from consortium members and encourage collaborative relationships among providers in rural areas.

B. On-going Projects and Activities/Services To Be Provided

i) Will all, some or none of the elements of the program be sustainable once Outreach grant funding has ended? Please check the appropriate selection.

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained (i.e. the program will completely end after the grant period)

ii) Identify the projects and activities that will be sustained beyond Outreach grant period.

The consortium is committed to improving the quality of life in those patients with diabetes in the project service area. We intend to continue to offer a blended learning delivery model (online education blended with 1:1 DSME education, support groups, health coaching classes and distance education in a group setting). Our plan to have continuation of activities and services by potential sources of support include: in-kind support through staff, space, and technology; the continued use of assets; and, the development of alternative funding streams. The project is anticipated to be extremely sustainable based upon:

- Meeting the HbA1c goals results in incentives for BMH and Clarion that will be reinvested in the program to maintain patient results
- Meeting the HbA1c goals through chronic disease self-management education and lifestyle coaching services to support the reduced consumption of inappropriate healthcare resources.
- Decreasing the cost of healthcare to society particularly in the rural setting by reducing readmission rates and hospital/emergency room utilization rates

Strategy 1: Leverage existing resources. The project employs a number of existing resources that are part of the partner's ongoing operational budget. These resources have already been expensed and will continue without the need of additional funding. These resources include: DSME staff (five current employees), technology infrastructure, existing partnerships between hospitals and primary care physicians, clinical staff at referring practices, curriculum and other resources of ADA recognized DSME program, and patient owned technology resources and internet access.

Strategy 2: Use Star Performance Improvement Payments to continue program. The Star Performance Improvement Program offers incentive payments to clinical practices and their associated hospitals for reaching certain patient clinical goals. Of the 20 measurements that are considered, six are related to diabetes and three of those are triple weighted. Helping patients better manage their diabetes could result in a payment of \$400,000 with potential ongoing payments based upon patient health outcomes and costs. This funding will be used to offset program costs, expand the program to engage more patients, and possibly expand the program to encompass other chronic diseases that benefit from self-managed education.

Strategy 3: Succeed with payment reform (providers taking on financial risk) in reducing the cost to society in healthcare, in particular, in the rural setting. We are anticipating our payments to be risk based by 2020. This program will continue to support rural hospitals to be successful in managing the utilization of healthcare resources and continue to serve their community in a new payment environment. We believe our success with improving patient outcomes while reducing care costs (reducing medication need, complications, hospitalizations, etc.) not only will prepare each consortium member to take on full risk in 2020 but become a gold standard for other providers who are also preparing for payment reform. The consortium consulted with their respective Finance Department in developing this sustainability approach. They have verified the current and anticipated change in payment reform and agree on the need for this type of program to gain an understanding of how to effectively manage a high risk population to reduce the utilization of healthcare resources and to learn how to survive in a risk based payment system.

C. Sustained Impact

The program has created many lasting effects on the community. The programs legacy will include but certainly is not limited to the change in the way the consortium member's work together to serve the patients with diabetes in our service areas. Prior to the

grant the diabetes education in the different areas was completed in silos. The collaboration of this program and the blended delivery model created a cohort of people with similar interests. In addition to the day to day information sharing across partners, a formalized diabetes task force team was created with representatives from all consortium sites which will continue long after the federal funding is completed. As a result of the program, the community will continue to see practice changes from increased referrals to diabetes education as the value has been proven and explained to the referring providers. Providers are now knowledgeable about the services and the value they add. The communities will continue to see an increased capacity for diabetes education training as new services have been added and videoconferencing will continue to connect people to education. Beyond the services and infrastructure the program has provided, Motivational Interviewing has been integrated into provider practice and is now regularly used when engaging and educating patients providing an additional lasting impact.

Part VIII: Implications for Other Communities

The collaboration with consortium partners has allowed Butler Health System to work closer and develop a trusting relationship with Clarion hospital. As a result, we pulled resources together to write an additional grant for care coordination. Clarion hospital works closely with additional health systems that Butler Health System does not typically do business with. Because of the trust that was developed during the Outreach grant, Clarion recommended that we work with these additional health systems for the care coordination grant. We see these relationships extending well beyond grant services and into telemedicine visits and process improvement.

Part IX: Success, Increased Capacity, and Contributions to Change

A. Defining Success

i) How do you define "success" for your grant program? Please check the appropriate selection(s). You may choose more than one option. If other, please describe.

- Access to a new or expanded health service
- Increased number of people receiving direct services
- Improved quality of health services
- Operational efficiencies or reduced costs
- Integration of process improvement into daily workflow
- Continuation of program activities after grant funding
- Continuation of network or consortium after grant funding
- Health improvement of an individual
- Health improvement among your program participants
- Health improvement among your community
- Enhanced staff capacity, new skills, or education received
- Improved capacity to adapt to changes in healthcare

ii) Do you believe that your program has achieved success? If so, how?

The program has been successful as diabetes education, including nutrition and lifestyle coaching, is now considered a necessity of chronic disease management in our consortium organizations. In the past, providers knew diabetes education was offered, however, felt too many roadblocks were in the way of getting the education to the patients. Through this grant, we have worked with the providers and educators to remove barriers and deliver education to patients at their level. Education is now believed to be essential in diabetes outcomes. We have seen an increase in referrals to the educators. Butler hospital has also started a new endocrinology program with 3 full time providers who serve all the consortium areas. The services offered through the grant have provided wrap around services to the care plan of the providers. The program has brought awareness and focus on diabetes and chronic disease. As the grant progressed into year 2 we began focusing on wellness. An employee wellness committee was formed and monthly newsletters are sent with the focus of reducing chronic diseases.

B. Organizational Capacity

How has the federal funding of your grant program increased local capacity at your organization, within your network, and/or in your community? Please check the appropriate selection. If other, please describe.

- Formalized networks or coalition
- Developed new partnerships or relationships
- Enhanced skills, education, or training of workforce

Enhanced data collection and analysis

C. Contributions to Change

Change in individuals' lives, your organization, consortium, or community:

Our success has been proven as seen in both clinical outcomes and personal testimonials of those patients who participated in our programs in which a second HGBA1C was obtained, a .14% reduction was seen. Below are a few testimonials that support the continuation of the program.

- Patient a; lost more than 20 pounds and improved his HGBA1C "Learning about nutrition and eating right was like learning a new language. These classes taught me and now I can be successful"
- Patient b; lost 30 pounds and needs less medications; "My doctor said he thinks I lost enough weight to not be on my CPAP machine anymore."

Physician offices continue to request, support and refer to health coaching classes to be offered to patients to further support the physician and diabetic educator's efforts in improving patient education while decreasing HGBA1c levels and improving health outcomes. Lifestyle coaching and weight loss classes are conveniently offered in the evening in both the Butler Crossroads location and Northern area also via videoconferencing in the Seneca area. Additionally, participants are encouraged to seek individual DSME appointments with a certified diabetes educator in the diabetes management center. Outcome metrics based on HGBA1C reduction, engagement and weight loss will be submitted to the Butler Health System Foundation with consideration of award for 2019.

Change in policies, systems, and environment:

Diabetes Prevention Program:

As a result of increased engagement from providers and patients in diabetes education a need for diabetes prevention was identified. The Butler Health System has begun seeking accreditation for the Diabetes Prevention Program. January 2018 the Health System was awarded Pending Recognition according to the criteria contained in the CDC Diabetes Prevention Recognition Program Standards. The CDC pending status will remain in place until completion of a cohort and submission of data. At that time, we anticipate being awarded interim recognition. It's that interim level or full recognition (successful performance) from the CDC that will allow the program to apply to CMS to be a recognized program and bill for services. This program will allow us to have a reimbursable program to help people with pre-diabetes strive to prevent type 2 diabetes and improve their health.

Pennsylvania

Part I: Organizational Information

Grant Number	D04RH28405
Grantee Organization	J.C. Blair Memorial Hospital
Organization Type	Hospital
Address	1225 Warm Springs Avenue, Huntingdon, PA 16652
Grantee organization website	www.icblair.org
Outreach grant project title	
Project Director	Name: Shelly Rivello
	Title: Director of Integrated Care
	Phone number: 814-643-8785
	Fax number: 814-643-8102
	Email address: srivello@icblair.org
Project Period	2015 – 2018
Funding level for each budget period	May 2015 to April 2016: \$200,000
	May 2016 to April 2017: \$200,000
	May 2017 to April 2018: \$200,000

Part II: Consortium Partners

* Indicates consortium partners who signed a Memorandum of Understanding/Agreement

Partner Organization	Location (town/county/state)	Organizational Type
J.C. Blair Memorial Hospital*	Huntingdon/Huntingdon/Pennsylvania	Healthcare
J.C. Blair Medical Services*	Huntingdon/Huntingdon/Pennsylvania	Healthcare
PinnacleHealth*	Harrisburg/Dauphin/Pennsylvania	Healthcare
Juniata Valley Behavioral and Developmental Services*	Mifflintown/Juniata/Pennsylvania	Behavioral and Mental Health
Juniata Valley Tri-County Drug & Alcohol Abuse Commission*	Mifflintown/Juanita/Pennsylvania	Drug and Alcohol Commission

Part III: Community Characteristics

A. Area

The target population for this grant project was Huntingdon County, Huntingdon, PA. With a census of 45,694 (2014), Huntingdon County is a rural community located in southcentral Pennsylvania. With limited access to health care services due to a variety of contributing socioeconomic factors, the residents of Huntingdon County were among the target population. Among the target population of Huntingdon County area, the grant project focused on the health care providers and patients of local health care organizations (refer to Consortium) who seek to address community needs and health disparities with a goal of improving health outcomes and overall health.

B. Community description

While Huntingdon County has rich history and positive attributes in terms of community life, tourism, and cultural influences, the residents experience health disparities primarily due to socio-economic factors. Ranking 21 out of 67 counties for overall health outcomes, Huntingdon County ranks 56 of 67 counties in social economic factors including education, income, and unemployment. The Quality of Life measured "poor or fair" with higher than state averages for smoking, obesity, teen births, substance abuse, and low physical activity. A majority of the population is identified as White (92.7%), experiences poverty rates at 12.4%, with 20% of children living in poverty. The unemployment rate in the county is significantly higher than the state rate (9.5% in 2014). Access to quality health care services is limited by the availability of health care providers, ranking rural Huntingdon County as a Health Professional Shortage Area for primary care, mental health, and dental providers.

C. Need

Based on the described county demographics and limited access to health care, the need that the Outreach grant program was designed to provide an innovative strategy to improve access to health care, reduce health care costs, and improve the patient health care experience (The Triple Aim). The primary goal through the grant project was to provide more comprehensive, patient-centered care that would integrate an evidence-based behavioral health element into the primary care and specialty care settings. The goal of the integrated care program would meet the biopsychosocial health needs of the patients and enhance the patient care experience for rural populations through a fiscally responsible design. Reduction of stigma for mental health and substance abuse was an important goal, as well as appropriately managing the mental health and behavioral factors that influence care, provider satisfaction, and patient engagement in treatment.

Part IV: Program Services

A. Evidence-based and/or promising practice model(s)

The grant project was primarily framed on the health care philosophy of integrated health care with specific application of the evidence-based model of Primary Care Behavioral Health (PCBH) model. PCBH is a “population-based clinical service that is simultaneously co-located, collaborative, and integrated within the primary care” setting with the overarching goal to “improve and promote overall health within the general population”. Review of the *Milbank Memorial Fund and Patient Centered Primary Care Institute (PCPCI)* reports, PCBH services promote improved outcomes in health care “associated with several fundamental characteristics, including collaboration and co-location with PCP and mental health providers, as well as systematic follow-up, medication compliance, patient psychoeducation, and patient input into treatment”.

Facilitated by Behavioral Health Consultants (BHC), utilization of multiple empirically based interventions achieves the goal of addressing the biopsychosocial needs of patients. The evidence-based interventions include, but not limited to: Motivational Interviewing, Screening, Brief Intervention, Referral, and Treatment (SBIRT), Brief Cognitive Behavioral Therapy (CBT), Transtheoretical Model of Change, Care Management, Behavioral Activation, Crisis Intervention, Disease Management, and Psychoeducation. The PCBH model embeds BHC and related mental health personnel directly within the primary/specialty care setting. Initiated through the use of screenings, referrals, and chart reviews, the BHC is available to assist both the health care provider and the patient/consumer.

As a preferred model of practice by health care providers, PCBH “facilitate systemic change within primary care that facilitates a multidisciplinary approach” to treatment and actively involves the health care provider without overburdening the existing system. Inclusion of a BHC in the treatment of mental health within the primary/specialty care setting “improves outcomes, patient and physician satisfaction, and costs less than usual care”. (*PCPCI, 2013*) Since the PCBH model is not a particularly rigid model, although there are core principles and concepts, the grant project adapted the model to fit the developing program and specifics of the health care environment. Throughout the work plan, the PCBH model provided overarching guidance and was respected for effective strategies for program development and implementation.

B. Description of Activities

The primary activities of the grant project were outlined through several key focus areas, including: fidelity to the PCBH model, improved patient care experiences, improved access to quality health care services, and financial sustainability and influence payment reform. The impact of the project was designed to reduce barriers to care among rural populations, improve quality of life, and increase access to affordable care.

The activities of the project were extensive over the duration of the grant program timeframe; however, were focused on several key activities, including but not limited to:

- Development and implementation of core programming elements
- Recruitment and retaining clinical personnel to administer programming services
- Administration of programming within various health care settings (primarily outpatient)
- Identification of key clinical measures and indicators to cue interventions and monitor outcomes
- Education of health care providers on intervention strategies and utilization of services
- Increase the number of patients screened for clinical indicators and apply interventions
- Improve the quality of health screenings for clinical indicators to expand screening application
- Improve patient engagement with treatment planning to enhance overall health outcomes
- Educate general public and health/human services agencies regarding integrated care
- Assess value of project among health care providers while encouraging acceptance
- Implement a fiscally responsible project that ensures access to affordable and valuable services

- Monitor state and national strategies regarding integrated care and related reimbursement strategies
- Review licensure requirements and credentialing to ensure compliance with related strategies

C. Role of Consortium Partners

The grant project offered collaboration between two direct health care organizations and three administrative leading organizations to create a unique dynamic of clinical/health, administrative, political, financial, and community health realms geared to meet the complex health needs of the target population. The grant project consortium included: J.C. Blair, J.C. Blair Medical Services, Juniata Valley Behavioral and Developmental Services, Juniata Valley Tri-County Drug & Alcohol Abuse Commission, and PinnacleHealth Hospitals. Identified as leaders among the health and human service providers within the target service area, the consortium members were carefully selected and invited to participate in the grant project.

The members of the consortium joined the development and implementation at different times, but all within a short timeframe prior to the application for funding. Initially designed as an organization-specific pilot project, the grant project expanded from direct care providers to include additional resources from regional health and human services administrative providers. As with many rural communities, the Huntingdon community relies on interactions between health and human service providers to achieve program and patient goals. The PCBH model demands an increased level of collaboration to meet the needs of the community and to achieve success as an evidence-based model with replication potential.

J.C. Blair Memorial Hospital was the applicant organization and was the primary health care provider within target area and for this project. J.C. Blair Medical Services consisted of multiple locations offering primary care services and specialty care services as the direct health care provider maintaining patient base. PinnacleHealth Hospital provided J.C. Blair and J.C. Blair Medical Services additional clinical and administrative support through a clinical affiliation, as well as grants management support. Juniata Valley Behavioral & Developmental Services and Juniata Valley Tri-County Drug & Alcohol Abuse Commission provide influence and input into local policy development, networking, and access to stakeholders.

Involvement of the consortium members was vital in the development and implementation of the grant project. The consortium members met on a regular schedule with a formalized agenda. Led by the Project Director, status updates on project goals and objectives, intervention strategies, and challenges were discussed. Feedback regarding project results were encouraged where all consortium members were encouraged to participate. Outside of the formal meetings, consortium members continued to interact at non-project specific community networking opportunities.

Part V: Outcomes

A. Outcomes and Evaluation Findings

Through various activities, the grant project had short-term, intermediate, and long-term outcomes outlined to provide goals and measurable objectives. The ultimate long-term outcomes measured through the activities outlined in the work plan included: improved patient outcomes through a coordinated integrated program, reduced costs associated with health care through integrated care methods, improved coordination of care and productivity among health care providers, and increased community capacity to promote wellness, prevention, early intervention, and recovery.

Demonstrated measurable outcomes during the grant project included improvements for patients' mental and physical health status, improved levels of patient engagement, and enhanced provider relations and satisfaction. Levels of depression, anxiety, and drug and alcohol abuse were improved or stabilized through an integrated care approach. As part of the treatment team, behavioral health providers provide clinical interventions and care coordination addressing the various health factors, socioeconomic issues, and social determinants which influence patients and care plans.

Serving children, adults, and older adults, the grant project provided therapeutic interventions through a brief intervention treatment model. Co-occurring substance abuse conditions were recognized as significant contributing conditions influencing the patients' overall health and functioning. Reduced stigma and supporting whole-person care was a direct outcome of the grant project. Targeting chronic disease management by addressing health behaviors and related mental health factors, the project provided an innovative, collaborative, and efficient way to deliver health care among rural health care providers while improving access to care.

B. Recognition

The grant project strived to maximize community awareness of grant funding announcements, project activities, and project outcomes through internal and external publicity. Due to organizational marketing and community outreach support, the grant project was featured in multiple articles in the local newspaper serving as resident experts on various mental health topics.

Ongoing community recognition among local media was instrumental in the promotion of services. Promotion of national health observances assisted the access to media while promoting the relevant services.

In addition to local (primarily Huntingdon County area) recognition, the received accolades at the state level for program design and outcomes. In 2016, The Hospital and Healthcare Association of Pennsylvania (HAP) awarded the grant project the "Excellence in Care" award. In 2017, the Pennsylvania Office of Rural Health awarded the "Rural Health Program of the Year" award to the grant project. The grant project is also currently highlighted as an innovative strategy to address demanding health care needs within a state-wide global demonstration project (Pennsylvania).

Representation at conferences has also been a highlight for the grant project, including presentation at a state-wide integrated care conference, a state-wide rural health and public health conference, and a professional association conference. Grant project personnel have also been selected to participate in state-wide planning initiatives focused on integrated care, behavioral health, readmission rates, and social work.

Part VI: Challenges & Innovative Solutions

Like most successful initiatives, there were multiple challenges experienced during the grant program's development and implementation. However, solutions were identified through creative and innovative strategies, collaboration, and persistence. The consortium members and organizational leadership were useful in strategic planning and problem solving.

A large and impactful challenge was related to personnel recruitment and retention. The initial budget and work plan included several clinical personnel (LCSW); however, it proved challenging to recruit qualified personnel due to the rural nature of the target community. Modification to the budget and work plan was necessary, as well as adaptation to the evidence-based model in application due to limited staff to implement the project activities. Through purposeful redesign, the project leveraged non-clinical staff to improve the utilization and effectiveness of the clinical staff. Enhanced training and clinical supervision was offered to non-clinical personnel to ensure clinically appropriate services.

Another large challenge was the reorganization of the consortium organizations which impacted the location of the direct services provided. While this change did not impact the design of the project, it did alter the implementation schedule, organizational environment (morale, engagement, culture), and regulatory oversight. Through strategic planning, the project coordinated efforts to align with the organizational changes and coordinate services. This relationship has matured into a symbiotic relationship between health care organizations to achieve maximum health outcomes and services delivery.

Sustainability challenges, particularly regarding direct financial reimbursement strategies, have been particularly challenging throughout the entire grant project. Integrated care services create a challenging clinical area of service due to the cross over between physical health and mental health. To further complicate the challenge, Pennsylvania permits multiple insurance carve outs which create multiple co-pays for patients when seen within an integrated care setting. This challenge has not been successfully resolved; however, it has been actively initiated and evaluated. Project leadership actively partnered with internal and external stakeholders to identify the challenges, strategized potential solutions, and developed a work plan to continue concentrated work on financial reimbursement and value-based models of payment.

Part VII: Sustainability

A. Structure

The future organizational structure of the consortium will change to an internally-focused consortium group, rather than the current consortium structure. Due to the nature of the consortium membership, the direct care clinical providers will continue to be the focused and collaborative organizations; however, the remaining administrative/human service organizations will remain available at an ad hoc level. Based on the developed professional relationship among the consortium members, it is possible for the applicant organization to seek council from these external members at any time. The external consortium members have had less involvement as the project has developed and been implemented over the past three years, so an ad hoc role would be appropriate. The consortium members to continue in full capacity would be: J.C. Blair Memorial Hospital (applicant organization), J.C. Blair Medical Services, and PinnacleHealth (UPMC Pinnacle). Due to the internal organizational structure and clinical affiliation, these are the evident stakeholders of internal monitoring of the project. The external consortium members to form an ad hoc group include: Juniata Valley Tri-County Drug & Alcohol Abuse Commission and Juniata Valley Behavioral and Developmental Services. These latter two currently serve in policy and practice consultation role in every day practice with the applicant organization outside of the project. It is important to consider future corporate restructuring and clinical affiliation as key factors

influencing the project and consortium status. The applicant organization does not intend to discontinue the project; however, certain organizational-level changes may influence any of the consortium members at any time in this ever-changing realm of health care delivery.

B. On-going Projects and Activities/Services To Be Provided

i) Will all, some or none of the elements of the program be sustainable once Outreach grant funding has ended? Please check the appropriate selection.

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained (i.e. the program will completely end after the grant period)

ii) Identify the projects and activities that will be sustained beyond Outreach grant period.

Based on an updated work plan, all elements of the program will be sustained at this time with future consideration for modification. Administrative functions, clinical/direct care functions, community outreach functions, and program development functions will remain intact as outlined in the work plan and in line with grant project goals. Sustainability is key to maintaining these elements, which will be further defined as the project continues based on direct reimbursement and value-added opportunities. At the time of this report, a No-Cost Extension request has been submitted for consideration to promote continuation of the program to continue the work plan activities not yet completed. This method to sustain activities is not a long-term plan, therefore, the responsibility of program sustainability rests with the applicant organization and clinical consortium members. It will be necessary to identify fiscally responsible elements to continue the program, completion of a fiscal proforma, and ongoing collaboration with fiscal stakeholders.

C. Sustained Impact

The long-term effect on the community as a result of the grant program has proven positive at this time. The impact of the project as outlined in the logic model was designed to: reduce barriers to care among rural populations, improve quality of life, and increase access to affordable care. As with The Triple Aim, the grant program was designed to provide an innovative strategy to improve access to health care, reduce health care costs, and improve the patient health care experience. After three years of services, there have been measurable outcomes in line with the program goals and objectives as outlined through several key focus areas, including: fidelity to the PCBH model, improved patient care experiences, improved access to quality health care services, and financial sustainability and influence payment reform.

The grant project has attempted to collect quantitative and qualitative data to demonstrate impact upon the target population (health care providers, patients, and the community). With demonstrated improvement in clinical indicators, the grant program has also provided enhanced testimonials from those who experienced the program. The perceived stigma of mental health services, social worker/case manager roles, team-based care, and referral to specialty mental health services has appeared to improve based on positive interactions with the target population. The value-added benefits of identification of appropriate level of care, management of access to care services, system efficiency, health care provider support and work place support, and enhanced patient engagement have also been witnessed.

The grant project has also served in a leadership role among the region and state levels regarding integrated care models, policy development, legislative work, and relationship building. As a state actively considering a demonstration project for value-based care, Pennsylvania is viewing integrated care as a component of future health care reform. The grant has fostered additional professional relationships and supported colleague's grant applications which have been funded, hence assisting in bringing additional resources and programs to the target community.

Part VIII: Implications for Other Communities

Our organization welcomes feedback exchange to other communities and organizations considering an integrated care program. As a program in continual development, the grant project has opportunity to both offer support, and learn from others. Based on network interactions, many of our experiences are similar to others developing and implementing integrated care programs. To this point, there are several manuals, books, webinars, journal articles, tool kits, and other means of sharing information available nationwide. The grant project utilized many of these available resources and encourages others to do the same.

The PCBH model is evidence-based and is replicable in a variety of settings. There are recommended measures and indicators as part of the model, focusing on the readiness of the organization, personnel competencies, processes, policies, and practices. In

addition, there are many suggested clinical measures recommended or suggested among the nationwide practice of integrated care; however, are specific to the work place type and population.

Part IX: Success, Increased Capacity, and Contributions to Change

A. Defining Success

- i) How do you define "success" for your grant program? Please check the appropriate selection(s). You may choose more than one option. If other, please describe.
- Access to a new or expanded health service
 - Increased number of people receiving direct services
 - Improved quality of health services
 - Operational efficiencies or reduced costs
 - Integration of process improvement into daily workflow
 - Continuation of program activities after grant funding
 - Continuation of network or consortium after grant funding
 - Health improvement of an individual
 - Health improvement among your program participants
 - Health improvement among your community
 - Enhanced staff capacity, new skills, or education received
 - Improved capacity to adapt to changes in healthcare
- ii) Do you believe that your program has achieved success? If so, how?
It is the perspective of the Program Director, program staff, applicant organization leadership, and consortium members that our grant program has achieved success on multiple levels. This report has already outlined several areas of success and measurement; however, the most rewarding level of success is hearing a patient report improvement and offering gratitude for the support offered through the program. While our program strived to achieve success at the micro-mezzo-macro levels, the most impactful often come from the interaction with patients and providers. The impact made by touching the life of a patient or community member can make a positive impression and promote forward progress to reducing the stigma of mental health care.

B. Organizational Capacity

- How has the federal funding of your grant program increased local capacity at your organization, within your network, and/or in your community? Please check the appropriate selection. If other, please describe.
- Formalized networks or coalition
 - Developed new partnerships or relationships
 - Enhanced skills, education, or training of workforce
 - Enhanced data collection and analysis

C. Contributions to Change

- i) Please provide a story or two about how your program made a difference in individuals' lives, your organization or network, or your community. (Please do not use actual individuals' names.)
There are multiple success stories to tell of the positive impact the grant project has made in the lives of our target population. There are two main arms of the direct service provided through the grant project: care coordination and clinical social work/psychotherapy. The therapeutic experiences of the patients is magnified through the care coordination aspect by building relationships, fostering respect and trust, and encouraging and empowering for health care decisions. The opportunity to "bridge" people to services and resources, and "bridge" systems together to serve the people, have been demonstrated repeatedly. In a system of fragmented care, the role of care coordination has proven invaluable to prevent "falling through the cracks" of the health care and human service systems. By utilizing our program personnel's expertise, knowledge, and connections, the target population has received high quality, compassionate, genuine, and skilled health care.
- ii) Please provide an example of how your grant program may have directly or indirectly contributed to policy changes, systems changes, or environmental changes. Examples may include passing school nutrition policies, implementing Lean process improvements within your organization, or enhancing walkable spaces in your community.

Fostering system-level growth and change can be exciting, but difficult; however, with the support of this grant project we were able to promote change and encourage organizational-level and system-level discussion. For example, program leadership became actively involved in state-level discussions regarding integrated care to build relationships and promote policy changes. Through professional associations, the Program Director served as leadership for several ad-hoc task forces identifying challenges to integrated care and areas for improvement. Through this involvement, the professional associations were able to create work group outcomes, including position papers on the importance of integrated care services.

Pennsylvania

Part I: Organizational Information	
Grant Number	D04RH28435
Grantee Organization	St. Luke's Miners
Organization Type	Hospital
Address	360 Ruddle Street, Coaldale, PA 18218-1027
Grantee organization website	www.Sluhn.org
Outreach grant project title	St. Luke's Miners Adopt a School Program
Project Director	Name: Rosemarie Lister
	Title: Community Health Liaison Manager
	Phone number: 570-645-1966
	Fax number: 484-526-2103
Project Period	Email address: rosemarie.lister@sluhn.org
	2015 – 2018
Funding level for each budget period	May 2015 to April 2016: \$95,000
	May 2016 to April 2017: \$95,000
	May 2017 to April 2018: \$95,000

Part II: Consortium Partners		
* Indicate those partners who have signed a Memorandum of Understanding/Agreement		
Partner Organization	Location (town/county/state)	Organizational Type
*Panther Valley School District	Lansford, PA	School District
*Kellyn Foundation	Bath, PA	Non-profit community organization
Leiby's Farm	Tamaqua, PA	Local farm
Summit Hill Heritage Center	Summit Hill, PA	Non-profit community organization
Center for Humanistic Change	Bethlehem, PA	Non-profit community organization

Part III: Community Characteristics

A. Area

The outreach grant covered Schuylkill and Carbon Counties

B. Community description

Our outreach takes place in the challenged coal mining and manufacturing Appalachian Region communities in Northeastern Pennsylvania in the Medically Underserved Area (MUA) of Schuylkill and Carbon Counties. This MUA, served by St. Luke's Miners (SLM) hospital, has high rates of chronic disease, substance abuse and poverty and low rates of access to care as identified by the 2013 and 2016 Community Health Needs Assessment (CHNA). SLM systematically works with community partners to improve health outcomes for our rural population by effectively engaging our communities in all aspects of assessing, developing, implementing and evaluating comprehensive health goals and objectives. Our CHNA, as well as community input, has identified Access to Care, Mental/Behavioral Health, Chronic Disease Prevention/Healthy Living Initiatives, Adolescent Health and Elder Health as priority needs. Local partners work together consistently to engage the community in improving health outcomes.

C. Need

The outreach program delivered via a consortium was designed to address mental health/behavioral health and substance abuse prevention (primary care behavioral health, school-based programs on substance abuse, healthy relationships, depression); improve chronic disease prevention, management and health living initiatives (Tail on the Trail and Walk with a Doc Community Walking, Healthy Foods, Garden as a Classroom); and improve access and connection to health care services (connection to vision, dental, primary care addressing transportation, Mobile Youth Health Center with integrated behavioral health).

A. Evidence-based and/or promising practice model(s)

The Adopt a School rural health outreach was modeled after the evidence-based Coalition for Community Schools' Community Schools Model, including recommendations of school based coordinators and leadership committees. Having school based coordination has helped the school district become a hub for health and wellness. The outreach team has integrated into being able to identify students and families in need and to connect to care and/or community resources and programs on a consistent basis. The Leadership and Steering/Wellness committee is a sustainable opportunity for coordinators and partners to meet each month to strategize how best to overcome barriers and share how to build off the strengths of the partnerships and resources.

Integrated behavioral health and primary care is designed using the Primary Care Behavioral Health (PCBH) model of HRSA AHRQ. Through the rural health grant, an LCSW was hired to offer PCBH, as well as traditional therapy, at the school district and in the rural health center.

Additional evidence-based programs include the Centers for Disease Control and Prevention School Health Index and the SAMSHA recommended Lions Quest physical/behavioral/mental health life skills curriculum life skill training for grades K-12.

These evidence-based programs have helped Panther Valley School District become a hub for physical and mental health, wellness and education and provide access to care for families most in need; help families overcome barriers for initial access and all follow-up care; help reduce the time needed to move through the limited healthcare delivery system; and increase the opportunity for students and families to participate in integrative health education programs and healthy living initiatives.

B. Description of Activities

Through the outreach program, School Based Coordinators and Care Coordination services have provided connection to care throughout the year. Examples of activities include LCSW and PCBH services, Mental Health Programs such as the Heroin and Opiate Prevention Program, Lions Quest physical/behavioral/mental health life skills program for K-12, School Nutrition and Garden Programs for grades 3-5, Community Walking and Walk with a Doc for students and community members throughout the year, Policy Improvement through CDC's School Health Index, Community Support Agriculture (CSA) bringing 10 full shares of fresh, local produce distributed through the summer lunch program, the rural health centers and rural community outreach at local events.

C. Role of Consortium Partners

Community partners and consortium members are involved in the Community Health Needs Assessment (CHNA) and implementation process and rural outreach grant planning in numerous ways including community forums, surveys, key informant interviews, and leadership and steering committees that meet on a consistent basis. Consortium partner Panther Valley School District attended the 2015 community forum and served as a site for the community surveys. In addition, they attend the quarterly leadership and monthly steering committee meetings along with a variety of other partners. Consortium partner the Kellyn Foundation attends monthly steering meetings where sustainability strategies are discussed at each meeting.

Strategic Planning: The consortium developed a strategic plan in November 2015 using a collaborative process to create vision and mission statements. The vision and mission statements have become a guiding force for the articulation of the outreach goals and objectives. The outreach team created a one-page handout (who, what, when, why and how) that includes these statements as well as the District Wide Coordinators' (DWC) contact information. This handout accompanies is distributed at all outreach events and is posted on the school district website under the Adopt a School Tab (<http://www.panthervalley.org/adopt-a-school>). Panther Valley School District (PVSD) has become the hub for addressing CHNA-identified needs with the PVSD target population of students and staff. Working together, the collaborative partners and outreach team--which includes a full time DWC, Community Health Manager, Nurse Navigator (NN), Licensed Clinical Social Worker (LCSW), and four part-time school based coordinators (SBCs), were able to identify students and their families that are in need of care and connect them to appropriate services, while taking the necessary steps and policy improvements to promote comprehensive health and wellness.

A. Outcomes and Evaluation Findings

The Adopt a School Initiative has demonstrated successful outcomes in the Panther Valley School District during the time of this grant. In the last academic year (2016-2017) alone, they were able to close the medical need (defined by those who needed

physicals) in the elementary school from 34% in the beginning of the year to 13% at closing and from 54% to 24% at the intermediate school. Similarly, the vision program addressed the students' needs, reducing from 43% needing services to 30% in the elementary school and from 29% to 23% in the intermediate school. Dental need (defined by those who needed a dental exam) was also tracked and showed improvement from 49% needing exams to 11% at the elementary school, and 74% to 70% at the junior & high schools. Body mass index (BMI) measures calculated in the 2015-2016 academic year showed 34%, 43% and 40% overweight and obese at the elementary, intermediate and junior/high schools respectively, where as in 2016-2017, data showed BMI measures at 38%, 40% and 37% respectively. The Adopt a School model supported school gardens at Panther Valley School District, with nutrition education in classrooms from the elementary to high school levels. Research shows that addressing issues related to health, diet, activity and nutrition ultimately leads to enhanced academic performance. Third grade reading, established through Pennsylvania System of School Assessment (PSSA) scores remained consistent at 60% across the elementary schools between academic years 2015-2016 and 2016-2017. This is important to track and maintain as Robert Wood Johnson data from county rankings indicates that high school graduation rates in Schuylkill and Carbon counties were 88% and 89% in 2016, and 89% and 81% in 2017.

B. Recognition

SLM has been able to highlight the outreach and partnership of our federal, state and local partners, including HRSA, in achieving recognition such as the 2016 Rural Health Program of the Year Award, the 2017 Rural Health Hero of the Year Award as well as receiving state recognition with the 2016 Hospital Association of Pennsylvania (HAP) Community Champion Award for developing a program that connected students to vision care through community partnerships and care coordination that included transportation.

In addition, the consortium has been able to showcase the effort's partnerships, programs and outreach at national and state conferences such as the Premier Breakthrough Conference (2017); Pennsylvania Office of Rural Health (2017, 2016); HRSA Rural Health Outreach poster presentation and interviews (2017); Centers for Medicare and Medicaid Services (CMS) Rural Listening Session, February 2017; The Association for Community Health Improvement (ACHI) and the American Hospital Association (AHA), March 2016; The Whole Health Conference; Pennsylvania Department of Health and the University of Pittsburgh, March 2016; Penn State Pro Wellness State Advisory Council, March 2016; and Pennsylvania Department of Health Public Health 3.0 lead partners (2017).

Part VI: Challenges & Innovative Solutions

It took over two years to secure a qualified LCSW for this rural area but the solution to this barrier eventually led to a sustainable model. To support the goals of the grant, a search began for a part-time LCSW position. In this MUA (Medically Underserved Area), it is difficult to attract professionals to work in the remote area. Eventually, by joining forces with St. Luke's Rural Health Center (RHC) and combining the position, which required approval from the president of the hospital, a full-time LCSW position was created and this led to the hiring of a qualified candidate who had school-based mental health experience. Thus, the LCSW is integrated in both the RHC and the outreach team in the schools. It is sustainable as the services provided by the LCSW are billable at the RHC and multiple options are being explored to seek funds (both internally and externally) to continue the services at the school. Both the school and the RHC serve the same target population which increases trust and engagement.

Part VII: Sustainability

A. Structure

The consortium is expected to continue and to build on the strengths of partners. St. Luke's is a not-for-profit hospital working to address CHNA priority areas in the community. The school district now has built-in community engagement to provide services, programs, messaging and care coordination. Developing these relationships internally with students and families and externally in the communities allows for future sustainability to improve educational and health outcomes.

School Based Coordinators and Care Coordination: School based coordination has helped the school district become a hub for health and wellness. The outreach team is able to identify students and families in need and connect them to care and/or community resources and programs on a consistent basis. The Leadership and Steering/Wellness committee is a sustained opportunity for coordinators and partners to meet each month to strategize how best to overcome barriers and share how to build off the strengths of the partnerships and resources. By funding existing school employees for additional hours, they were trained in care coordination and evidence-based programs. When the grant ends, they still have full-time employment with the school districts in which to utilize this knowledge, while additional opportunities to fund outreach work are explored.

LCSW: The LCSW provides an option to offer services, programs, initiatives, and outreach throughout the year in collaboration with community partners and adjusting to the mental health needs of the community.

School Nutrition and Garden Programs: The level of this type of intervention may vary depending on funding. The physical garden boxes and signs at the elementary school and intermediate school will remain and be utilized. It is expected that the Kellyn Foundation will provide "train the trainer" kick-off programs with the 3rd-5th grade teachers at the beginning of the year instead of year-round programming. This will save dollars and continue a consistent dialogue, while we will seek additional funds to provide nutrition programs throughout the year.

Physical Activity and Community Walking: Outreach events are promoted throughout local media outlets where the community is invited to attend and be engaged. This past year, SLM Community Health has worked with several engaged physicians to promote the evidence-based national Walk with a Doctor program. Participants take a group walk with a physician who can answer their health care questions along the route, and encouraging them to engage in healthy habits for improved health outcomes and quality of life. These events have had excellent attendance from patients, PVSD students and parents. These are examples of successful outreach that has provided an opportunity to gain feedback and support and build trust for improved comprehensive health outcomes.

Continuing partners include: Panther Valley School District, St. Luke's Miners, the Kellyn Foundation, Leiby's Farm (local community supported agriculture partner) and Summit Hill Heritage Center (summer lunch program) as well as the various local organizations that participate in the annual interactive health carnival. These partners understand the needs of the community and consistently work to meet these needs by providing resources and services as well as opportunities for the community to be engaged in the decision-making process regarding activities and programs.

B. On-going Projects and Activities/Services To Be Provided

i) Will all, some or none of the elements of the program be sustainable once Outreach grant funding has ended? Please check the appropriate selection.

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained (i.e. the program will completely end after the grant period)

ii) Identify the projects and activities that will be sustained beyond Outreach grant period.

The School-Based Consortium and Leadership Teams: These groups will continue to meet monthly, or bimonthly, to assess and address important implementation issues, promote community awareness, identify other funding opportunities and gain broad-based community support for ongoing operations and linkage to other health and social service support systems.

School-based coordinators: By funding existing school employees for additional hours, they were trained in care coordination and evidence-based programs. When the grant ends, they still have full-time employment with the school districts and will continue to utilize this knowledge.

Community Support Agriculture (CSA) and healthy foods: The visibility and accessibility of fresh produce at community events was increased and is expected to be sustained by local organizations donating a share of CSA for \$360 which provides 25lbs a week of produce for 12 week (300 lbs.).

LCSW: While the amount of time the LCSW can dedicate to school-based services will depend on funding, she will be able to see students and their families at the local rural health center.

Mental Health Programs: This level of intervention may vary depending on funding. However, the partnerships with the local mental health service organizations and grass roots coalition can continue to address issues together, such as the opiate epidemic, thereby combining resources, outreach and collective impact. The LCSW can reduce costs by providing some of the outreach and trainings.

School Nutrition and Garden Programs: The level of this type of intervention may vary depending on funding. The physical garden boxes and signs at the elementary school and intermediate school will remain and be utilized. It is expected that the Kellyn Foundation will provide "train the trainer" kick-off programs with the 3rd-5th grade teachers at the

beginning of the year instead of year-round programming. This will save dollars and continue a consistent dialogue, while we will seek additional funds to provide nutrition programs throughout the year.

Physical Activity and Community Walking: Outreach events are promoted throughout local media outlets where the community is invited to attend and be engaged. This past year, SLM Community Health has worked with several engaged physicians to promote the evidence-based national Walk with a Doctor program. Participants take a group walk with a physician who can answer their health care questions along the route, and encouraging them to engage in healthy habits for improved health outcomes and quality of life. These events have had excellent attendance from patients, PVSD students and parents. These are examples of successful outreach that has provided an opportunity to gain feedback and support and build trust for improved comprehensive health outcomes.

C. Sustained Impact

St. Luke's Hospital – Miners Campus Community Health Team: As a non-profit health network, St. Luke's Hospital is invested in community health efforts based upon the CHNA-identified priority areas and implementation plan. St. Luke's has recently merged with two additional partners in Carbon County which allows for the opportunity to share resources and personnel costs, such as the Miners Community Health Manager, District Wide School Based Coordinator (DWC) and Nurse Navigator (NN) to continue to invest in PVSD which remains the identified school district in need. In addition to investing in the community health staff, St. Luke's will continue to explore grant opportunities and partnerships to offset the program expenses.

The positive results of this rural program stem from building strong and effective local, state and national partners along with support inside the hospital network. The level of internal and external collaboration in the St. Luke's Miners rural community has set a strong foundation for community engagement and improved outcomes.

According to Mary Ellen Greco, School Guidance Counselor and SBC, "Now it is more vital than ever to prove to the community that we are invested in the mental, physical and emotional well-being. Our students are confronted with issues and problems that extend well beyond academics. We must first improve their mental, physical and emotional well-being. I believe that there is a direct correlation between academic success and mental and physical well-being. The opportunities definitely outweigh the barriers and these trainings and partnerships give me more resources for our staff, students, parents and guardians."

The evidence based Adopt a School program and partnerships have had the opportunity to make a lasting impact internally within the hospital, school district and community partners as well as externally with potential new funders.

Part VIII: Implications for Other Communities

Braided funding: Through engaging federal, state and local partners and braiding funding sources, the initiative has a plan for sustainability. Each year, more children and families are supported through outreach efforts; however, each year the community demand to access care exceeds the ability to serve each child and family referred to services. St. Luke's is committed to continuing to build and strengthen existing relationships as well as to form new collaborative efforts with local providers, foundations and businesses to build a sustainable network to improve access to care.

Attracting additional donors: Federal partners, such as HRSA, increase St. Luke's ability to raise the public's awareness and outreach to provide health services. In effect, the HRSA grant provided the leverage St. Luke's needed to be able to approach new donors from the private and public sector and to increase program funding for the Carbon and Schuylkill communities. Once potential donors become aware of the need, they tend to become deeply supportive. For example, meetings are being held with United Way and applications are being submitted for United Way grants that have just become available for the first time in Carbon County. Through this outreach work in other communities, there is data available, including the HRSA-funded direct and indirect outreach and impact data, to demonstrate the value of supporting collaborative, school-based, comprehensive programs and outreach in rural areas to improve health outcomes.

Increased visibility and engagement: The greatest challenge is to educate the community, public school professionals, social service workers and parents about the initiatives. Having school based coordinators from the local school districts has assisted efforts in further engaging the community. For example, the school district athletic director (AD) is also the SBC and utilizes personal knowledge and connections with engaged parents, students, staff and media to promote the related evidence-based programs, outreach and resources. Consistently, this individual reaches them through Instagram (987 followers), Twitter (683) and Facebook (457). Having the AD involved in all aspects of the outreach builds off of the strengths in this local rural community. In addition, a tab (<http://www.panthervalley.org/adopt-a-school>) was created on the school website to promote outreach and resources on a continuous

basis. Of interest, when an outreach website link was used to distribute toothbrushes, there was an immediate increase in website traffic as evidenced by tracking through Google analytics. This type of outreach will be sustained due to the years of partnership that have built this type of support and innovative approaches.

Part IX: Success, Increased Capacity, and Contributions to Change

A. Defining Success

i) How do you define "success" for your grant program? Please check the appropriate selection(s). You may choose more than one option. If other, please describe.

- Access to a new or expanded health service
- Increased number of people receiving direct services
- Improved quality of health services
- Operational efficiencies or reduced costs
- Integration of process improvement into daily workflow
- Continuation of program activities after grant funding
- Continuation of network or consortium after grant funding
- Health improvement of an individual
- Health improvement among your program participants
- Health improvement among your community
- Enhanced staff capacity, new skills, or education received
- Improved capacity to adapt to changes in healthcare
- Other: Policy improvement

ii) Do you believe that your program has achieved success? If so, how?

This success has been achieved, and health outcomes have been improved, as reflected in the vision and mission statements. The consortium developed a strategic plan in November 2015, using a collaborative process to create vision and mission statements:

Adopt a School Vision: Partnering in this community to connect and assist individuals and families in navigating the health care system, and to promote and improve physical and mental health, so that every individual has the opportunity to maximize their health and educational outcomes leading to happier, healthier and longer lives.

Adopt a School Mission: The mission of the Adopt a School program is to create an environment where the school district is the hub to cultivate the physical and mental well-being of individuals and families in this community through collaborative partnerships, using evidence based programs, to connect families to health services (medical, dental, vision, mental health and insurance) while promoting healthy living initiatives, literacy and leadership to improve the health and educational outcomes of students.

Through collaborative partnerships and outreach team, which includes a full time DWC, Community Health Manager, Nurse Navigator (NN), Licensed Clinical Social Worker, and four part-time school based coordinators (SBC's), the needs of students and families were identified and they were connected to appropriate services, while taking the necessary steps and policy improvements to promote comprehensive health and wellness.

B. Organizational Capacity

How has the federal funding of your grant program increased local capacity at your organization, within your network, and/or in your community? Please check the appropriate selection. If other, please describe.

- Formalized networks or coalition
- Developed new partnerships or relationships
- Enhanced skills, education, or training of workforce
- Enhanced data collection and analysis
- Other: policy improvement and opportunities for increased visibility and funding

C. Contributions to Change

- i) Please provide a story or two about how your program made a difference in individuals' lives, your organization or network, or your community. (Please do not use actual individuals' names.)

One area of impact is helping students and families navigate the health care system. The infrastructure created helps families navigate the health insurance system, particularly Medical Assistance. During the HRSA outreach grant, the DWC was trained as both a CHW (Community Health Worker) and a Certified Applications Counselor and works with families to help them complete the necessary paperwork and get connected to a provider. One example was a custodian working in the school district who did not have insurance for herself and her daughter, who is a student in the district. The DWC was able to help her with the Medical Assistance (MA) application and shortly after she was approved, the student was injured and needed to be on crutches. The custodian was so grateful that she had insurance during that situation. Another example involved a 19-year-old student at the high school who was living with friends and did not have insurance. She needed to go to the emergency room and kept receiving a bill from the hospital visit that she could not afford. She was working a part-time job, but since she did not have any parental support, did not make enough to afford insurance on her own. The DWC worked with her to apply for Medical Assistance and worked with the County Assistance Office to have her past due bill from the hospital addressed.

According to Carrie Selinko, School Nurse and SBC, "I think one of the biggest impacts that we are making is establishing these basic health habits at an early age. Teaching these students in elementary that they should be seeing a dentist twice a year, having their eyes examined, and seeing a doctor routinely will make an impact on them for the rest of their lives. So many students ask me when their glasses will come in and it is so exciting to watch, when they put them on for the first time, the looks on their faces when they realize they can now see properly."

Jennifer Kupetz, Administrative Assistant of Special Education and SBC, said, "I learned from a team member about a student who wasn't arriving in time to eat breakfast at school and who suffered from a food shortage at home. Working with transportation and our disciplinarian who handles breakfast duties in the lunch room, we were able to make necessary changes to allow the buses to arrive earlier for this student, as well as other students, to receive their breakfast. As a backup, I also began holding a box of cereal in my office, just in case. I see the trust the facility and students/parents have in Adopt-A-School growing. In a world where fear, poor self-esteem and challenging home lives are norm, we wish to continue to provide trust, positive mental status, and a feeling of security to our students."

- ii) Please provide an example of how your grant program may have directly or indirectly contributed to policy changes, systems changes, or environmental changes. Examples may include passing school nutrition policies, implementing Lean process improvements within your organization, or enhancing walkable spaces in your community.

This grant program has directly or indirectly contributed to policy changes, systems changes, or environmental changes in several ways including:

The use of the CDC's School Health Index has assisted our team in creating policy change. Two areas that ranked especially low with students and staff were the students washing their hands and the amount of physical activity available to students during the day. Upon investigating these issues, it was determined that many of the bathrooms throughout the school had issues with functionality (water not working, hand dryers not working, soap dispenser empty). Thus, a process was developed for monitoring the restrooms on a weekly basis and reporting any non-working items to the maintenance staff to be fixed. The students were engaged in this monitoring by visiting the bathrooms each day with a check list to ensure functionality. This created student engagement, improved health environment and healthy lifestyle promotion.

Due to budget constraints affecting the teacher positions, physical education and opportunities for physical activity has been an area that has been reduced over the years, even with the rate of obesity increasing. Many students may only have physical education class one semester per year or one day per 6-day cycle. To increase the amount of physical activity per week, walking was integrated into team faculty meetings each week at the Intermediate School. While the teachers are meeting, the students are in the gym walking. In addition, there is a signed Use of Facilities Agreement with the school to promote community walking at their track at scheduled times and dates. Students, staff and community members consistently take advantage of these opportunities with different student groups leading the walks at different times. These programs are sustainable after the grant.

Pennsylvania

Part I: Organizational Information

Grant Number	D04RH28418
Grantee Organization	UPMC Bedford Memorial
Organization Type	Hospital
Address	10455 Lincoln Highway, Everett, PA 15537
Grantee organization website	https://www.upmc.com
Outreach grant project title	Rural Health Care Services Outreach Grant Program
Project Director	Name: Jenna Stiffler
	Title: Financial Analyst
	Phone number: 814-889-4104
	Email address: ringlerj@upmc.edu
Project Period	2015 – 2018
Funding level for each budget period	May 2015 to April 2016: \$200,000
	May 2016 to April 2017: \$200,000
	May 2017 to April 2018: \$200,000

Part II: Consortium Partners

* Indicates consortium partners who signed a Memorandum of Understanding/Agreement

Partner Organization	Location (town/county/state)	Organizational Type
UPMC Bedford Memorial*	Everett/Bedford/Pennsylvania	Hospital
Home Nursing Agency and Visiting Nursing Association*	Altoona/Blair/Pennsylvania	Home Health, Hospice
First Choice in Home*	Bedford/Bedford/Pennsylvania	Home Care

Part III: Community Characteristics

A. Area

The Bedford County Mental Health *Plus* Program served individuals in Bedford County, Pennsylvania.

B. Community description

Bedford County is a rural area and is designated by the federal government as a Health Professional Shortage Area (HPSA) which is based on the ratio of the population to the number of primary care providers. The provider-to-population supply in Bedford County is 1:3,112 which is much lower than the 1:1,067 ratio for Pennsylvania. According to the Center for Rural Pennsylvania, a bipartisan, bicameral legislative agency that serves as a resource for rural policy within the Pennsylvania General Assembly, Pennsylvania's elders continue to be the fastest growing segment of Medicaid recipients. Moreover, based on the 2010 US Census, Pennsylvania ranks fourth in the number of rural elders, 65+, and is projected to increase by 51 percent by 2030. In 2010, rural Pennsylvania had more residents who were 40+ than at any other time in the last 60 years. Reflecting the rural nature of the area, there are fewer people per square mile and fewer doctors per person compared to the state and the nation, with a population of 49,762, and a population density of 49.2 residents per square mile. Moreover, there are fewer people per square mile and fewer primary care doctors per person in Bedford as compared to the state of Pennsylvania.

C. Need

Bedford County has a large and increasing percentage of elderly residents (age 65 and over) at 19 percent compared to PA (15 percent) and the US (13 percent). According to US Census, a higher percentage (12.5 percent) of elderly in Bedford County lives alone, compared with PA (11.4 percent) and US (9.4 percent). Reflective of the higher proportion of elderly, the percentage of Medicare recipients was higher in the county than the state and nation. Although the population has remained stable since 2000,

the county's most elderly (age 85 and over) population increased significantly. The most elderly population in Bedford County (85+) has seen a 44 percent increase from 2000 to 2010, while the County's total population has seen a decrease of less than 1 percent from 2000 to 2010.

Rates of major depression — a serious mental illness that involves depressed mood or loss of interest or pleasure over a two-week period, along with several other symptoms of impairment — are higher in younger populations, according to the U.S. Centers for Disease Control. But other, less severe conditions, such as minor depression and dysthymic disorder, are more common among older adults. Estimates for the different conditions vary, but about 25 percent of adults age 65 or older have some type of mental health problem, according to the CDC.

"Feelings of grief and bereavement, financial stress and other worries, a loss of identity after leaving the workforce, loneliness or worthlessness, as well as biological and medical factors often contribute," said Charles F. Reynolds III, MD, director of the Aging Institute of UPMC Senior Communities and the University of Pittsburgh.

According to Reynolds, physical decline and depression also often "travel together," interacting and making each other worse, and with the increase of disabilities that occurs as people age, the risk of developing depression symptoms increases. "Depression in older adults is eminently treatable, thereby enhancing health-related quality of life and prolonging health span, as demonstrated by many studies published from the University of Pittsburgh's NIMH Center of Excellence in late life mood disorders.

The HRSA-sponsored project was a superb opportunity to extend the evidence to help older residents living in underserved areas of Pennsylvania.

Primary Care and Access to Specialists such as psychiatrists for mental health endocrinologists for diabetes were identified by the Bedford County Community Health Needs Assessment (CHNA) as the significant health needs that were rated highly across the three criteria of importance, likelihood of making a measurable impact, and the hospital's ability to address the problem. The consortium was designed to access to the psychiatry specialty.

Part IV: Program Services

A. Evidence-based and/or promising practice model(s)

The consortium utilized the research from Jacobs JA, Jones E, Gabella BA, Spring B, Brownson RC. Tools for Implementing an Evidence-Based Approach in Public Health Practice. An outcomes-oriented approach to enhance and sustain the delivery of effective health care in rural communities was the goal of the consortium's project and was based on an evidence-based model, which integrates primary care providers and is congruent to Bedford County Mental Health *PLUS* Senior Outreach.

Evidenced –Based Practice Model - Assessing Depression in Older Adults: Increasing disease rates, limited funding, and the ever-growing scientific basis for intervention demand the use of proven strategies to improve population health. Health practitioners must be ready to implement an evidence-based approach in their work to meet health goals and sustain necessary resources.



Figure 1. Domains that influence evidence-based decision making. Source: Satterfield JM et al. Jacobs JA, Jones E, Gabella BA, Spring B, Brownson RC. Tools for Implementing an Evidence-Based Approach in Public Health Practice. *Prev Chronic Dis* 2012;9:110324. DOI:<http://dx.doi.org/10.5888/pcd9.110324>.

"The formal training of the public health workforce varies more than training in medicine or other clinical disciplines. Fewer than half of public health workers have formal training in a public health discipline such as epidemiology or health education. No single credential or license certifies a public health practitioner, although voluntary credentialing has begun through the National Board of

Public Health Examiners. The multidisciplinary approach of public health is often a critical aspect of its successes, but this high level of heterogeneity also means that multiple perspectives must be considered in the decision-making process.”

Therefore, we enacted a model which integrated community providers; community hospital, private as well as multi-practice doctor’s offices, homecare and private duty agencies, and government entities such as the office on aging to assess for major depression in older adults utilizing the PHQ2/9.

The proposed screening tool which was used is the nationally recognized PHQ-9 questionnaire. By utilizing the proposed screening tool with all involved parties, we could better serve our clients by establishing one recognizable tool to determine the level of major depression in any individual. By utilizing one screening tool, we established baseline statistical data which followed the individual throughout the continuum of care in our community. The tool can be compared easily whether the client is admitted to the hospital, has a routine doctor’s office appointment, or should they have an acute episode or exacerbation of their chronic illness and require homecare services.

The PHQ-9 had recommended treatment scoring at each encounter to aide home health nurse in determining the level of care necessary for the client and if a tele-psychiatrist encounter was warranted.

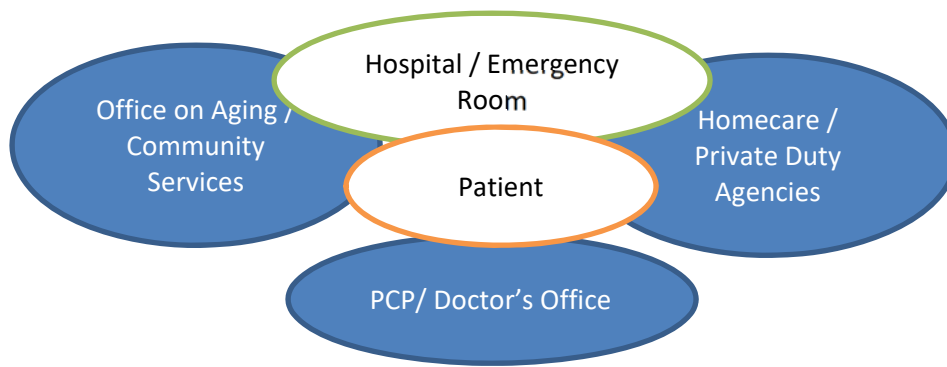


Figure 2. Community Providers

By utilizing the PHQ-9 by each of the community providers, we assured uniformity, standardization, and a tool which followed the patient throughout the entire continuum of care. The uniformity and standardization ensured the patient received objective rather than subjective care from all providers thus improving outcomes overall. Once a baseline of functioning is established with the depressed older adult, it is easier for the clinician to determine: 1) Level of care need. 2) Referral for other forms of help and assist. 3) Medication effectiveness or if new medications should be attempted or tried.

B. Description of Activities

Using an evidence-based approach and a standardized assessment tool including the PHQ2, care managers at UPMC Bedford Memorial and home health nurses with Home Nursing Agency and other consortium partners identified multiple points of assessment (e.g. community health fairs, emergency room, inpatient) throughout the county in order to screen for depression. Over the grant period, they collaborated with several primary care offices for screening, education, outreach and project sustainability to continue to improve access, diagnosis and treatment of geriatric depression.

Some highlights include:

- Educational/outreach items were developed/branded with consortium logos (e.g. Brochure, Billboard, Magnet, Banner Stand) to raise awareness of outreach program, in addition to client/caregiver educational items purchased (e.g. Spiral Bound Flex Journal, Pill Box, Daily Calendar, Serenity CD, Lavender Relaxation pouches, Pedometer). As a result, our indirect audience increased by over 700% from 3500 in year one to over 2.4 million in year two with direct service increasing from 48 pts to 1175.
- Community stakeholder meetings were held in the spring of 2016 and 2017 and attended by lawmakers, county mental health professionals, homecare staff, assisted/independent living personnel, media and community foundation representatives to raise awareness on impact and to solicit feedback for sustainability efforts.
- After participating in “A Sustainability Approach: Moving from Program to Policy” webinar (June 2016) by the Federal Office of Rural Health Policy (FORHP) and Georgia Health Policy Center (GHPC), the consortium compiled and contacted Regional 211 Helplines for surrounding counties for our nurses to provide additional education since public/media relations efforts generated additional inquires.

- In June 2016, we discussed replicability efforts with Blair Mental Health director, and held teleconference meetings with UPMC Altoona Behavioral Health leaders which helped to engender the ongoing sustainability efforts with Bedford County's Federally Qualified Health Center that will likely transition our current patients to their program post-grant.

C. Role of Consortium Partners

Collectively, consortium members educated those living, working, and/or providing services within Bedford County as to the need for identification of and treatment for depression in individuals over the age of 65 and the possible complications that occur when depression goes untreated. The educational information was obtained from the Needs Assessment conducted in 2013 by UPMC Bedford Memorial Hospital, research articles, scholarly articles, and interviews with experts in the field of Geriatric Depression. This education helped to facilitate awareness among the community of the potential devastating effects of depression and the lack of resources presently available in rural communities such as Bedford County.

UPMC Bedford Memorial Hospital Teleconsult Center connected the rural community hospital to specialists at the highly regarded UPMC Senior Care-Benedum Geriatric Center which is UPMC's primary ambulatory care services site for older persons with complex problems, including frail older adults who have multiple diagnoses and health care needs. Western Psychiatric Institute and Clinic provides psychiatric services at the center targeted specifically to the geriatric population.

Working with UPMC WPIC and Benedum Geriatric Center, the consortium was able to procure a physician for four (4) hours per week for patient visits beginning May 2017. Utilizing the UPMC Teleconsult Center located just behind UPMC Bedford Memorial, patients could complete visits with Dr. Sharon Altman, a board certified geriatric psychiatrist, who also evaluated patients using the GAD-7 and MoCA assessment tools, in addition to the PHQ-9.

Home Nursing Agency / First Choice Home Health Nurses educated numerous primary care physician (PCP) practices within Bedford County regarding identification and treatment of geriatric depression as well as support for the PCP from UPMC Psychiatrists, specifically Sharon Altman, MD and Joseph Antonowicz, MD.

Moreover, Home Nursing Agency Home Health Nurses presently provide care to patients within their homes throughout Bedford County. They also provided education to all home health staff regarding the identification of seniors with depression and the process for referral to a psychiatric nurse that is currently employed by these agencies. The psychiatric nurse(s) were provided education regarding the use of standardized, validated depression assessment tools and treatment algorithms and coordinated with Benedum Geriatric Center.

Roles and Responsibilities

UPMC Bedford Memorial

- Lead applicant
- Screen all inpatient and observation patients 65 and older for depression
- Community outreach and education

Home Nursing Agency

- Screen patients 65 and older for depression
- Provide psychiatric nurse support
- Provide training to primary care physicians and community organizations
- Community outreach and education

First Choice

- Community outreach and education

*See Algorithm on last page.

Part V: Outcomes

A. Outcomes and Evaluation Findings

Increase the proportion of elderly individuals who receive initial screening for depression.

- A hospital case manager retired, and education was completed with the new case manager. They screened over 1800 elderly patients admitted to the hospital and those staying overnight in observation status in the first two years alone.

- Screening is completed to those elderly patients admitted to home health by the nursing staff at Home Nursing Agency. The agency has implemented screenings for all patients admitted to home health.
- Patients are identified that would benefit from home psychiatric nursing services. Referrals made to home health and attending physician informed. Over the first two years of the grant, 1810 hospital screenings were completed. Of those patients, 48 resulted in a score greater than 13 and 20 referrals were completed based on the PHQ-9 results

Improve medication management of patients identified with depression

- Inpatient and observation patients have medication reconciliation and teaching completed by a staff nurse. All medication orders are verified by a pharmacist.
- Physicians reconcile medications from hospital stay to what they were taking at home and determine what is to be taken at discharge.
- Medication list is provided to next level of care provider.
- Home health evaluates all current medications taken and reviews at each contact
- Home health psychiatric nurse evaluates the need for and/or efficacy of psychotropic meds
- Home health evaluates patient and caregiver's ability to manage medications.
- Pill planners were purchased and used to help with this management of medications
- Home health incorporates measures to improve medication management
- Audits show compliance with above steps

Increase access to mental health services utilizing the least restrictive level of care

- Algorithms are used that identify which patients can be adequately managed by the PCP
- Home health psychiatric case manager conducts a comprehensive evaluation of patient's depressive condition
- Education has occurred with office managers and at physician meetings.
- We are encouraging screenings in the physician offices
- We are encouraging screening with our local Area Agency on Aging Case managers with appropriate referrals
- We are encouraging screening with the assisted living and private duty agency on their elderly clients
- Education was completed with the above groups with good engagement at the meetings but follow through has not been good. In response, we hosted Community Stakeholder meeting (Nov. 2016) with these community providers and achieved improved coordination of care from admission to the hospital, treatment in physician's office, and/or home health agency.
- The PHQ-9 is utilized to determine if depressive symptoms are improving.
- We identified patients that require psychiatrist intervention. Sharon Altman, MD, a geriatric psychiatrist conducts the tele-consults. Satisfaction is high with this addition with our staff, local providers, patients and families. Dr. Altman is comprehensive and has a good relationship with our home care psych nurses who assist locally at the tele-consult center setting. She provides good care coordination. She is available for consults every Monday morning.

Individuals identified with a depression disorder on the PHQ-9 will show improved depression symptoms

- We have had 70 tele-psychiatry visits with 41 different patients. 23 tele psychiatry patients showed improvement on PHQ9 Scores.
- 237 home health visits have been completed with 20 different patients. 11 home health patients showed improvement on PHQ9 Scores during the first two years of the grant.

Increase the knowledge of Bedford County Elders about the available resources, programs, and services, and particularly those with a mental health focus

- Education sessions have been held in the community – health fairs, Senior Expo, County Fair, Alive and Well Session
- Billboards, Newspaper and television coverage
- Speaking engagements with health and welfare organizations
- Included in hospital's Community Health Needs Assessment update with stakeholders in the community. Mental health identified as a top need in our county.
- Information packets and guides have been updated
- PHQ-2 was added to back of brochure

B. Recognition

Circulation: TV media/WTAJ-TV coverage – 292,000 households throughout 10 PA Counties
7/9/2015: <http://www.wearecentralpa.com/news/local-seniors-to-be-screened-for-depression>

10/10/2015: <http://www.wearecentralpa.com/news/helping-seniors-fight-depression>

Circulation: Newspaper Media/Bedford (County) Gazette circulation – 10,838

06/09/2015: Bedford hospital lands \$600,000 grant

08/25/2015: Bedford Hospital lands \$600,000 grant to study seniors' health

01/17/2017: Is it sadness or depression?

June 2017: The Association of American Medical Colleges featured UPMC Bedford HRSA initiative in its 2017 Health Equity Research Snapshot for its exemplary community-partnered Community Health Needs Assessment processes that have successfully impacted the health of local residents.

Part VI: Challenges & Innovative Solutions

The consortium's main challenge was to address the lack of mental health service available in Bedford County. Particularly those services that were focused on the aging population. Working with UPMC Benedum Geriatric Center, the consortium was able to procure a physician for 4 hours per week for patient visits. Utilizing the UPMC Teleconsult Center located just behind UPMC Bedford Memorial, patients could complete visits with Dr. Sharon Altman, a board certified geriatric psychiatrist. As demand for the program continued to grow, we also partnered with UPMC Altoona. In February 2018, Dr. Joseph Antonowicz also began seeing patients 4 hours per month.

After implementing the telepsychiatry service, we began to see many patients choosing not to show up for appointments. This resulted in unutilized physician time. To combat this issue, we implemented an extensive follow-up process. Because the patient visits were on Mondays, they automatically received a reminder call the Friday before their appointment. If patients cancelled appointments at that time, every effort was made to fill the slot. In addition, the consortium's two psychiatric nurses, made reminder calls on Sundays, stressing to the patient the importance of maintaining their appointments. While we were not able to eliminate all no-show and late cancellation appointments, we did see a significant increase in the number of no-shows and were better able to fill the physician time.

Part VII: Sustainability

A. Structure Post 3/23

Going forward we will be transitioning our current patients to Hyndman Area Health Center, a local Federally Qualified Health Center, in Bedford county. Patients will continue to receive home care services as appropriate for treatment. Home Nursing agency will coordinate care of any home care patients with the new psychiatric provider. In addition, the hospital and local PCPs will continue to screen patients for depression and will refer anyone meeting criteria to Hyndman Area Health Center for treatment.

B. On-going Projects and Activities/Services to Be Provided

i) Will all, some or none of the elements of the program be sustainable once Outreach grant funding has ended? Please check the appropriate selection.

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained (i.e. the program will completely end after the grant period)

ii) Identify the projects and activities that will be sustained beyond Outreach grant period.

Patients will continue to be screened for depression using the PHQ-2 and PHQ-9 at the hospital, physician, and home health level. Our local providers and national payors have recognized the importance of screening patients for depression. As barriers to payment have prevented us from continuing to do tele-psychiatry when funding ends, patients will be transitioned to Hyndman Area Health Center. Patients will be able to see a face to face provider. We feel that this will be a better care model for our patients and will allow them better access to the provider.

C. Sustained Impact – Post 3/23

The collaboration between UPMC Bedford Memorial's relationship and the county's Federally Qualified Health Center (FQHC) has been strengthened after discussions of how the Outreach grant program increased access to geriatric tele-psychiatry and overall PCP engagement with at-risk seniors. We have been able to establish a lasting relationship with a provider that will be a great

resource to our patients. Not only seniors, but anyone seeking psychiatric care. Psychiatric care for seniors in our area has been lacking for many years. The establishment of screening tools and new partnerships will allow us to better serve those individuals.

Education and sharing of resources and information has greatly improved. The hospital, home health organizations, local physicians and the community have been able to connect in better ways to serve our seniors. We now have resource guides available to give our patients contact information for all services in Bedford county, something we did not have readily available before the beginning of this project.

Part VIII: Implications for Other Communities

This project has been very positive for our community. Implementing proper screening tools is the first step identifying patients who are at risk for depression. Using the PHQ-2 and PHQ-9 depression screening tools, we were able to identify patients who were at-risk. Having a clear screening and referral process in place was key to ensuring our patients were receiving consistent referral and care.

Having the support of local primary care physicians was also key to our referral base. Ensuring physicians understood the process and how to refer patients helped us build the program. Patients, especially the elderly population, establish trusting relationships with their primary care physicians. These physicians are key partners in maintaining the health of community and we could not have been successful with their support.

Part IX: Success, Increased Capacity, and Contributions to Change

A. Defining Success

i) How do you define "success" for your grant program? Please check the appropriate selection(s). You may choose more than one option. If other, please describe.

- Access to a new or expanded health service
- Increased number of people receiving direct services
- Improved quality of health services
- Operational efficiencies or reduced costs
- Integration of process improvement into daily workflow
- Continuation of program activities after grant funding
- Continuation of network or consortium after grant funding
- Health improvement of an individual
- Health improvement among your program participants
- Health improvement among your community
- Enhanced staff capacity, new skills, or education received
- Improved capacity to adapt to changes in healthcare

ii) Do you believe that your program has achieved success? If so, how?

Yes. We have achieved success. We have implemented proper screening tools for depression in our elderly population. The tele-psychiatry program improved the mental health of our elderly patients and allowed us to partner with local physicians to refer patients into behavioral health programs. Going forward, we have established a strong new relationship with a Federally Qualified Health Center. Through them, our patients will have access to face-to-face psychiatric providers.

B. Organizational Capacity

How has the federal funding of your grant program increased local capacity at your organization, within your network, and/or in your community? Please check the appropriate selection. If other, please describe.

- Formalized networks or coalition
- Developed new partnerships or relationships
- Enhanced skills, education, or training of workforce
- Enhanced data collection and analysis

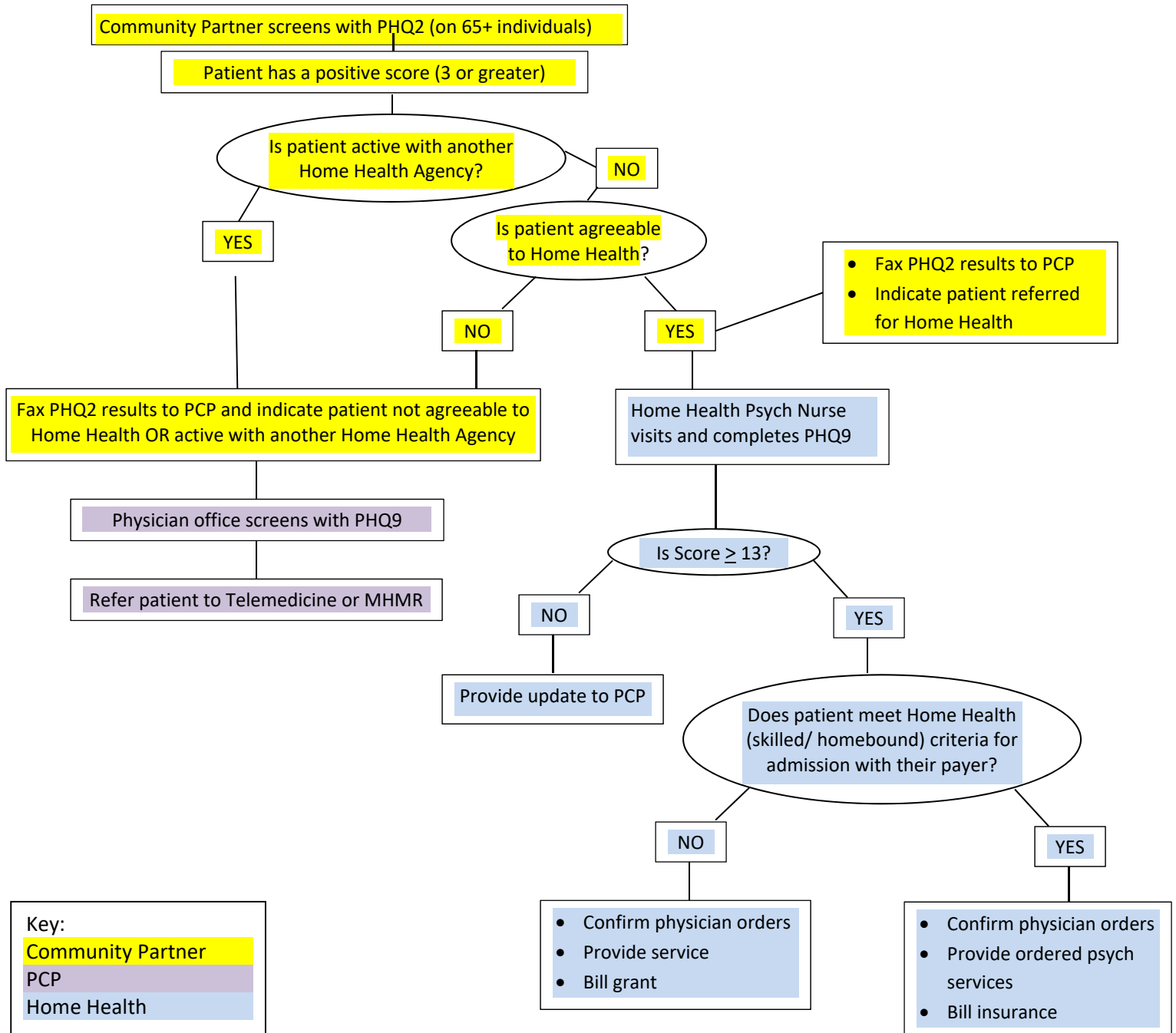
C. Contributions to Change

This Program has made a difference in individuals' lives, our organization, and our community. Here are some stories to illustrate:

One of the consortium's first telepsychiatry patients began treatment in May of 2016. Initially the patient was diagnosed with extreme anxiety and depression with a suspected neurological condition. The patient's care giver was overwhelmed. The telepsychiatrist and psychiatric nurse worked together, and a treatment plan was formed. In March of 2016, the patient was able to move into an assisted living facility. Over the treatment period, the patient's cognitive level improved to normal. The patient is now living a highly active and fulfilling life.

Our group was able to implement screening tools that are used throughout the hospital and home health organization to screen patients for depression. We can now screen patients and refer them on to a psychiatrist as needed. With the addition of Hyndman Area Health Center, we now have a face-to-face area psychiatry program that will be able to accept our patient base. This relationship will be beneficial to HAHC, as they will be able to grow their program and continue to serve the needs of our patient population.

Bedford County Mental Health *PLUS* Senior Outreach Depression Screening Process for Community Partners



Saipan

Organizational Information

Grant Number	D04RH28399
Grantee Organization	Commonwealth Healthcare Corporation
Organization Type	Semi-Autonomous Hospital & Public Health
Address	P.O. Box 500409 Saipan, MP 96950
Grantee organization website	www.Chcc.gov.mp
Outreach grant project title	Rural Health Care Services Outreach Grant Program
Project Director	Name: Amber Lynn Mendiola
	Title: Acting NCD Bureau Administrator
	Phone number: 670-236-8710
	Fax number: 670-236-8700
	Email address: amendiolancdb@gmail.com
Project Period	2015 – 2018
Funding level for each budget period	May 2015 to April 2016: \$200,000
	May 2016 to April 2017: \$200,000
	May 2017 to April 2018: \$200,000

Part II: Consortium Partners

* Indicates those consortium partners who have signed a Memorandum of Understanding/Agreement

Partner Organization	Location (town/county/state)	Organizational Type
Hardt Eye Clinic	Garapan/ Saipan/ MP	Eye Clinic/ Diabetes Self-Management Education Center
Commonwealth Healthcare Corporation (CHCC)- Physical Therapy (PT)	Navy Hill/ Saipan/ MP	Unit under the CHCC
Northern Marianas College (NMC)- Cooperative Research Extension & Educational Services (CREES)- Expanded Food and Nutrition Education Program (EFNEP)	As Terlaje/ Saipan/ MP	Community College
Eucon Medical Health Services	Gualo Rai/ Saipan/ MP	School/ Medical Center

Community Characteristics

A. Area

Because the entry point for referrals was initially at Family Care Clinic (FCC)—the outpatient clinic located at the sole hospital of the Commonwealth of the Northern Mariana Islands (CNMI), the Patient Referral Outreach and Advocacy (PROA) program has been able to serve a number of community demographics on the island of Saipan, as all communities are welcome at the hospital.

B. Community description

The CNMI is home to a diverse group of people, coming from various socio-economic, ethnic, and religious backgrounds. The population consists of Asians (i.e. Filipino, Chinese, Japanese Korean, Bangladesh/Indian descent, etc.)—which makes up about half of the population in the CNMI, Pacific Islanders (i.e. Chamorro, Carolinian, Palauan, FSM-national, etc.)—which makes up about a 3rd of the population, and the remaining are of other nationalities. According to the 2016 CNMI Non-Communicable Diseases (NCD) and Risk Factors Hybrid Survey, a 3rd of CNMI residents reported lack of physical activity or exercise, and about 42.3% of adults perceived their health as fair or poor. While 56% of CNMI adults are estimated to have hypertension, about 17.3% are estimated to have high cholesterol, and about 18.7% are estimated to have diabetes, only about half of CNMI adults have some form insurance coverage.

C. Need

As previously mentioned, 18.7% of the CNMI population is estimated to have diabetes, but only half of CNMI adults have some form of insurance coverage. The 2016 CNMI NCD and Risk Factors Hybrid Survey also found that 64% of adults are overweight or obese. That poses a major concern and burden on the sole hospital in the CNMI. Additionally, there was no referral system in place for the tracking and monitoring of a patient's progress when a referral was made for Diabetes Self-Management Education (DSME). Thus, the program was designed to fill that gap by facilitating referrals from FCC to Hardt Eye Clinic, setting up clientele appointments for DSME, providing reminder calls for their appointments, and tracking and monitoring their progress from attending the DSME sessions. In addition to bridging the gap, those in the community that were high risk for developing diabetes and wanted to learn more about physical activity and nutrition were referred to NMC-CREES' EFNEP.

Program Services

A. Evidence-based and/or promising practice model(s)

One evidence-based model and one promising practice were chosen to meet the needs and objectives of the program. The first is the Genesys Health Works Health Navigator Model, which utilizes a combination of health coaching, case management and care coordination. Health coaches/navigators would build supportive relationships with clients and link them to services in and outside of the health spectrum. The promising practice is the Manu O Ku Diabetes Self-Management Train-the-Trainer Curriculum and Training. This specific model was created to cater to Pacific Islanders to recognize and integrate cultural and traditional values while improving Diabetes Management. The curriculum includes lifestyle coaching, stewardship of the spirit, stewardship of the mind, motivational interviewing, goal setting, nutrition, glucose monitoring, etc.

The PROA program took segments from Genesys Health Work Health Navigator Model and the Manu O Ko and customized areas that worked best for the population of the CNMI. In the beginning, each Health Coach would follow up with patients, build supportive relationships and assess how the patients were doing in DSME or EFNEP. These were techniques used in the Genesys Health Work Health Navigator Model. At times, if patients stated they did not want to go back, the Health Coach would discuss reasons why and provide cultural motivations for patients to keep attending courses. Health Coaches would also use cultural stories to help patients relate to what they learned. These were techniques from the Manu O Ko promising practice.

B. Description of Activities

The program was designed to facilitate referrals for diabetes patients to DSME at Hardt Eye. Under this area of the program, PROA staff would receive a referral from FCC and shortly afterwards, they would fax the referrals to Hardt Eye Clinic. After faxing, the PROA staff member would confirm with Hardt Eye clinic on whether the referral was received. Upon confirmation, the PROA staff would reach out to the patient, conduct an over-the-phone initial intake survey, and assess availability of appointment dates. PROA would then work with Hardt Eye to set up an appointment for the client. Prior to an appointment, a PROA advocate would remind the patient of their appointment, and if needed, reschedule the appointment if the patient mentioned they were unable to make it. The PROA advocate would then follow up with that patient via phone to communicate about how the sessions were going, if they would continue the course or not, to gauge retention of the material learned, etc. This would continue until the patient completed all 10 DSME sessions or until the patient stopped attending the course.

Additionally, for those at risk for diabetes, they were referred to EFNEP for nutritional and physical activity education. PROA received clients under this activity when an interested participant called in or visited the PROA office location. Upon receiving a call from an interested participant, a PROA staff would then plug them into a minimum group of at least 7 or 8 individuals to form a cohort. When a cohort was made, PROA would then work with EFNEP and the clients within that cohort to set up a start date. Prior to beginning the cohort and at the end of the 6-week, one hour a week-sessions, PROA staff would conduct a mini-health screening to track a participant's before-and-after data.

Separate from the workflow with Hardt Eye and NMC-CREES EFNEP, the PROA program participated in numerous types of outreach activities and/or events, either providing a presentation about Diabetes and/or brief Diabetes Self-Management Education or conducting health screenings to create exposure and awareness to the community.

C. Role of Consortium Partners

Hardt Eye Clinic and NMC-CREES EFNEP were involved since the inception of the program in formulating a workflow map and establishing the referral system. As the only entity in the region certified to provide diabetes management education, Hardt Eye

Clinic has been providing diabetes self-management education to our participants throughout the duration of the grant period. Hardt Eye Clinic also provides the program with updates on patients and evaluations of each session provided to a patient. Such evaluations inform the program staff about what topics were discussed during the sessions and barriers faced by the patients in adhering to their diabetes management plan including food insecurity, stressors, and other financial barriers. NMC-CREES, through their 'Expanded Food and Nutrition Education Program,' has been providing nutrition education to participants who have diabetes, pre-diabetes, or other NCD risk factors. CHCC Physical Therapy Unit and Eucon Medical Center were added to the consortium during the third year of the program. These partners were added to build community capacity and improve the availability of services for people with diabetes and related complications. As such, the PROA program has been assisting Eucon Medical Center with obtaining certification to establish a foot care clinic. The program has also been assisting the CHCC Physical Therapy Department with purchasing equipment necessary to treat patients with diabetes related injuries. In return, Eucon Medical Center and the PT Dept. have been contracted to provide the PROA program with any data on patients with diabetes who receive any type of treatment or care that will be used in the future to track progress and assess and changes before and after the creation of a foot care clinic.

Outcomes

A. Outcomes and Evaluation Findings

We are currently in the process of compiling evaluation findings from participants to assess which behavioral changes they were able to maintain as a result of participation in this program. Thus far, 209 referrals have been received by the program and directed to diabetes self-management education. Among these individuals are various levels of participation from patients who have attended all 10 sessions of DSME to patients who have elected not to attend any sessions. Roughly 42% of the referrals we have received are for patients who have no insurance coverage.

B. Recognition

To the knowledge of current staff and consortium members, no public recognitions have been given to the PROA program.

Challenges & Innovative Solutions

A major challenge faced by the program was the establishment of a referral system from the ground up. A large portion of the first year was dedicated to building the program, hiring personnel and working with consortium partners to assign responsibilities and design a referral process. Once this was established, another challenge was recruiting participants for both diabetes management education and nutrition education. One factor that contributed to the lack of participants was that the community was unaware that such services were being offered. In response, the program worked on advertising these services through various media platforms including radio commercials, posters, flyers, word-of-mouth, and social media. Amongst those already participating in the program, a challenge was the loss of interest after attending a few sessions. In an attempt to prevent participants from dropping out, the program purchased incentives to give to patients who attended DSME and nutrition programs. Several other barriers were faced by participants preventing them from attending their sessions including a lack of access to transportation. There is a lack of established public transportation system in the CNMI and travelling around the island is done through private vehicles. The PROA program began working with the Commonwealth Office of Transit Authority (COTA) to provide transportation to participants via their established assistance program for people with disabilities. However, since COTA only has three (3) available vehicles, scheduling became difficult at times.

Sustainability

A. Structure

For all three (3) years of the grant, it had been challenging to schedule consortium meetings with all members. Since the first year was focused on building a structure from within and obtaining staff, it was not until the latter part of the first year that a formal consortium meeting was conducted. At times, either a couple of representatives would attend a meeting, or PROA would have to reschedule due to staff turn-over. The current consortium has not yet formally met all-together.

Before the development of the PROA program, entities in the consortium had already established working relationships and collaboration efforts for various objectives and activities. The consortium will not continue after the grant ends, however, partnership efforts to tackle Non-Communicable Diseases will. Eucon Medical Center, Hardt Eye Clinic and the NMC CREES EFNEP already work together to conduct screening activities, share data, and enhance health policies for their respective entities. The CHCC Physical Therapy Unit works with Eucon Medical Center to enhance foot care services for patients, treat wounds and

share data. Therefore, even though the mechanics of the consortium will not continue, because the CNMI is such a small chain of islands, entities will resume collaboration.

B. On-going Projects and Activities/Services To Be Provided

i) Will all, some or none of the elements of the program be sustainable once Outreach grant funding has ended? Please check the appropriate selection.

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained (i.e. the program will completely end after the grant period)

ii) Identify the projects and activities that will be sustained beyond Outreach grant period.

Through the NCD Bureau, partnership activities, events, screening and policy development will continue. The Diabetes Prevention and Control Program (DPCP) will be expanding and utilizing strategies adapted by the PROA program. Some strategies include hiring at least one (1) Patient Navigator, not just for Diabetes but Hypertension as well, working with other clinics to integrate comprehensive Diabetes Care, making referrals to other programs and services, etc. Unfortunately, we will not be able to pay for patients to receive DSME, but we will continue to inform the community about the course.

C. Sustained Impact

One of the biggest successes of the program and has proven a positive impact, was financially assisting patients to receive DSME courses. Many patients wanted to participate in the program prior to the creation of PROA but did not have insurance to do so. By paying for services, more individuals have learned to take care of their health and manage their Diabetes. This does not only mean the patient, but their family and friends become positively affected as well. This causes a ripple effect for more people to practice healthier behaviors.

Another sustained impact is the referral procedure to Hardt Eye Clinic for DSME or to the NCB Bureau to link patients to other services. As mentioned before, the CHCC Family Care Clinic did have a system in place where nurses would refer patients to Hardt Eye Clinic, however, no entity was able to track the patients. Now, through a database created by one of the PROA advocates, we can now track progress and if the patient was referred to outside services such as food stamps, low-income housing, etc.

Implications for Other Communities

For communities with tribal or strong cultural values, the integration of the Genesys Health Work Health Navigator Model and the Mano O Ku practicing promise would be a beneficial method to utilize. Similar communities can fuse spiritual and cultural teachings to customize nutrition/physical activity education, self-management and goal setting to ensure patient success and improvement. Having an advocate/navigator dedicated to establishing supportive relationships with patients and linking them to services, even services that are not health related, will strengthen program output. In the CNMI, people appreciate when service providers take the time to work with them and give them guidance while empowering them. More people appreciate information being given at face value rather than on the phone or via email. Meeting people face-to-face or giving more time to talk on the phone showed to be more impactful.

Success, Increased Capacity, and Contributions to Change

A. Defining Success

i) How do you define "success" for your grant program? Please bold/highlight your selection. You may choose more than one option. If other, please describe.

Access to a new or expanded health service

Increased number of people receiving direct services

Improved quality of health services

Operational efficiencies or reduced costs

Integration of process improvement into daily workflow

Continuation of program activities after grant funding

- Continuation of network or consortium after grant funding
- Health improvement of an individual
- Health improvement among your program participants
- Health improvement among your community
- Enhanced staff capacity, new skills, or education received
- Improved capacity to adapt to changes in healthcare

ii) Do you believe that your program has achieved success? If so, how?

Current program staff believe that parts of the program has achieved success. Before the development of the PROA program, the Family Care Clinic would send referrals but were not able to track them. Now, they can track the referrals. Through the efforts of PROA with Hardt Eye Clinic, Hardt Eye now provides monthly reports to the Family Care Clinic. This clinical linkage makes it easier for physicians to see overall health progress. Another success is the program being able to financially assist patients with the cost of DSME. Unfortunately, this is not a service that the NCD Bureau can continue after the grant ends. PROA also collaborated with community members to host focus groups to enhance, develop or update health educational materials. In terms of patient education, this gave the NCD Bureau an opportunity to speak with community members and gauge what information appeals to them and what doesn't.

B. Organizational Capacity

How has the federal funding of your grant program increased local capacity at your organization, within your network, and/or in your community? Please bold/highlight all that apply. If other, please describe.

- Formalized networks or coalition
- Developed new partnerships or relationships
- Enhanced skills, education, or training of workforce
- Enhanced data collection and analysis

C. Contributions to Change

i) Please provide a story or two about how your program made a difference in individuals' lives, your organization or consortium, or your community.

The program has been able to provide financial assistance to patients who otherwise would have not been able to afford diabetes management education. Because roughly 50% of the population of the CNMI does not have any form of health insurance, this specific group is vulnerable to facing adverse health outcomes. For individuals who are not US citizens, and do not meet the qualifications for Medicare or Medicaid, having a program like this that subsidizes the cost of diabetes management education gives them the resources necessary to manage and take control of their chronic disease. Increasing access to education would help improve the health outcomes of the community by challenging misconceptions of chronic disease.

ii) Please provide an example of how your grant program may have directly or indirectly contributed to policy changes, systems changes, or environmental changes? Examples may include passing school nutrition policies, implementing Lean process improvements within your organization, or enhancing walkable spaces in your community.

In partnership with the Diabetes Prevention and Control Program and other programs under the Non-Communicable Disease Bureau, this program has worked to improve workplace wellness within the Commonwealth Healthcare Corporation. This program has also provided health screenings for employees of the organization and to community members. This has allowed us to collect baseline data on BMI, blood glucose, and blood pressure of employees and community members. With this data, we hope to enact workplace and community wellness initiatives to improve health amongst our community members. From the assessment, the workplace wellness committee has developed procurement guidelines when requesting quotes for food, a healthy meeting policy, and employee referral system for DSME.

South Dakota

Part I: Organizational Information	
Grant Number	D04RH2824
Grantee Organization	Delta Dental Philanthropic Fund
Organization Type	Foundation
Address	804 North Euclid Avenue, Suite 101, Pierre, SD 57501
Grantee organization website	www.deltadentalsd.com
Outreach grant project title	Delta Dental/Head Start Early Childhood Caries Prevention Project
Project Director	Name: Connie Halverson
	Title: Vice President, Public Benefit
	Phone number: 605-494-2547
	Fax number: 605-224-0909
	Email address: connie.halverson@deltadentalsd.com
Project Period	2015 – 2018
Funding level for each budget period	May 2015 to April 2016: \$150,000
	May 2016 to April 2017: \$150,000
	May 2017 to April 2018: \$150,000

Part II: Consortium Partners		
* Indicates those consortium partners who have signed a Memorandum of Understanding/Agreement		
Partner Organization	Location (town/county/state)	Organizational Type
Cheyenne River Head Start*	Eagle Butte, Dewey, SD	Head Start
Yankton Sioux Tribe Head Start*	Marty, Charles Mix, SD	Head Start
Rosebud Sioux Tribe Head Start*	Rosebud, Todd, SD	Head Start
Badlands Head Start*	Belle Fourche, Butte, SD	Head Start
Oglala Lakota College Head Start/Early Head Start*	Pine Ridge, Oglala Lakota, SD	Head Start
Rural America Initiatives Prenatal to Five Head Start*	Rapid City, Pennington, SD	Head Start
South Central Development, Inc.*	Wagner, Charles Mix, SD	Head Start
Delta Dental Philanthropic Fund*	Pierre, Hughes, SD	Foundation

Part III: Community Characteristics

A. Area

Communities Served

Pine Ridge, Manderson, Kyle, Loneman, Martin, Allen, Batesland, Wanblee, Porcupine, Rosebud, Parmalee, Crow Creek, Eagle Butte, Cherry Creek, Dupree, Red Scaffold, Timber Lake, White Horse

Counties Served

Oglala Lakota, Jackson, Bennett, Todd, Mellette, Charles Mix, Dewey, Buffalo, Ziebach

American Indian Reservations Served

Pine Ridge, Rosebud, Yankton, Cheyenne River, Crow Creek

B. Community description

The 'community' for this grant included five American Indian Reservations. Three of the poorest counties in America are encompassed within those reservations. Along with extreme poverty, transportation barriers include distance, weather challenges, limited public transportation and varying availability and reliability of personal vehicles. Oral health disease rates for children are some of the highest in the country. Further, a shortage of dental professionals greatly compromises the oral health of this population. While the Indian Health Service (IHS) is the primary care provider on the reservations, there simply are not enough dentists or hygienists to adequately serve this high-needs population. For example, on the Pine Ridge Indian Reservation in southwest South Dakota – an area as large as the state of Connecticut – there are three IHS dental clinics. At the start of the grant, these three clinics shared three dental hygienists among them for the approximately 40,000 reservation residents. Compare that to a typical private dental clinic, where there is usually one dental hygienist for 2,000 people. Most South Dakota reservations experience similar staff shortages, with IHS vacancy rates often averaging nearly 50 percent.

C. Need

According to a research paper titled "Assessment of parental oral health knowledge and behaviors among American Indians of a Northern Plains tribe", the disparity of disease burden of American Indian children compared to other minority populations is significant:

Among groups at risk for oral health disparities, prevalence of dental caries in American Indian and Alaska Native (AI/AN) children is among the highest in the United States. Compared with other ethnic/racial groups, over 72 percent of AI/AN preschoolers have ECC versus 42 percent of Mexican-American, 32 percent of African American, and 25 percent of non-Hispanic white children. Severity of disease, as measured by decayed, missing, and filled teeth, is 3-4 times higher in AI/AN preschoolers than the general population of U.S. children. Moreover, population-based studies reveal untreated dental decay increases with age among AI/AN children, with a 21 percent prevalence in one-year-olds and 75 percent prevalence in five-year olds.

The 2010 Indian Health Service survey showed that almost 20 percent of one-year-old American Indian children in the Aberdeen Area (now the Great Plains area) already had decayed teeth. Without intervention, a child experiencing decay that early will very likely require extensive, and expensive, care throughout their life, including many who will need surgical care in the operating room. Officials estimate that 25 percent of American Indian children in some communities require full mouth restoration under general anesthesia, a rate 50 to 100 times that of the general population. Not only is this care expensive, but the risks to the child are considerable.

On the Pine Ridge Indian Reservation, the W. K. Kellogg Foundation found an astounding 90 percent of participants in the Checkup Study showed signs of active dental decay, three times higher than typically found in the United States. In addition, the Checkup Study found 45 percent of children and 60 percent of adults on the Pine Ridge reservation suffer from moderate to urgent dental needs, including infections and other problems that could be life threatening.

Part IV: Program Services

A. Evidence-based and/or promising practice model(s)

The project is designed based upon the promising practice model for risk-based prevention and disease management of early childhood caries for children 0-5 utilized by the DentaQuest Institute's Early Childhood Caries (ECC) Collaborative. The new clinical protocol was created because some of the field's experts identified that the current strategies toward managing ECC were not achieving desired outcomes. The ECC Collaborative "How to Guide" describes ECC as largely preventable if the correct actions are taken:

Early childhood caries (ECC) is a prevalent form of caries that affects the primary teeth of infants, toddlers and preschool children. It can progress rapidly and if left untreated, may result in pain and infection. Yet, ECC is largely preventable. Until recently, standards of care for ECC called for restorative and surgical treatment, along with general recommendations to change dietary and oral hygiene practices. Young children who are not cooperative or have special health care needs and require restorative treatment are commonly sedated or treated under general anesthesia. However, the costs of general anesthesia are high, and relapse rates of 37-79% (restorative treatment failures) have been reported in the scientific literature. It is now known that restorative treatment of caries alone does not address the disease process...if ECC is identified early and the risk factors responsible for the disease are addressed, it can be prevented, and its progression can be slowed, halted or arrested.

The clinical protocol that has been developed through the work of the Collaborative approaches ECC in a similar manner to medical management of chronic conditions such as diabetes and asthma. This protocol is different from a traditional approach in that it gives the clinician a supporting role and the patients (parents) a central role in determining care and developing self-management goals to make behavioral changes that will reduce their risk of caries. The approach requires family engagement and empowerment to make effective behavioral changes. Treatment is based upon evidence-based guidelines. The ECC disease management (DM) approach is also based on the premise that a patient's caries risk status is not static, but rather can change over time.

The components of the ECC disease management clinical care are:

- Caries risk assessment (CRA)
- Caries charting by tooth, surface and activity
- Effective communication with patients (parents)
- Self-management goals (SMG): Development and maintenance
- Topical fluoride or other modalities to remineralize caries
- Treatment based on patient's clinical needs and parent's desires
- Return DM visit intervals based on caries risk

B. Description of Activities

Our program centered on two primary activities conducted by collaborative practice dental hygienists on-site in Tribal Head Start centers. The first was to provide oral health services including caries risk assessment, oral health cleanings, and fluoride varnish and dental sealants to Head Start children on a semi-annual basis. The second service was to include parental education during the child's appointment. That education included the use of motivational interviewing and self-management goal setting by the parents. Secondary activities included educating the Head Start staff on how to apply fluoride varnish and advocating for covering silver diamine fluoride and increased payment for dental sealants with South Dakota Medicaid.

C. Role of Consortium Partners

Staff with the Delta Dental Philanthropic Fund provided administrative services and performed the clinical and educational services for the grant. The Head Start Consortium members helped recruit patients and parents for the project and worked with the clinical staff at the local level.

Part V: Outcomes

A. Outcomes and Evaluation Findings (do not submit your Evaluation Report in lieu of completing this section)

Our overall project aim is to improve the oral health of American Indian children ages 0-5 enrolled in reservation-based Head Start and Early Head Start programs in South Dakota.

Our project goals are:

- Decrease the percentage of children presenting with new decay by 20% by 4/30/18
- Decrease the percentage of children reporting pain by 20% by 4/30/18
- Decrease the percentage of children classified as high risk for disease by 25% by 4/30/18
- Decrease the percentage of children requiring a referral to the operating room by 25% by 4/30/18

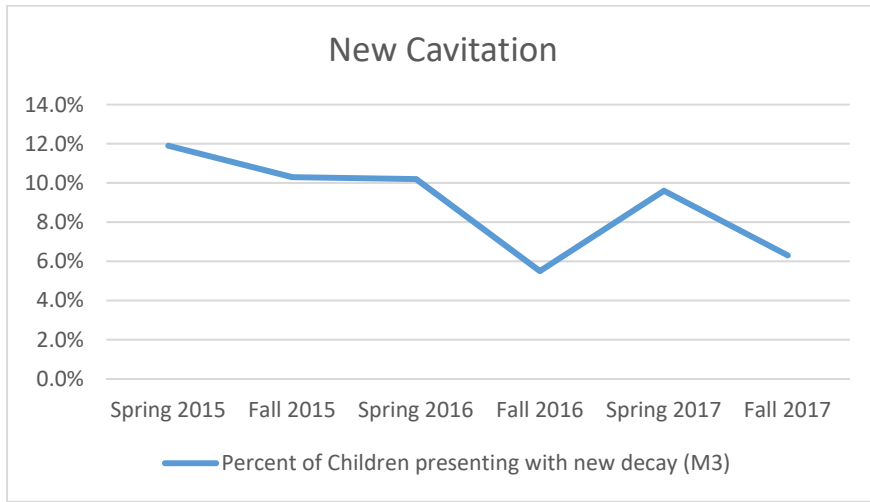
Our objectives were to increase the number of children/families enrolled in the project, to increase the number of children who'd been assigned a risk status, to increase the number of children who received a cleaning, fluoride varnish and dental sealants, and to increase the number of caregivers who had set self-management goals.

We're pleased to report that we met most of our objectives. In total, we saw 1,133 children and their parents for an ECC visit. (Note that another 2,780 children received preventive care, but their parents did not participate in a visit so they weren't classified as ECC visits.)

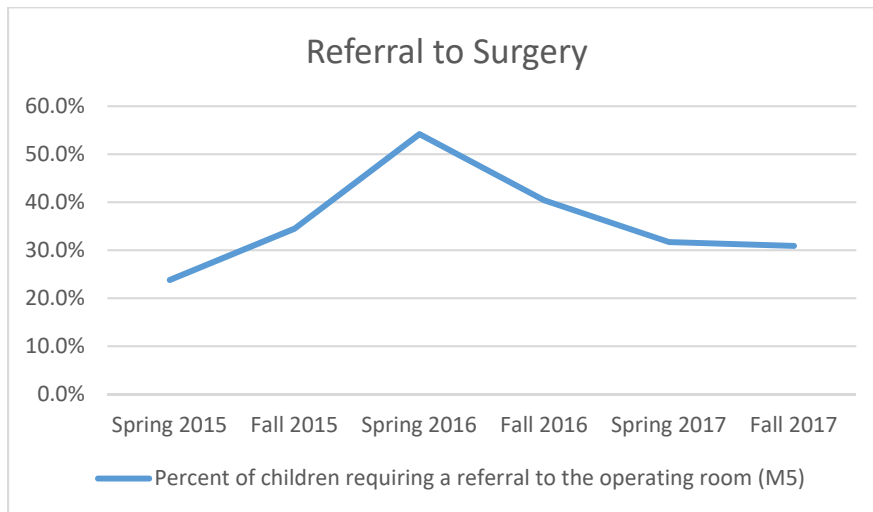
Behavior change is challenging for nearly everyone, but promoting the importance of oral health in a population that has many other pressing needs like housing, food insecurity, and even lack of running water, is an uphill battle. However, we are pleased with the program's overall progress. While not all indicators are as positive as we had hoped them to be, at this stage of the program we are encouraged that the trends are moving in the right direction.

One goal that we did not end up tracking was the measure on pain. This was something we did not anticipate, but essentially, although many of the children we saw had cavities, their parents did not report that their child was experiencing pain. Most of the responses were none, so we eliminated that measure.

The charts below show the program's outcomes for the other goals. We're pleased to report that the percentage of children presenting with new cavitation dropped by nearly 50% (47%).



As was to be expected, we initially had a higher rate of surgery referrals, but those referrals have decreased and are moving in the right direction.



B. Recognition

During the course of the grant, we were asked to present about this project at two conferences.

The first was the Midwest Dental Public Health Conference held annually by the University of Iowa. Attendees included dental students, public health officials and others interested in oral health from 10 Midwestern states.

The second meeting was a national Symposium on Caries in AI/AN Children. The symposium was sponsored by QUEST, whose name encompasses the mission of the organization: Quantifying, Understanding and Eliminating Severe Tooth Decay in AI/AN Children.

Part VI: Challenges & Innovative Solutions

Our initial challenge was to ensure that all staff members learned and ultimately believed in the disease management, risk-based treatment and oral health education using motivational interviewing and self-management goals. That challenge was addressed using the PDSA model and starting with one dental hygienist in one location, testing the model and making changes to fit our

program. We then expanded it to two additional hygienists on one reservation before expanding it statewide. That process provided buy-in because they learned what worked and what didn't from their peers.

The other major challenge was to encourage parents to not only attend their child's first appointment with the hygienist, but to also continue to attend those appointments on a regular basis. After the first appointment, it became clear that parents were not likely to attend recurring appointments. We then began using gift cards to incent the Head Start staff to help recruit parents. Finally, we began offering the gift cards directly to parents to attend the appointments. The gift cards seemed to work as intended for the 3rd and 4th appointments, but their ability to attract parents to the appointments seemed to drop off after that.

Finally, the overarching challenge for the project was, and continues to be, the general lack of importance placed on oral health by not only the target audience, but also others on the reservations. This is understandable considering the economic and other challenges faced by tribal members as described above. By maintaining a consistent presence in the Head Starts, educating Head Start staffs and other tribal members, we believe there is slowly but surely, a positive change in people's attitudes around oral health.

Part VII: Sustainability

A. Structure

Five of the seven Head Start consortium members have agreed to continue participating in the program. Oral health is important for Head Start and most of the Head Start partners believe the services provided to the children and parents are valuable and needed. Those continuing the project are:

- Cheyenne River Head Start
- Rosebud Sioux Tribe Head Start
- Badlands Head Start
- Oglala Lakota College Head Start
- Yankton Sioux Tribe Head Start

B. On-going Projects and Activities/Services To Be Provided

i) Will all, some or none of the elements of the program be sustainable once Outreach grant funding has ended? Please check the appropriate selection.

- All elements of the program will be sustained
 Some parts of the program will be sustained
 None of the elements of the program will be sustained (i.e. the program will completely end after the grant period)

ii) Identify the projects and activities that will be sustained beyond Outreach grant period.
Because the project leaders and consortium partners believe we are making progress toward our goal of improving oral health for our target population, our intent is to continue providing all of the services currently provided in the program. While the preventive services are important, we feel strongly that without behavior change, we will never make true progress in improving population oral health. In addition to the quantitative data improvements, we're also excited about the anecdotal stories we've gathered that indicate that increasing numbers of the target population are understanding that oral health is important and that oral diseases can be prevented.
In addition to sustaining our current program, we are excited about the potential of adding a new treatment that has true potential to help improve the oral health of our patients in this program by significantly reducing the number of children that have to be referred to surgery. Silver diamine fluoride is a clinical product that helps stop the caries process, and we plan to begin using it within our program in the next year.

Delta Dental believes strongly in this project and will absorb the loss of grant funding to continue the project.

C. Sustained Impact

The sustained impacts of the Outreach grant are that our program will continue to work with our partners to provide care to our target population in the community, including engaging parents in their child's oral health; that the oral health of our target population will continue to improve, including reduced cavitation and lowered numbers of referrals to surgery; and that our partners and parents have a significantly greater awareness of the importance of good oral health, which will ultimately help oral health outcomes long term.

Through our participation in the national ECC collaborative, our staff were introduced to the motivational interviewing technique which has changed the way they provide education. The concept of using self-management goals to promote parent/family behavior change was also new. Early in the project, our hygienists regularly commented about the number of questions parents had when they had the opportunity to be actively involved in their child's appointment. We believe that helping them increase their oral health knowledge and promote behavior change will result in sustained oral health improvements for their families.

The national ECC collaborative also introduced our staff to the disease management approach to oral health which includes risk assessment of each child and higher levels of preventive care for those children who are identified as having a higher risk for disease. We believe that the trend of the number of children with a decrease in risk status and the positive trend (a decrease) in new cavitation will have long term impacts because past caries experience, including having cavities in childhood, is the best predictor of tooth decay across the lifespan.

Part VIII: Implications for Other Communities

Consortium members believe this project has potential to be replicated in other rural and tribal communities across the country that also experience high rates of oral disease. Success for this project, which delivered care to patients with limited access, combined with in-depth education to promote behavior change, should generate interest with others seeking to lower disease burdens for high needs populations. Retaining a dental hygienist who is already a prevention specialist and adding in the use of mobile equipment, care in the community and training in motivational interviewing with additional time to spend on educating the family on how to change their behavior is a common-sense solution.

Part IX: Success, Increased Capacity, and Contributions to Change

A. Defining Success

i) How do you define "success" for your grant program? Please check the appropriate selection(s). You may choose more than one option. If other, please describe.

- Access to a new or expanded health service
- Increased number of people receiving direct services
- Improved quality of health services
- Operational efficiencies or reduced costs
- Integration of process improvement into daily workflow
- Continuation of program activities after grant funding
- Continuation of network or consortium after grant funding
- Health improvement of an individual
- Health improvement among your program participants
- Health improvement among your community
- Enhanced staff capacity, new skills, or education received
- Improved capacity to adapt to changes in healthcare

ii) Do you believe that your program has achieved success? If so, how?

While there remains much work to be done, we believe the program has achieved success. Our outcomes are trending in the right direction, and there were anecdotal stories from the project that were quite positive. Two of the Head Start directors specifically mentioned that their staff's knowledge of oral health had increased significantly (see story below). Taking preventive oral care directly to patients, identifying those with the highest risk and ensuring that they get the follow-up care they need is an innovative model of care that we believe is an excellent option for children with the greatest need and least current care.

B. Organizational Capacity

How has the federal funding of your grant program increased local capacity at your organization, within your network, and/or in your community? Please check the appropriate selection. If other, please describe.

- Formalized networks or coalition
- Developed new partnerships or relationships
- Enhanced skills, education, or training of workforce
- Enhanced data collection and analysis

C. Contributions to Change

Change in individual's lives, your organization, consortium, or community:

In year two of our program we had a Head Start staff member write a letter to Delta Dental to express her gratitude for the ECC program. She specifically called out the staff for their dedication and hard work and stated that all of her co-workers had learned much about oral health as a result of the program. That same staff member had a child who was participating in Head Start and being served by the program. That child had older siblings who had to be treated in a surgery center under general surgery for their care because their disease was too extensive to be treated in the dental office. The child who was participating in the ECC program did have some cavities, but was their first child in the family that did not need to be sent to surgery for their oral care. This story epitomizes the program's success to date. When the dental hygienists first started providing care in the Head Starts, the majority of children had urgent needs and needed to be referred to surgery. Those referrals have dropped significantly; and our ultimate goal would be to have that number be zero.

Change in policies, systems, and environment:

An indirect result of our grant activities was that South Dakota Medicaid announced it will begin covering the application of silver diamine fluoride in FY 2019. Our knowledge of our target population disease burden helped shape the discussions on that topic and we're pleased to have this new treatment option. We had also advocated for coverage of dental sealants on primary teeth and an increased payment rate for sealants in general. While Medicaid staff considered those requests, South Dakota's tight budget did not allow for them to approve those changes.

Through our involvement with the national ECC Collaborative, Delta Dental staff learned more about using the PDSA model of change and about the disease management approach of early childhood caries.

South Dakota

Part I: Organizational Information

Grant Number	D04RH28431
Grantee Organization	Sanford Health Network
Organization Type	Hospital
Address	20 S Plum Street, Vermillion, SD 57069-3346
Grantee organization website	
Outreach grant project title	Virtual Infusion
Project Director	Name: Susan Halbritter, CNP Rachel Olson, Director of Ancillary Services
	Title: Co-Project Directors
	Phone number: 605-328-8086, 605-638-8279
	Fax number:
	Email address: Susan.halbritter@sanfordhealth.org Rachel.Olson@sanfordhealth.org
Project Period	2015 – 2018
Funding level for each budget period	May 2015 to April 2016: \$194,114
	May 2016 to April 2017: \$193,805
	May 2017 to April 2018: \$193,808

Part II: Consortium Partners

* Indicates consortium partners who have signed a Memorandum of Understanding/Agreement

Partner Organization	Location (town/county/state)	Organizational Type
*Sanford Vermillion Medical Center	Vermillion/Clay/ SD	Critical Access Hospital
*Douglas County Memorial Hospital	Armour/Douglas/SD	Critical Access Hospital
Sanford Worthington Medical Center	Worthington/Nobles/MN	Hospital
*Sanford Hematology and Oncology	Sioux Falls/Minnehaha/SD	Clinic
*Sanford Information and Technology	Sioux Falls/Minnehaha/SD	Information Technology

Part III: Community Characteristics

A. Area

Vermillion served six counties in three states: Clay and Yankton counties, South Dakota; Ida and Woodberry counties, Iowa; Dixon and Knox County, Nebraska.

Armour: Douglas County, South Dakota

Worthington: Nobles County, Minnesota. (Further counties to be determined with year three data.)

B. Community description

The project's footprint, South Dakota, is home to a significant American Indian population. According to the 2010 census, there is a significantly higher than the national average American Indian population (8.9% compared to 1.2% nation-wide). Low socioeconomic status and concentrated poverty conditions are common across rural and tribal communities in both Clay and Douglas County. Socioeconomic status, whether assessed by income, education, or occupation, is linked to a wide range of health problems, including low birth weight, cardiovascular disease, hypertension, arthritis, diabetes, cancer.¹ Higher incidence of chronic disease and lack of resources to travel to a medical center for services and preventative care can result in more urgent health concerns when patients do eventually seek medical treatment.

¹ E. Pamuk et al., Socioeconomic Status and Health Chartbook: Health, United States, 1998 (Hyattsville, Md.: National Center for Health Statistics, 1998).

Virtual Infusion added Sanford Worthington Medical Center, Nobles County, MN, to the project in year 2. This facility serves a large rural, agricultural population with very limited access to oncologists and oncology services. Worthington has a diverse population of 12,000 with 34% non-White ethnicity, largely uninsured, non-English-speaking and primarily Hispanic. Many are illiterate even in Spanish.

C. Need

Rural and underserved communities in and around South Dakota and their residents have above average need for oncology care but limited access to immediate, oncology expertise. Although many rural facilities in South Dakota have infusion centers that administer anti-cancer therapies, those facilities do not have direct oversight by an oncologist or oncology-trained advanced practice professional (APP). Rather, a physician from the rural facility (usually a family practice or internal medicine physician) oversees the infusion center. These physicians have limited oncology experience and are unfamiliar with many of the medications. Due to the high risk associated with anti-cancer agents and the potential for infusion reactions, the Sioux Falls hematologists/oncologists often restrict the administration of many agents off-site. This safety feature forces patients to travel to the tertiary care setting to receive their prescribed treatment.

The nurses in the rural infusion centers are oncology trained, but have limited exposure to many of the complex treatment plans ordered by the physicians. If questions arise regarding laboratory studies, the treatment plan, or the symptoms that the patient is reporting, the rural nurses contact the oncology clinic by phone. The receptionist passes their question to the physicians' nurse who in turn, relays the question to an oncology provider. The oncology provider addresses the question between office visits and relays orders to the rural infusion staff through the office nurse. This process can cause delays and dissatisfaction for the patient.

The practice is different in the infusion center at Sanford Cancer Center in Sioux Falls. A Certified Nurse Practitioner (CNP) with an expertise in oncology resides within the 20-chair/4-bed infusion center and provides direct oversight. The CNP is readily available to the nursing staff to address concerns about laboratory studies, reported side effects or questions regarding the treatment plan. The CNP also manages all of the infusion reactions. The purpose of the Virtual Infusion Project was to extend CNP coverage to the rural sites using telemedicine, telephone and the electronic medical record, so that patients could receive complex anti-cancer therapies closer to home.

Part IV: Program Services

A. Evidence-based and/or promising practice model(s)

The literature describes telemedicine as a useful and effective way to provide expert medical care for patients residing in rural communities. In addition to office visits, telemedicine technology has allowed tertiary medical centers to assist rural providers with expert care in the rural emergency rooms and intensive care units. A review of the literature specific to the needs of oncology patients describes telemedicine as a way to provide health care services in the form of office visits. The oncology literature is bereft in models that describe the use of telehealth services to provide expert oncology support for rural infusion centers administering anti-cancer therapies. The project team looked to our partners in Sanford Health for guidance in using this approach in oncology.

Sanford Health has been the recipient of several telehealth-related grants that have elevated the pace and success of implementation of telemedicine. Branded One Connect Emergency, successful projects include Tele-ER and Tele-Stroke. Sanford One Connect had the technology as well as a model in place that addressed regulatory issues (licensure, data security, privacy) and staff training. The Virtual Infusion Project incorporated lessons learned from Sanford One Connect, as well as best practices in oncology and telemedicine to demonstrate a creative and effective care-delivery model in rural South Dakota, overcoming barriers that force patients to travel to the tertiary cancer center for treatment.

B. Description of Activities

- Consortium members met in Sioux Falls, SD for a kickoff meeting. It was an opportunity for everyone to meet his or her counterparts and other consortium members.
- Providers at Sanford Hematology and Oncology (MDs and CNPs) obtained telemedicine privileges at Armour (Douglas County Memorial Hospital) and Vermillion (Sanford Vermillion Medical Center).
- The core team reviewed and standardized policy and procedures for telemedicine and infusion between all three sites.
- The infusion centers in Sioux Falls, Armour and Vermillion purchased, installed and tested telemedicine equipment. The infusion center in Worthington (Sanford Worthington Medical Center) followed the same process when it joined the consortium late in year 2.

- The core team collected pre-implementation baseline data. This data would document the effectiveness of the project following go-live in year 2.
- Satisfaction Surveys were developed. It was determined that the surveys did not need to go through Sanford's Institutional Review Board.
- The core team worked out access to the Beacon Software for the rural sites. This software, which contains the chemotherapy orders, had previously been in "read only" mode for the nurses in the rural sites. This change required a deviation of Sanford Enterprise policy. The security issue was resolved and the project received permission to expand access to the nursing personal in the consortium sites. Nursing access allowed standardization of pharmacy policies and procedures as well. Due to the collaboration and ultimate success of this teamwork, there was be little trouble gaining security access for nursing at the Worthington site when they were later added to the project in 2016.
- The expansion of Beacon access to rural infusion nurses in the project has gone well. Sanford Health will use the data obtained to determine future policy changes that increase Beacon security access for all appropriately trained nurses in rural infusion sites that were not involved in the project.
- The rural infusion nurses from Vermillion and Armour received training prior to go-live. The nursing staff at Worthington received the same training prior to their go-live a year later.
- Pharmacists from Vermillion and Armour traveled to Sioux Falls and worked side-by-side with the tertiary care pharmacist for training.
- The Virtual Infusion Project went live May 2016 in the Armour and Vermillion sites as planned. Three patients transitioned from Sioux Falls to Vermillion the first month. Armour successfully treated their first patient in October 2016.
- The Armour infusion space was finalized and nursing completed Oncology Nursing Society (ONS) training. The increasing complexity of treatments at Vermillion lead to the purchase of a second infusion chair as backup.
- Sanford Cancer Center Hematology and Oncology physicians were supportive of the work of Virtual Infusion. In addition to willingly transitioning patients to the rural sites, they were open to doing telehealth office visits for patients in rural areas.
- Telehealth equipment purchased for Sioux Falls was placed on 2 (of 9) physician desks as well as the three designated stations in the infusion center (two stationary and one mobile). The overall telehealth program in the clinic increased due to the availability of equipment.
- Vermillion, Armour and Sioux Falls infusion centers operationalized bar scanners (medication safety technology).
- The core team conducted competency checks at each of the participating sites to ensure proper use of equipment and policies and procedures.
- The Vermillion team presented the work of the Virtual Infusion Project at the Vermillion Rotary Club meeting in September 2016. The presentation included a live demonstration of the telehealth equipment capabilities.
- Per the request of the Sanford Cancer Center Hematology & Oncology physicians, the Virtual Infusion Project submitted a prior approval request to HRSA to add Sanford Worthington Medical Center as a third consortium site. Following approval, work began to operationalize Worthington in the fall of 2016.
- The core team began onboarding Worthington staff in the fall of 2017. The team reviewed and standardized policies/procedures. The Worthington site ordered their telehealth equipment.
- A Community Awareness Campaign (marketing plan) rolled out in Year 2.
- Sanford Vermillion and Sanford Worthington are in the process of establishing a contract with a vendor who will provide 24/7 coverage for patients receiving continuous infusions via a portable pump. This will increase the number of patients that can have their care transferred to these sites for treatment.
- Purchase of equipment and supplies (blanket warmers, infusion chairs, bar-code scanners (for medication safety), reference materials for nurses, etc).
- The core team added research representatives early on so that they could consistently participate in project development. Late in year 3, the research team identified a clinical trial to implement in rural sites. Vermillion and Worthington identified and trained research coordinators and completed the required regulatory work. Worthington is open for enrollment and Vermillion will soon follow.

C. Role of Consortium Partners

The Virtual Infusion Project consortium initially included Sanford Hematology and Oncology (tertiary care), Sanford Vermillion Medical Center (rural), Douglas County Memorial Hospital (rural) and Sanford One Connect. Early in the first year of the grant, team members identified that enrollment in clinical trials as a potential barrier to the project. Representatives from Sanford Research joined the consortium meetings looking for opportunities that would remove those barriers. Late in 2016, (year 2 of the grant) a third rural site, Sanford Worthington Medical Center, joined the consortium. Consortium team members represented the multidisciplinary nature of oncology care. The staff of the partner sites provided a rich source of ideas that incorporated past-

history and current practice. Each site and representative team member offered a unique perspective on oncology care based on the various sizes of populations they serve. Representatives, including nurses, pharmacists and management met frequently throughout the project to network and discussed workflows with their corresponding partners. The Virtual Infusion Project achieved a seamless care delivery system through the multidisciplinary approach.

Sanford Vermillion Medical Center located in Clay County, (rural) South Dakota. Sanford Vermillion is a 25-bed Critical Access Hospital and a long-standing active member of the Sanford Health Network. Clay County serves a population that has almost twice the number of individuals living below poverty as the state average, as well as a lower than average median and household income. The oncology services provided in Vermillion, South Dakota are limited. Sanford Vermillion has an infusion center, but no direct oncology supervision by an oncology provider. Patients have to travel a minimum of 25 miles to find the nearest provider. Representing Sanford Vermillion Medical Center:

- Rachel Olson, MPA, Director of Clinic Operations; Co-Project Director
- Jeff Berens, RN, BSN, MS, Director of Nursing
- Janice McGuire, RN, Team Leader; Project Clinical Nurse Lead
- Paige Fornia, PharmD, Pharmacy Manager

Douglas County Memorial Hospital in Douglas County, (rural) South Dakota. Douglas County Memorial Hospital serves the cities of Armour, Corsica, Stickney and Wagner, which are the physical locations of the hospital's rural health clinics. Douglas County Memorial Hospital was selected to participate due to their location and the fact they currently do not offer oncology services. Douglas County Memorial Hospital had approached Sanford Health about the possibility of providing telehealth oncology services at their facility after the loss of their oncology outreach service. With that change, their patients had to travel long distances and many times in inclement weather conditions for their continued oncology care. The hospital's governing board identified this gap in services as a major priority, leading to a hospital renovation project. The renovation added a new chemo room, which was set up to meet 797 standards. With the help of the other partners in the grant, Douglas County Memorial Hospital was able to provide this valuable and needed service to their community. Representing Douglas County Memorial Hospital:

- Peggy Dufek, RN, Telehealth Project Director
- Heath Brower, Rural Site Administrator

Sanford Hematology and Oncology in Sioux Falls is a hospital-based program that provides hematology/oncology care to a 4-state region. The clinic had implemented telehealth office visits. Adding telehealth coverage for rural infusion centers was a natural expansion of the oncology program. Representing Sanford Health, Sioux Falls:

- Susan Halbritter, CNP, APN-BC, AOCN, Sanford Hematology and Oncology; Co-Project Director
- Becky Heisinger, Lead Grant Administrator, Office of Grants, Sanford Health
- Cassie McClure, RN, OCN, Clinical Manager, Sanford Hematology and Oncology
- Jenna Kaiser, RN, OCN, Nurse Navigator, Sanford Hematology and Oncology; Project Clinical Nurse Lead
- Kelly Carlson, MHA, BSN, Clinical Director, Sanford Hematology and Oncology
- Joe Weber, PharmD, BCOP, Pharmacy Coordinator, Sanford Hematology and Oncology
- Linda Reisdorfer, RN, CRC, Sanford Health Research
- Lora Black, RN, MPH, Senior Director, Sanford Health Research
- Sharon Hunt, MBA, CMPE, Executive Director of Cancer, Sioux Falls
- Jonathan Bleeker, MD, Hematologist/Oncologist, Sanford Hematology and Oncology

Sanford Telehealth Services (Sanford One Connect) played the critical role in supporting the consortium through information technology (IT) management. Sanford One Connect provided strategic guidance, day-to-day operational management across the system, IT resources and on-site training for oncology and other personal at end-user facilities. Representing Sanford One Connect:

- Susan Berry, Enterprise Director Telemedicine Services
- Kellyna Warnke, MHA, BSN, RN, Senior Clinical Informatics Analyst

Sanford Worthington Medical Center in Nobles County, (rural) Minnesota. Sanford Worthington is a 48-bed acute care hospital in southwestern Minnesota. It serves a large rural, agricultural population with very limited access to oncologists and oncology services. Sanford Worthington operates its own infusion center serving over 1200 patients annually. Representing Sanford Worthington Medical Center:

- Lynn Dierks, RN, Nursing Inpatient Manager

- Chelsey Fricke, RN, OCN, Infusion Nurse; Project Clinical Nurse Co-Lead
- Jamie Cranston, RN, OCN, Infusion Nurse; Project Clinical Nurse Co-Lead
- Jennifer Weg, MS, RN, Executive Director

Part V: Outcomes

A. Outcomes and Evaluation Findings

The expected outcomes of this project were to increase access to quality oncology care, expand specialist support and increase participation in clinical trials for rural residents. The project went live Year 2 of the 3-year grant. Combined data from all sites after the first 12 months of operation, revealed the tertiary care infusion center transitioned 16 patients to a site closer to home as compared to six in the baseline data. This translated into over 93 infusion visits as compared to 65 prior to implementation. Preliminary data suggest that collectively, patients and their families saved over 1122 miles, 151 hours in travel time and \$10,548 in cost savings by receiving treatment closer to home. CNP oversight along with rural infusion nurse training increased the comfort level of the prescribing oncologists. The rural infusion centers safely administered complex treatments that were previously restricted to the tertiary care setting. There were no medication variances, sentinel events or hospitalizations related to infusion reactions in the rural settings the first 12-months. Patient, physician, CNP and nursing satisfaction survey scores were high.

Grant dollars purchased two telemedicine stations for Sanford Hematology and Oncology providers. With increased access and extra training, telemedicine gained popularity among the oncologists and CNPs. Telemedicine clinic visits to both grant and non-grant facilities increased from 38 in the 12-months prior to the grant to 102 by the end of the first year of operation. Based on this data, management budgeted clinic dollars and purchased additional telemedicine equipment to place in each physician office.

Prior to the Virtual Infusion Project, access and use of the electronic treatment plans were inconsistent throughout the Sanford Network. Beacon, the software embedded in the EMR, contains the oncology treatment plans. Whereas the infusion nurses in the tertiary cancer center actively work within the software, the nurses in the rural infusion centers were limited to a “read only” status, creating extra steps in their workflow and diminishing the effectiveness of EMR. In line with the goal of a seamless approach to care, the project team asked for and received approval to change the security for consortium members. The rural infusion nurses in Virtual Infusion became part of a pilot project measuring the impact of the expanded Beacon access. The pilot's data will determine future security clearance for all rural infusion nurses in the Sanford Network.

The project team developed a Community Awareness Campaign to 1) inform patients in the targeted population to speak to their physician about receiving oncology treatment closer to home and 2) shift the perception that oncology care not only could be received at a large tertiary facility, but at a rural infusion center as well. The Community Awareness Campaign consisted of print ads in local newspapers, direct mailings/flyers, reminder cards, radio spots, website updates and a presence on Facebook.

Sanford Worthington Medical Center, Worthington MN, joined the consortium as the third rural infusion site in the project at the end of year 2. This was well ahead of the projected timeline. Worthington has a diverse population of 12,000, with 34% non-White ethnicity, largely uninsured, non-English-speaking and primarily Hispanic. Many are illiterate even in Spanish. The use of translator services is a significant need so that oncology providers and their staff can effectively communicate with patients and families. Worthington has a pool of professional translators in the community that they draw from. Additionally, they have a contract with an online translator service as their backup. Oncology needs frequently exceeded the availability of a personal interpreter, both in the oncology clinic and in the infusion center and increased their dependence on the online translator service. Wi-Fi access for oncology was available in a limited area. Additional wireless access points, purchased with grant dollars, expanded Wi-Fi connectivity, assisting in the transmission of translator services.

The oncologists selected Sanford Vermillion as the next site for outreach expansion. Vermillion's involvement in the Virtual Infusion Project was one of the deciding factors. As Vermillion started administering complex anti-cancer therapies, administration time lengthen. The long timeframe tied up chair availability, limiting patient access. An additional chair, purchased with grant dollars, increased scheduling flexibility. Telemedicine equipment, purchased and installed, accommodates the anticipated increase in volumes in the clinic and in the infusion center at Vermillion.

Several treatment plans for patients with colorectal and pancreatic cancers require medication delivery as a continuous infusion via a portable infusion pump. Nursing coverage needs to be available 24/7 for patients with continuous infusion pumps to troubleshoot problems. Rural sites that did not have coverage, could not initiate treatment, requiring patients to travel to the tertiary care center. A vendor has been identified and both Worthington and Vermillion sites are in the process of developing a contract which will address this problem and establish a workflow to provide 24/7 coverage for their patients.

Sanford Research identified Compass as clinical trial that might be a good starting point towards transferring research into the rural sites. The research team has worked with Sanford Vermillion and Sanford Worthington to complete the required regulatory work. Both sites have identified and trained research coordinators and are open for enrollment. To date, two patients have been enrolled in the Compass clinical trial through a rural site.

In 2017, there was a significant increase in the number of nurses sitting for and passing the oncology certification exam. A total of ten registered nurses and three CNPs in the consortium were certified. Three of the nurses who obtained certification were infusion nurses from a rural consortium site.

B. Recognition

Local:

- Vermillion Rotary Club presentation, September 13, 2016
- Radio (KTWB, KMIT, KISD, KVHT, WNAX) reached 348,000
- Print ad (Armour Chronical, Vermillion Plain Talk and Broadcaster Press, The Globe) reached 137,699.
- Press releases
- Digital (sanfordcancercenter.org) 152 page views
- Facebook 21,233

Regional:

- Poster presentation at Sanford Nursing Research and Evidence Based Conference, October 6, 2017, Sioux Falls, SD
- Presentation at South Dakota State University Telehealth Symposium 2018, April 9, 2018, Sioux Falls, SD
- Poster presentation at Sanford Performance Improvement Symposium 2018: "Shaping the Future", April 12, 2018, Sioux Falls, SD

National:

- Poster presentation at JADPRO Live at APSHO 2017, November 2-5, 2017, Houston, Texas
- Nominated for ACCC (Association of Community Cancer Centers) Innovator Award, February 2018
- Presented at Community-Based Division All-Programs Meeting, February 27-March 1, 2018, Washington D.C.
- Self-nominated for Rural Health Community Champions
- Asked to speak at the 2018 National Oncology Conference, sponsored by the Association of Community Cancer Centers (ACCC), October 17-19 in Phoenix, AZ

Part VI: Challenges & Innovative Solutions

Inconsistent use of Beacon: Beacon is software embedded in EPIC that contains the oncology treatment plan. Sanford Health Network had inconsistent security access throughout the system. The consortium addressed the inconsistencies and standardized workflows to ensure a seamless care delivery model. The work of the consortium led to participation in a pilot program within Sanford Health. Sanford Health will use the results of the project to determine future security clearance for rural infusion nurses throughout the system.

Inconsistent pharmacy practices between consortium sites: Standardizing nursing workflows in Beacon lead to inconsistent pharmacy workflows. Obtaining nursing security access led to standardized pharmacy policies and procedures for order verification, preparation and dispensing of anti-cancer medications.

Inconsistent policies/procedures and workflows: The consortium members spent the first year of the grant reviewing policies, procedures and workflows among the various sites. Other than small nuances, these were standardized. The team's goal was to create a seamless care-delivery model.

Patient concern that care is unequal to the tertiary care center: Although the majority of patients are eager to receive their care closer to home, there are always a few that are concerned that the care might be substandard in a smaller center. The consortium addressed this concern in the Community Awareness Campaign (marketing plan). The verbiage *"High-quality care from an expert team is available at your local infusion center. Infusions are safely provided by oncology trained nurses who receive virtual oversight by an expert oncology provider"* appeared on all printed materials.

Participation in clinical trials: Sanford Hematology and Oncology was committed to increasing the number of patients enrolled in clinical trials. The consortium identified early in the project, that clinical research requirements were a barrier preventing the transition of a patient's anti-cancer therapies into the rural infusion centers. Members of Sanford Research joined the consortium looking for opportunities to overcome those barriers in order to move therapies into the rural areas.

Construction: Implementation of The Virtual Infusion Project coincided with construction/remodeling at both the Sioux Falls and Vermillion infusion sites. Although construction did not hamper the May 1, 2016 go-live date, it did pose challenges. Those challenges eventually evolved into opportunities. Telemedicine equipment temporarily placed on the desks of two physicians adjacent to the infusion center during construction, led to their use for telemedicine office visits. Telehealth become so popular in the clinic that the Sioux Falls management team, at the request of the providers, purchased equipment for the remaining physician offices as well two additional units for the CNPs. The core team elected to track the number of telemedicine office visits and found that they increased from 38 to 102 in the first 12 months.

Low patient volumes at the Armour site: One of the lessons learned from adapting a promising practice in the rural setting is the struggle to identifying patients from those areas. This was especially difficult for the Armour site. Armour is the smallest of the consortium's rural sites and serves a sparsely populated area. Despite the oncologists' willingness to transition patients to Armour, they were unfamiliar with the rural area and thus did not offer the services. The consortium created the Community Awareness Campaign (marketing plan) with the idea that if patient awareness was increased, they would ask for the service.

Part VII: Sustainability

A. Structure

Sanford Hematology and Oncology physicians have endorsed the Virtual Infusion Project. The clinic plans to continue to offer this service to the current members of the consortium. CNP coverage will continue with plans to expand it to other rural infusion centers within the Sanford Network. However, the tertiary care center cannot continue to provide expert coverage free of charge. The leadership team is currently putting together a business plan that incorporates a monthly subscription fee based on the size and volume of the rural infusion center. Consortium members may or may not opt to continue virtual infusion services. If a consortium member opts out of having CNP oversight, Sanford Hematology and Oncology may elect to discontinue transitioning complex therapies to that site.

The success of the Virtual Infusion Project revolved around seamless care-delivery system. Standardized policies and procedures, quality telemedicine equipment and fully training staff were paramount to the project's success. Key components that will continue include:

- Quality telemedicine equipment will be required for future sites. Sanford IT will recommend and approve all purchases.
- Future expansion sites will need to agree to adopt established infusion policies and procedures required by the tertiary care center to meet program accreditation and certification standards.
- Expansion sites will adopt the standardized workflows. Infusion nurses in expansion sites will have the same security clearance to work in Beacon (oncology software embedded in the EMR).
- Expansion sites will agree to have their staff attend the core training developed in this project.
- Expansion sites will have representation on the oncology clinical leadership team that will continue to meet at least quarterly.
- Report and monitor variances for quality improvement opportunities.
- Sanford Research will continue to look for opportunities to transition clinical trials in rural infusion centers.

Administration/management at each rural health care site oversees their rural infusion center. The administration and management team, accountable to their stakeholders, have to balance finances with program development. They will have to weigh the potential advantages their facility may gain through virtual infusion services against the cost and requirements of the service.

B. On-going Projects and Activities/Services To Be Provided

i) Will all, some or none of the elements of the program be sustainable once Outreach grant funding has ended? Please check the appropriate selection.

- All elements of the program will be sustained
- Some parts of the program will be sustained
- None of the elements of the program will be sustained (i.e. the program will completely end after the grant period)

- ii) Identify the projects and activities that will be sustained beyond Outreach grant period.
- Quality telemedicine equipment will be required for future sites. Sanford IT will recommend and approve all purchases. Future expansion sites will need to agree to adopt established infusion policies and procedures required by the tertiary care center to meet program accreditation and certification standards.
 - Expansion sites will adopt the standardized workflows. Infusion nurses in expansion sites will have the same security clearance to work in Beacon (oncology software embedded in the EMR).
 - Expansion sites will agree to have their staff attend the core training developed in this project.
 - Expansion sites will have representation on the oncology clinical leadership team that will continue to meet at least quarterly.
 - Report and monitor variances for quality improvement opportunities.
 - Sanford Research will continue to look for opportunities to transition clinical trials in rural infusion centers.

C. Sustained Impact

The Virtual Infusion Project has had far-reaching effects. Three rural sites now have state-of-the-art telemedicine equipment dedicated to oncology and have staff that have been trained to use it. Not only have nurses participated in the required oncology training, several went on to study and successfully obtain certification in oncology nursing. They are well prepared to provide care for patients requiring complex anti-cancer therapies. Thus, Virtual Infusion has expanded oncology expertise into the rural setting at a time when there is a shortage of oncology nurses.

The Virtual Infusion Project expanded nursing's security access in Beacon. Beacon, software within the electronic medical record, contains the patients' treatment plan. Unlike their counterparts in the tertiary infusion center, the rural infusion nurses were limited to a "read only" access, which omitted their input into the verification process. Per oncology standards there are three steps of verification: 1) the provider reviews the treatment plan and signs the orders 2) the nurse assesses the patient for readiness of treatment, reviews the orders and if parameters are met, releases the orders to pharmacy and 3) pharmacy reviews and verifies the orders before the drug is admixed. Leaving nursing out of the process omitted a safety check. It also led to financial ramifications when nursing, through assessment, identified problems that lead to a cancellation of treatment. The medication has already been prepared and had to be wasted. It took weeks of work, navigating through several layers of administrative authority to obtain security access for consortium members.

The Virtual Infusion Project identified and resolved several barriers that evolved following implementation. Standardized workflows, policies and procedures ensure a seamless care-delivery model. Worthington enhanced their translation services for the through the purchase of Wi-Fi equipment. Two rural sites met the regulatory requirements of clinical trials and successfully enrolled patients.

The oncologists at Sanford Hematology and Oncology have been pleased with the overall results of the project. As a result, they have been eager to transition patient care to the rural setting whenever possible, to ease the travel burden and time for patients and their families. Volumes increased in the rural infusion centers involved in the project, as has the complexity of the treatments administered. Patients and their families have saved travel time and costs associated with receiving treatment closer to home. The oncologists have not only increased their use of telemedicine for office visits, they have also increased their outreach presence in rural sites. Virtual Infusion has become an important component of Sanford's Oncology Program.

Part VIII: Implications for Other Communities

The American Society of Clinical Oncology (ASCO) and the Oncology Nursing Society (ONS) identified research opportunities in the ever-changing world of oncology. Both organizations suggested that oncology programs need to design and test cost-efficient patient care models to provide quality oncology care, improving patient care outcomes, all while maintaining accountability for the care delivered. The Virtual Infusion Project is an innovative care deliver model that met their challenge.

The Virtual Infusion Project aligned with oncology and telemedicine best practices to provide a seamless model of care. Standardized evidence-based policies and procedures guided care delivery amongst the consortium members. The tertiary infusion center in Sioux Falls, accredited by the Commission on Cancer (CoC) and certified by the Quality Oncology Practice Initiative (QOPI), provided expert oncology support for the rural infusion sites.

Sanford Hematology and Oncology and the rural sites that participated in the project found Virtual Infusion to be an effective model of care delivery. The project demonstrated that an oncology CNP based in a tertiary care center could safely provide direct oversight for

patients receiving oncology care in a rural infusion center. The oncologists, confident in the level of care provided in the rural infusion centers, willingly transitioned patients and complex anti-cancer therapies to a site closer to home.

Part IX: Success, Increased Capacity, and Contributions to Change

A. Defining Success

- i) How do you define "success" for your grant program? Please check the appropriate selection(s). You may choose more than one option. If other, please describe.
- Access to a new or expanded health service
 - Increased number of people receiving direct services
 - Improved quality of health services
 - Operational efficiencies or reduced costs
 - Integration of process improvement into daily workflow
 - Continuation of program activities after grant funding
 - Continuation of network or consortium after grant funding
 - Health improvement of an individual
 - Health improvement among your program participants
 - Health improvement among your community
 - Enhanced staff capacity, new skills, or education received
 - Improved capacity to adapt to changes in healthcare
- ii) Do you believe that your program has achieved success? If so, how?
- Staff training and standardization of policies and procedures ensured a seamless care delivery mode.
 - CNP oversight of the rural infusion centers increases the comfort level of the prescribing oncologists.
 - Oncologists allowed the transition of complex anti-cancer therapies to rural infusion centers participating in the project.
 - The tertiary care center and rural infusion centers are satisfied with the results of the project and plan to continue Virtual Infusion Services following grant closure.
 - There were no variances, sentinel events or infusion-related hospitalizations in the first 12 months of operation.
 - Overall telemedicine usage has increased at Sanford Hematology and Oncology that further benefits cancer patients in all rural areas throughout the Sanford system.
 - Sanford Research identified a clinical trial that could be implemented in the rural setting. They successfully completed the regulatory work required at Vermillion and Worthington. Both sites are now open for enrollment.

B. Organizational Capacity

How has the federal funding of your grant program increased local capacity at your organization, within your network, and/or in your community? Please check the appropriate selection. If other, please describe.

- Formalized networks or coalition
- Developed new partnerships or relationships
- Enhanced skills, education, or training of workforce
- Enhanced data collection and analysis
- Other: Demonstrated an innovative care-delivery model that safely allowed for patients to receive anti-cancer therapies closer to home.

C. Contributions to Change

Change in individuals' lives, your organization, consortium, or community:

The CNPs in the tertiary infusion center in Sioux Falls have been satisfied that all members of the project are following the same standard approach to care. The CNP covering the infusion center carries a Spectra Link phone. Nurses throughout the infusion center as well as those in the rural setting, call with questions and concerns. An example of a seamless process occurred when CNP answered the phone, discussed a patient care concern with a person who identified herself from the lab, only to discover at the end of the conversation that she had been speaking to the laboratory staff in Vermillion.

A rural patient who typically received all of his treatment in Vermillion had come to Sioux Falls to have imaging studies and a face-to-face office visit with his physician. Since he was already in Sioux Falls, he opted to have his treatment there as well. While receiving treatment, he requested to meet the nurse who had set up all of his treatments in Vermillion, and the CNP who had been managing his infusions along with the Vermillion staff. He told them that he had spent so much time interacting with them that he wanted to put a face to the name. He was appreciative of the efforts of the entire team ~ Sioux Falls and Vermillion ~ that allowed him to receive the majority of his care closer to home.

Virtual Infusion has been a valuable service for rural patients during periods of inclement weather. Recently, South Dakota had a wave of storms move through. A patient who receives treatment in Armour told the infusion staff that had it not been for the Armour site, he would have missed several weeks of treatment due to poor road conditions and closures due to blizzard conditions.

Change in policies, systems, and environment:

The high risk associated with the administration of anti-cancer therapies is of concern nationally as well as at the tertiary care center. For that reason, the physicians at Sanford Hematology and Oncology have a limited list of medicines that they feel can be safely administered off site. The Virtual Infusion Project demonstrated an innovative and creative oncology care-delivery model where an expert oncology provider (CNP) could provide rural infusion oversight through telemedicine, telephone and the electronic medical record. Patients requiring complex anti-cancer therapies safely received treatment closer to home saving both travel time and expense. The success of this model has led to requests for access from other Sanford rural infusion centers. Sanford's management team is developing a business plan for Virtual Infusion Services that incorporate best practices learned over the 3 years of this project as key elements.

Early on, the consortium identified the oncologists' commitment to enroll patients in clinical trials as a potential barrier. Clinical research has stringent regulatory requirements that dictate the setting of patient enrollment and treatment. Nurses from Sanford Research joined the consortium early in the project to look for ways to overcome the barriers. They identified Compass as clinical trial that would be manageable in the rural setting. Sanford Research team initiated the required regulatory work for Sanford Vermillion and Sanford Worthington. Both sites identified research coordinators who completed training. Sanford Worthington opened for enrollment in March 2018; Vermillion in April 2018.

The Beacon security access change made for the rural infusion nurses participating in the grant was of great interest to Sanford Health. These nurses are now participating in a pilot project for the system. Sanford Health will use the data obtained in the pilot project to determine future security clearance for all rural infusion nurses in the Sanford Network.

South Dakota

Organizational Information

Grant Number	D04RH28389
Grantee Organization	University of South Dakota
Organization Type	University
Address	414 E. Clark Street, Vermillion, SD 57069
Grantee organization website	www.usd.edu
Outreach grant project title	Rural Health Care Services Outreach Grant Program
Project Director	Name: Ann Brunick
	Title: Chair
	Phone number: 605-658-5964
	Fax number: 605-677-5638
	Email address: Ann.Brunick@usd.edu
Project Period	2015 – 2018
Funding level for each budget period	May 2015 to April 2016: \$196,922
	May 2016 to April 2017: \$198,358
	May 2017 to April 2018: \$199,012

Consortium Partners

* Indicates those consortium partners who have signed a Memorandum of Understanding/Agreement

Partner Organization	Location (town/county/state)	Organizational Type
Parkston School District*	Parkston, SD (Hutchinson county)	School
Montrose School District*	Montrose, SD (McCook county)	School
Avera Sister James*	Yankton, SD (Yankton county)	Nursing home
Parker School District*	Parker, SD (Turner county)	School
Ethan School District*	Ethan, SD (Davison county)	School
McCook Central School*	McCook, SD (McCook county)	School
Freeman School District*	Freeman, SD (Hutchinson county)	School
Wakonda Heritage Manor*	Wakonda, SD (Clay county)	Nursing home
Canton School District*	Canton, SD (Lincoln county)	School
Sunset Manor*	Irene, SD (Clay county)	Nursing home
Pioneer Memorial Hospital and Health Services*	Viborg, SD (Turner county)	Nursing home
Oakview Terrace*	Freeman, SD (Hutchinson county)	Nursing home

Community Characteristics

A. Area

The Community Outreach Program included 7 rural schools and 6 nursing homes located in Southeastern South Dakota. All locations were in a 100-mile radius of the University of South Dakota campus, which is located in rural Vermillion, SD.

B. Community description

The program's target population is rural low-income, uninsured, Medicaid and Medicare-eligible school-aged and elderly individuals with no dental home, and classified by public health oral health professionals as "high-risk". For the targeted school-based sites, there is significant shortage of dental providers, especially those dentists who take new Medicaid patients. There is no dental school in the state and USD houses the only dental hygiene program in the state. The demographics of South Dakota show that 786,399 residents are living within 75,955 square miles. This makes SD one of the least densely populated states in the

nation. There is an average of 9.9 people per square mile and over half of the state's counties are designated as frontier. Twenty-nine of the state's counties are considered rural and only 3 counties are considered urban. Approximately 31 percent of SD residents live within 200 percent of the federal poverty level compared to 30 percent nationwide. This data represents both the rurality and the economic disparity of the state.

C. Need

These small rural communities require residents to travel great distances for dental care, if they can find a provider who will accept Medicaid payments, while elders/disabled residents in nursing homes often have limited/no ability to travel to dental appointments.

Program Services

A. Evidence-based and/or promising practice model(s)

- 1) Rural Health Information School-based Model that delivers preventive services such as fluoride varnish, dental sealants, and oral health education to school-aged children in a school setting. This model is based off of our program. Dental hygiene students and an instructor travel to rural school districts with portable dental equipment to perform preventive dental services. Referrals to dental homes are made. Improves knowledge of working in rural setting. <http://www.raconline.org/communityhealth/oral-health/2/school-based-model>
- 2) School-Based Dental Sealant Program outlined by Association of State and Territorial Dental Directors, is effective at preventing caries in children and reducing racial, ethnic and economic disparities in the prevalence of dental sealants. Targets vulnerable populations. Our program visits rural schools that have a high number of children receiving free or reduced lunch in rural communities. However, we will see children who have insurance or a higher income as long as their parent signs the permission slip. On the permission slip we explain that this service is meant for children without a dental home or who haven't seen a dentist in 2 years. However, there are many children who sign up who have been to the dentist within this time frame. We try to see all the children who sign up regardless of ability to pay. Many school-based sealant programs also target specific age groups according to eruption patterns of molars. We will see any child in the school regardless of their age. In this model, it is recommended that you do quality assurance within one to two months after sealant placement and to re-screen children within one year of initial sealant placement. We are only at each school between 1-4 days as we travel to multiple schools throughout the academic year, so we do not have the luxury of time to do this. Also, we do not always have permission to see the child again the following year. We do keep track of the number of sealants applied at each school for each child. <https://www.astdd.org/docs/sealant-bpar-update-11-2017-final.pdf>
- 3) Preventing Dental Caries: School-based Sealant Delivery Program promotes dental sealants as outlined by Community Guide. The program increases the identification of caries in children who do not routinely see a dentist and improves access to dental care by referring children in need of further dental care. Sealants are applied in school-based settings generally with low socioeconomic status often based on the percentage of children who receive free or reduced lunch. Some identify particular children based on their caries risk. Our program utilizes portable dental equipment to provide sealants in the school setting. As mentioned above, all children who have a signed permission slip receive services regardless of their income status or caries risk. https://www.thecommunityguide.org/sites/default/files/assets/Oral-Health-Caries-School-based-Sealants_0.pdf
- 4) Comprehensive School-based Program Initiative Model provides services for low-income children by providing oral health education, dental screenings and referrals, fluoride varnish applications, dental sealants, examinations, x-rays, cleanings and restorations. Our program did not utilize the exam and restoration as we did not have a dentist with us at the schools. <https://innovations.ahrq.gov/profiles/comprehensive-school-based-program-enhances-access-oral-health-education-prevention-and>
- 5) Elder Smiles provides services to individuals living in nursing homes. Dental services include dental cleanings, exams, fluoride varnish applications, denture/partial services, dental restorations, x-rays, periodontal therapy and oral health education. Our program did not do periodontal therapy as most of the residents are in long-term care. https://oralhealth.acl.gov/sites/default/files/uploads/docs/Elder_Smiles.pdf

B. Description of Activities

In the school setting, dental hygiene students and a hygiene instructor perform oral screenings, fluoride varnish applications, oral health education, oral cancer screenings, caries risk assessments, sealants, cleanings and x-rays on children who are low-income, uninsured/Medicaid, or have no dental home. From these services, referrals are made to find a dental home. Schools are typically visited 2-4 days a week depending on the number of children signed up to participate. Each week to two weeks, a new school is visited. Due to the rurality of the state, some schools traveled to are an hour and a half away there and back. Our equipment is portable and needs to be brought in and out of each location. Our time is limited to the school day; set up begins around the

beginning of the school day and concludes at the end of the school day. We also work around their lunch schedules and other activities.

In the nursing homes, dental hygiene students, a participating dentist and a hygiene instructor perform oral screenings, exams, fluoride application, desensitizing medicaments, oral health education, oral cancer screenings, caries risk assessments, tooth brushing for patients who are unable or inadequate, cleanings, x-rays, silver diamine fluoride applications, restorations, and partial/denture work. The nursing homes are typically visited one day per week throughout the academic year. Equipment is set up and taken down each day we are at the nursing home.

C. Role of Consortium Partners

In the school setting, consortium partners are responsible for sending out permission slips to parents/guardians and collecting them from the students. Consortium partners here have been asked to make copies and help complete necessary paperwork with the parents. They are also responsible for setting aside an area and for the mobile dental equipment and days to provide services. Some consortium partners have assisted in transportation of their students to a dental home following our referrals. Consortium partners are asked to locate funding opportunities to help further fund the program.

In the nursing homes, consortium partners help organize dates and locations for the portable dental equipment to operate. Consortium partners help send out permission slips to Powers of Attorney and other responsible parties. Partners are asked to provide patient information via a Facesheet and to provide the resident's medical history. They are also asked to assist with lifting, locating and transporting the residents to the treatment area. If needed, they have to request medications from physicians and dispense antibiotic premed for those residents requiring a premed before certain dental appointments. Consortium partners are asked to locate funding opportunities to help further fund the program in these locations as well.

The Consortium members are extremely vital in the success of the program. They are the communication link between USD and the patients. Without them, our program would not be successful. We have worked hard to build good working relationships with all of our Consortium members.

Outcomes

A. Outcomes and Evaluation Findings

In the 2015-2016 school year, our program provided services worth over \$56,000. There were 392 children seen, 196 of these were uninsured and 89 were on Medicaid. Of the 392 children seen, 79 had never seen a dentist and 48 had not seen a dentist in more than three years; 153 had suspicious areas. Suspicious areas include areas of decay, abscessed teeth, lesions that may be cancerous, broken teeth, or other areas that may need further evaluation from a dentist or other medical provider.

In the 2016-2017 school year, our program provided services worth over \$70,000. There were 460 children seen, 160 had no insurance and 111 were on Medicaid. Of the 460 children seen, 102 had never seen a dentist and 40 had not seen a dentist in more than three years; 158 had suspicious areas. Over \$9,000 worth of services were provided in the nursing homes. There were 59 residents seen; 33 were uninsured and 25 had Medicaid. There were 36 residents who had not seen a dentist in more than 3 years; 27 residents had suspicious areas. Suspicious areas include areas of decay, abscessed teeth, lesions that may be cancerous, broken teeth, or other areas that may need further evaluation from a dentist or other medical provider.

So far, in the 2017-2018 school year, our program provided services worth over \$84,000. There were 540 total patients who were provided direct care services (37 of these were nursing home residents, 503 were school-age children). Of the 540 patients seen, 183 were uninsured and 111 were on Medicaid. Of the total patients seen, 109 had never been to the dentist and 69 had not seen a dentist in more than 3 years; 236 had suspicious areas. Suspicious areas include areas of decay, abscessed teeth, lesions that may be cancerous, broken teeth, or other areas that may need further evaluation from a dentist or other medical provider.

B. Recognition

There were no formal special acknowledgements or recognition regarding this grant; however, several community members and other professionals have extended their praise for our efforts.

Challenges & Innovative Solutions

One of the challenges in the development of the Outreach program was finding a dentist who would work with us on rotations. Through networking efforts we were able to find a dentist to travel with us. Once this was established, we were able to provide additional

services to what we were doing initially. The benefit of having a dentist work with patients and dental hygiene students is profound. Having a dentist working with us is important because collaborative dental hygiene practice is relatively new in our state and it shows other dentists in the area that they could do something like this also in order to provide access to care to vulnerable populations. Currently in SD, there are not many dentists who are willing to collaborate with hygienists. However, after going to one of the nursing homes in the beginning of this grant, one dentist decided that he wanted to offer his services at that nursing home and have one of his hygienists be his collaborating partner. This allowed us to spend more time in other nursing homes that did not have their own dental provider. The relationship between the hygienist and the dentist is important in order to promote positive changes in the dental field. It is also another great opportunity for the dental hygiene students to observe dental procedures being performed and help assist the dentist; this helps make the dental hygiene students be better-rounded.

Some dentists who reside in the communities we planned to serve or did serve did not appreciate us being in their community. Those dentists saw us as competitors rather than working as part of a team. Because of that issue, some schools would not participate or later refused to participate again. Communication with the schools and dentists where we did provide care was established in order to work collaboratively.

Finding a dental home for patients in multiple different areas and dentists who would accept new patients with no insurance or Medicaid was also an issue. We provided patients with information to the USD Falls clinic or other dental clinics who did accept Medicaid and/or had a sliding fee scale. However, many patients were not able to travel the distances to these clinics. One school offered to transport children to the dental office. This was done until the necessary work was completed. Many phone calls were made with families and dental offices in order to accommodate the patient's needs.

Sustainability

A. Structure

There are currently 9 outreach Consortium members. Of these 9 members, 6 were involved with the sustainability planning. Each of these 6 members were given a summary of the value of services provided to the children and elders in their community and the value of the services provided to the program as a whole. Prior to this discussion, many members showed little understanding as to the value of the services this outreach provided free of charge to the children and elders. The School Administrators and Nursing Home Administrators were also not aware of the extent of dental disease among their community.

The threat of ending this program because of the end of the grant period sparked concern among Consortium members. The Consortium members pledged to seek financial support within their communities; many stated they would utilize the information given about the value of the services in order to show how important this program is to their community. Any assistance toward this project sustainability would be appreciated; however, it is not likely these funds will cover all the program expenses. In hindsight, community sponsorship and financial commitment should have been a conversation with partners annually from the beginning of the project instead of just at the end. This would have provided a better base from which to continue the program following the grant period.

Additional funding is necessary in order to continue this program. Many services offered were free or low cost to the patients; this means that the amounts received were minimal. We are currently looking at how to adjust the budget to make this program last at least another year.

B. On-going Projects and Activities/Services To Be Provided

i) Will all, some or none of the elements of the program be sustainable once Outreach grant funding has ended? Please check the appropriate selection.

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained (i.e. the program will completely end after the grant period)

i) Identify the projects and activities that will be sustained beyond Outreach grant period.

We are currently planning to continue serving the current schools with the same services and adding additional schools in order to increase funds received. We are looking at changing the contract of the school-based coordinator to a 9-month contract versus a 10-month contract as well as changing their status from full-time to 4 days a week. We also are looking into the dentist's salary and seeing what modifications can be made in order to keep the dentist on staff without completely depleting funds. We will continue to seek out further grant funding as well as sponsorships and donations.

C. Sustained Impact

The largest impact made on the communities served through this outreach is oral health awareness. Each Consortium member has been continuously communicated with as well as given an assessment summary of services provided plus the number of children and elders with unmet dental needs. The number of children and elders with unmet dental needs that were referred to a dental home accompanied with the knowledge regarding the importance of oral health stands out as the most significant impact that this program has made on these rural communities. In many cases, this program served as a partial solution to an ongoing and insurmountable problem.

By providing oral health education to children and elders, they become aware of the importance of good home care practices. Those who have never been seen by a dental professional and/or who have not been taught the proper oral hygiene, now have the skills to improve their oral health. After each appointment, the parent, guardian, or Power of Attorney was contacted to explain the results of the dental screening. In many cases, this personal contact and information has led them to take their family member to a dentist for follow-up care.

The health of individuals is the most invaluable sustained impact that this program has made in these many rural South Dakota communities. The people in these communities are now aware of the importance of oral health as it relates to overall health. This impact is undeniably significant. Without HRSA funding, this program would not have begun. The purchase of portable equipment with HRSA funds is a lasting asset to the outreach program. Sustaining the program is easier because the major expense of equipment has been assumed by grant funds. This equipment acquisition has been a positive factor associated with the program and will be used to serve the communities in the future.

This community-based outreach model was the first in the State of South Dakota; the State's dental and dental hygiene associations, the SD Oral Health Coalition and other vested professionals look positively on its success. Currently, dental hygienists are limited in their scope of practice in this state. Many rural areas and schools would benefit from dental hygiene services such as those provided with this program, but there are many restrictions preventing this from becoming a routine setting for dental hygienists. It is hopeful that this outreach will serve as an example of the importance of allowing collaborative practice dental hygienists to provide outreach to rural communities not currently being served by a dentist.

Implications for Other Communities

Perhaps the biggest step with helping others implement a similar program would be to look at our successes and failures without having to completely reinvent the wheel. It would also be important for others to see or utilize some of the portable dental equipment as this is not always readily available in private practice.

Our program has utilized surveys through the University of South Dakota Government Research Bureau. This data could be viewed by others considering this to view what the community values in terms of the program. The number of patients seen compared to those with possible areas of untreated decay would show the need for more programs like this. The evidence-based practice models we used could be shared with others in order to help promote the best care in this type of setting.

Part IX: Success, Increased Capacity, and Contributions to Change

A. Defining Success

- i) How do you define "success" for your grant program? Please check the appropriate selection(s). You may choose more than one option. If other, please describe.
- Access to a new or expanded health service
 - Increased number of people receiving direct services
 - Improved quality of health services
 - Operational efficiencies or reduced costs
 - Integration of process improvement into daily workflow
 - Continuation of program activities after grant funding
 - Continuation of network or consortium after grant funding
 - Health improvement of an individual
 - Health improvement among your program participants

- Health improvement among your community
- Enhanced staff capacity, new skills, or education received
- Improved capacity to adapt to changes in healthcare
- Other: Sustainability

ii) Do you believe that your program has achieved success? If so, how?

We provided care to over 1,000 people that may have not received care otherwise. We provided an alternative delivery of care for many individuals. Several parents indicated that their child had a much better "appointment" while with us at the school because the school is where they feel safe. In the nursing home, many residents are unable to travel and have to tolerate unnecessary pain. Because we are there, many residents are now able to eat food and even smile! In terms of continuity, we have succeeded. Many area schools cannot wait for us to return. We also have new schools and other communities interested in having our services. These communities include hospitals, senior citizens centers and Veterans. We have not been successful with sustainability. Having better follow-up care to ensure completion of dental needs is another area in which we could improve.

Our program helped improve the PEW report ratings for children who have received sealants. There is still much needed work in this area, but without this program, it is possible that the PEW report for SD would have remained unchanged.

B. Organizational Capacity

How has the federal funding of your grant program increased local capacity at your organization, within your network, and/or in your community? Please check the appropriate selection. If other, please describe.

- Formalized networks or coalition
- Developed new partnerships or relationships
- Enhanced skills, education, or training of workforce
- Enhanced data collection and analysis

C. Contributions to Change

i) Please provide a story or two about how your program made a difference in individuals' lives, your organization or network, or your community.

As mentioned early in this report, at one of the schools we provided services at, 2 adolescent girls (sisters) were seen. After the screening, it was noted that both girls had large areas of decay on almost every permanent tooth in their mouths. Some of the decay was so bad that losing their front teeth was likely within a year or two if not treated. Both patients had Medicaid and there was a dentist in the same town as the school. The dental office was called and asked if they would make an exception to see these girls with Medicaid as they had urgent dental needs. However, the parents were not willing to take them to the dental office. With the parent's permission, we worked it out with the consortium partners at the school to provide transportation to the dental office during school hours in order for the girls to receive care. The school provided the transportation for the first 3 appointments. After that, the parents started to notice the difference in the girls. The parents took them to the dentist after that until their dental work was completed. Not only did this change the appearance of the teeth for these girls, it changed their confidence in themselves. It also established a good dental home!

Another important contribution that our program made was that it improved the community's value of their oral health. After receiving surveys back from the schools, 70.10% of those who responded said that their child's oral health was very important, 28.87% considered it important and only 1.03% considered it moderately important. In the nursing home setting 58.33% felt the oral health of their loved one was very important and 41.67 felt it was important. Also important to note from the surveys is the percentage of respondents who said their loved one would not have received any dental care if not for our program. In the schools, 72.63% indicated that if not for this service, their child would not have received this treatment for 6 months, 15.79% for 1 year, 6.32% for 2 years and 5.26% said they would not have received this service at all. In the nursing homes, 27.27% said that their loved one would not have received this service for 6 months, 36.36% for 1 year, 9.09% for 2 years and 27.27% said they would not have received this service at all! Almost all respondents said they would have their loved one participate again; 98.98% of the school respondents and 100% of the nursing home respondents.

The last important contribution to change was that of the dental hygiene students. This program and clinical rotation is one that allows them to see the children and adolescents needed to meet accreditation. If not for this program, it is possible that our dental hygiene students wouldn't meet the minimum requirements for accreditation as most of the other rotations do not have many children or adolescents. Working with this population in this setting has improved their communication skills with

both children and their parents. Dental hygiene students were surveyed before starting this program and at the end of the program. Many students indicated in the pre-survey that they didn't think that they would like working with children or that they did not have any experience working with children. However, at the end of the program, all students reported that they were much more comfortable working with children. One student wrote that "this program is crucial to the variety of our scope of practice. Without this program, I'm not sure I would've had any experience with children". Another student wrote that this experience was "better than expected". Another student wrote that this experience taught them to work together and another said that it "opened my eyes to a lot of public health needs right here in our state".

- ii) Please provide an example of how your grant program may have directly or indirectly contributed to policy changes, systems changes, or environmental changes.

There are no known formal policy changes; however, some schools initially reluctant to allow children out of the classroom now realize how beneficial our involvement in their community really is.

Texas

Part I: Organizational Information

Grant Number	D04RH28426
Grantee Organization	Plainview Foundation for Rural Health Advancement
Organization Type	Non-profit foundation
Address	705 Second Street, P.O. Box 727 Hart, TX 79043
Grantee organization website	
Outreach grant project title	Rural HealthCare Services Outreach Grant
Project Director	Name: Retta Knox
	Title: Executive Director
	Phone number: 806-937-0014
	Fax number: 806-937-0015
	Email address: retta.knox@region16.net
Project Period	2015 – 2018
Funding level for each budget period	May 2015 to April 2016: \$196,165
	May 2016 to April 2017: \$196,165
	May 2017 to April 2018: \$196,165

Part II: Consortium Partners

* Indicates consortium partners who signed a Memorandum of Understanding/Agreement

Partner Organization	Location (town/county/state)	Organizational Type
Hart ISD	Hart, Castro, Texas	Public School
Pope Dental	Lubbock, Lubbock, Texas	Private dental group
Nelson Counseling	Dimmitt, Castro, Texas	Private counseling agency
Plainview Foundation for Rural Health Advancement	Hart, Castro, Texas Earth, Lamb, Texas Turkey, Hall, Texas	Non-profit foundation

Part III: Community Characteristics

A. Area

Clinics located at: Hart, Earth, and Turkey, Texas

Targeted Counties served: Castro, Lamb, Hall, Briscoe, Swisher, and Parmer

Additional counties with clients served: Deaf Smith, Hale, Bailey, Hockley, Randall, Donnelley, Gaines, Floyd, Potter, Dallam, Hutchinson, Scurry and Lubbock

B. Community description

The communities served by the Outreach project are all small rural farming and ranching communities with declining population and economy, with no or very limited medical resources. Geographically the target counties cover 5500 square miles in the Texas Panhandle, encompassing 28 small communities, ranging in size from >100 to 6274. Persons per square mile, range 1.8 to 13.8 average 8.15, demonstrates the extreme rural nature of the target area. The project served the working poor with all counties rate of persons below poverty being higher than national and state rates. The fact that the number of individuals that did not finish High School is substantially above Texas rates is a major factor in provision of health care, especially when managing chronic diseases. The uninsured rates for the targeted area is markedly above state and national rates. The insured population are usually farm families with individual insurance policies with a very high deductible to make the plan affordable. So, the family pays the majority of their health cost out of pocket. Most of the farm/ranch related employers are small business that do not offer employee insurance and if they do it only covers the employee not the rest of the family. The other factor is many of the jobs in the area are seasonal and without insurance benefits. The population is significantly above national and state percentage for minority populations, especially Hispanic.

C. Need

The project was designed to provide dental and mental health services to an underserved and underfunded population. The targeted counties are located in health professional shortage areas/medically underserved population areas. Castro, Hall, Lamb, Briscoe, Parmer, and Swisher counties of the Texas Panhandle are all designated MUA and four are designated HPSA for primary care, dental and mental health, with two HPSA for primary care and mental health. Unmet health needs are directly related to the lack of providers in the area and physical distance to access the existing providers. The primary dental care providers are a total of four dentist with three counties having none, dental hygienist total twelve with two counties zero. There are no psychiatrists in the target area. The only means of obtaining psychiatrist care is accessing on of the Mental Health and Mental Retardation Centers, which are desperately overbooked and understaffed. The six counties are home to five Licensed Professional Counselors with three counties having none. None of the counties have any public transportation. The three communities with Outreach clinics have no other medical, dental, or mental health provider access. These three communities do not have a hospital or pharmacy, two of them house volunteer ambulance services. The two counties housing the clinics do not have a hometown dentist.

The Outreach project is serving the working poor. Persons living below poverty is above national and state percentages (US 15%, TX 17.4%, Targeted counties range 18.9-28.5%) The uninsured rates for the targeted rates for the targeted area is markedly above state and national rates. (US 15%, TX 26%, target counties average 32.3%) The population is significantly above national and state percentage for minority populations, especially Hispanic. Language other than English spoken is significantly above national and state rates. (US 20.5%, TX 34.6% Targeted counties range 20-49.9%)

Part IV: Program Services

A. Evidence-based and/or promising practice model(s)

Our dental service project adapted three models into one to address our setting and need. All three are presented in Rural Assistance Center Oral Health Toolkit. They are School-Based Model, Dental Home Model, and Oral Health Primary Care Integration Model. The primary model adopted is School-Based because the clinic is located on a school campus, but the wide range of ages seen, and the wide range of services offered support the community dental clinic models. Dental home and community dental clinic models address comprehensive services, while school-based and integration focuses on prevention and education. The dental home model of care is a comprehensive approach to improving oral health access for vulnerable populations by providing a regular source of care. Our program emphasizes regular source of care with a very strong preventive and educational component.

Our Mental Health service project adapted Primary Care-Behavior Health Integration Reverse Co-Location Model. The adaptation to the model has been coordination with a school-based health center and the use of telemedicine to supplement service delivery in remote areas and to increase provider access. The co-location of the mental health services in the primary care clinic has supported this model.

B. Description of Activities

The four areas of goals and activities for our project were: dental services, Mental Health services, coordination of care and efficiency of systems. We have accomplished the majority of the tasks on our purposed work plan. Many of our activities are ongoing and vital to the continuation of the program.

Dental – We are providing direct dental services to clients 3-4 days a week. The targeted population is uninsured or public insured clients, because they have the most limited access to care. We have increased the number of days the dentist is available. We have developed very strong preventive and educational programs. We have not spent as much time and effort on our promotion of the program as anticipated because “word of mouth” has resulted in our schedule being completely full and growing daily. We have spent significant time on developing a referral network, due to the fact that the growth of our adult population resulted in the need for a low-cost avenue for some extended care, as dentures.

Mental Health – The MH program activities purposed have all been accomplished. All activities have led to the following results: We have a regular counselor schedule and a telemedicine counseling schedule. The MH program is now integrated into the primary care. The physicians accept and referred clients to the mental health program. The Mental Health notes are part of the clients’ medical record via the EMR. Our MH program routinely receives referrals from area schools, the special education cooperative, and from the area hospital. The counselor is conducting Telemed consults smoothly with no technical issues. The program has become an accepted part of the area care community.

Coordination of Care – The purposed activities fell far short of the activities required and accomplished to make the first steps toward a coordination of care model a reality. Once the professional staff began to see the results of their efforts the program took on a life of its own. Many difficult case situations were case managed with inspiring results. The daily routine of coordination became second nature, providers and staff are totally engaged and promoting new expanded approaches. Providers across service areas were communicating in a very productive manner. The implementation of the EMR was a key component in the success of these efforts.

Efficiency of Systems – The task undertaken by the staff in this area was very time consuming and sometimes painful, but productive. It fostered an increased sense of ownership of program in all staff members. It also motivated the staff to become involved in the future sustainability of the program. The routine staff meeting to address activities purposed allowed management to get a better feel for the staff concerns and limitations. Thus, some additional training was implemented.

The one task that is not completed and is ongoing is the development of a website that is user friendly to all clients and service areas. This was purposed as a promotion activity but is evolving into an efficiency activity to make permissions and other documentation available. The clientele served is not as computer / web connected as anticipated. We are now looking into other media avenues via cell phone connections. We have proceeded slowly because of security concerns, staff time restrictions, and some language challenges.

C. Role of Consortium Partners

Describe the roles and responsibilities that each consortium partner had in the planning and implementation of the grant-funded program.

Consortium meetings have been held on Tuesdays during lunch since all consortium members are in Hart on that day providing services. The school superintendent or principals represent Hart ISD. This arrangement has facilitated on-going communication and program development. The consortium has been active with all members participating.

Pope Dental - Dr. Pope has been in the clinic providing services 1-2 days a week the entire grant period. He has served as Dental Director, supervising all aspects of the dental program.

Nelson Counseling - Lyndy Nelson LPC has served as the Mental Health Director. She has provided direct services to clients. She has been in the clinic on scheduled days once a week and provided services via Telemed the other days of the week. She attended one of the FORHP conferences. She has actively participated in planning and implementation.

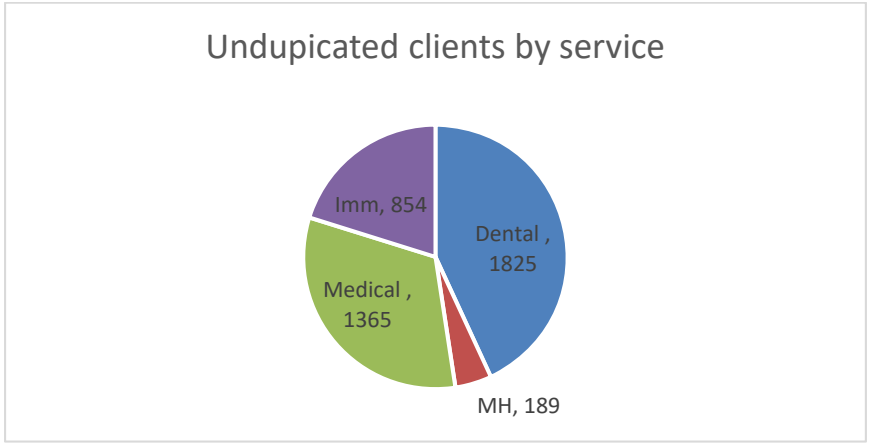
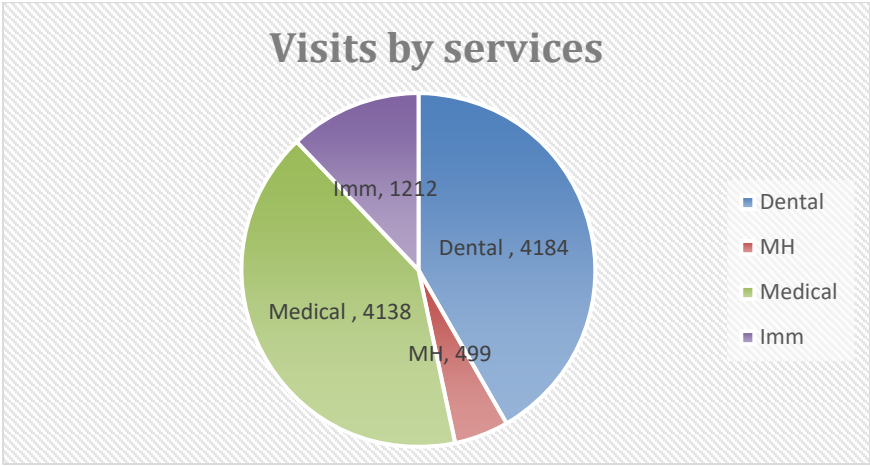
Hart ISD has provided operational space and support. The superintendent has attended PFRHA organizational board meetings as well as consortium meetings. The school administration has allowed access to the students during the school day for services. This has been an on-going logistical challenge that has required adaptation and cooperation.

Plainview Foundation for Rural Health Advancement (PFRHA) – PFRHA has been the lead organization, providing administrative and financial support and leadership. PFRHA has provided the daily operational structure and staffing for the entire program.

Part V: Outcomes

A. Outcomes and Evaluation Findings

PFRHA looked at the outcomes for the entire program with emphasis on the Outreach project activities. The success of the Outreach project was dependent on the efficient operation of the entire program. We are pleased with our service numbers. They reflect the tremendous need in the area and a huge growth in our program over the past 3 years. Our number of unduplicated clients for all services has increased by 80%. Our dental clients has increase by 142%. We have our Mental Health project operational, growing and well accepted.



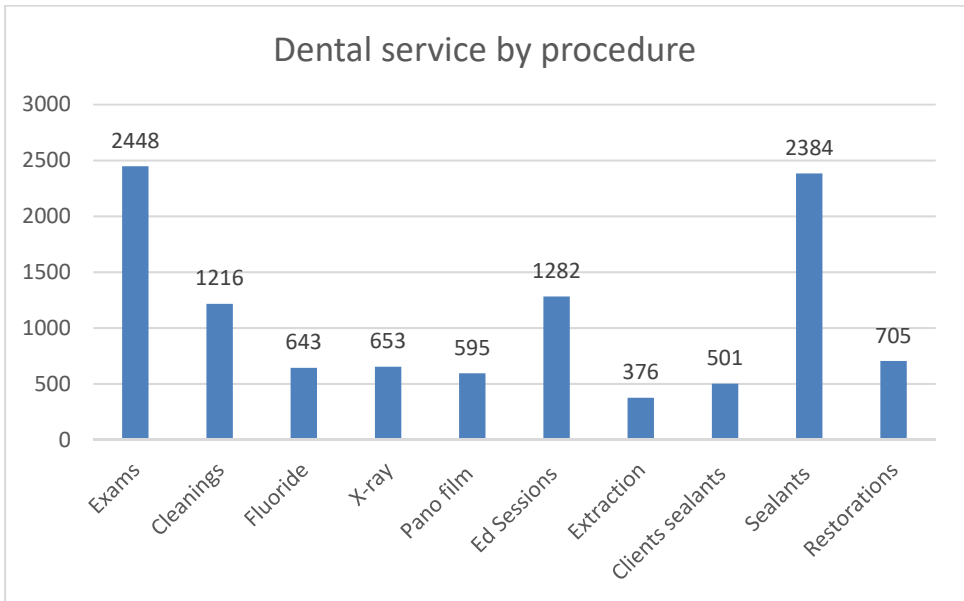
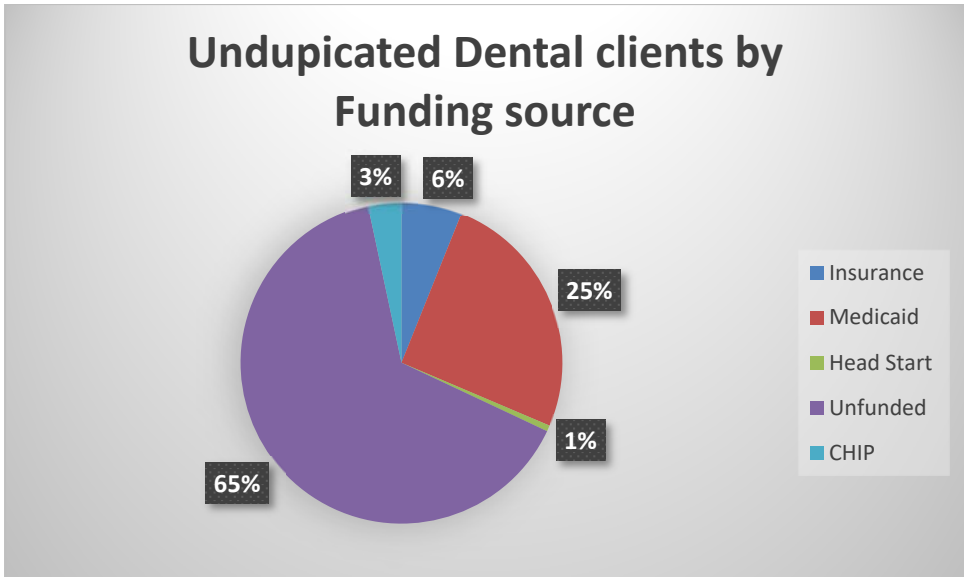
The Evaluation plan submitted designed four questions to address in each area, plus four general program questions. These questions were a mixture of process and outcome questions. Looking at brief answers to these questions gives us an overview of our outcomes. The data supporting our brief answers is presented in our evaluation report. The answer to all four of our general program question was very positive, supporting our progress with the overall program.

Dental

The dental program was one of two main focuses of our Outreach project. The dental clinic has become a major dental provider for the entire area for Medicaid clients. We are one of the very few programs in the area that accepts non-funded clients. Sixty-five percent of our dental clients are unfunded. During the Outreach project the ages of our dental clients have changed from around 90% under 18 to 59% under 18 and 41 % adults over 18 with 10% of the adults being over 65. Previously most of our unfunded clients were children with mainly preventive needs, while the adults have chronic long term dental problems. The dental staff has worked hard to ensure that provider time is utilized to the max.

Our dental client base has gone from 752 to 1825 in three years. Our dental program focuses lots of attention on preventive efforts. This is evident in the number of educational sessions, the number of sealants, along with cleanings and fluoride treatments. Please refer to chart below.

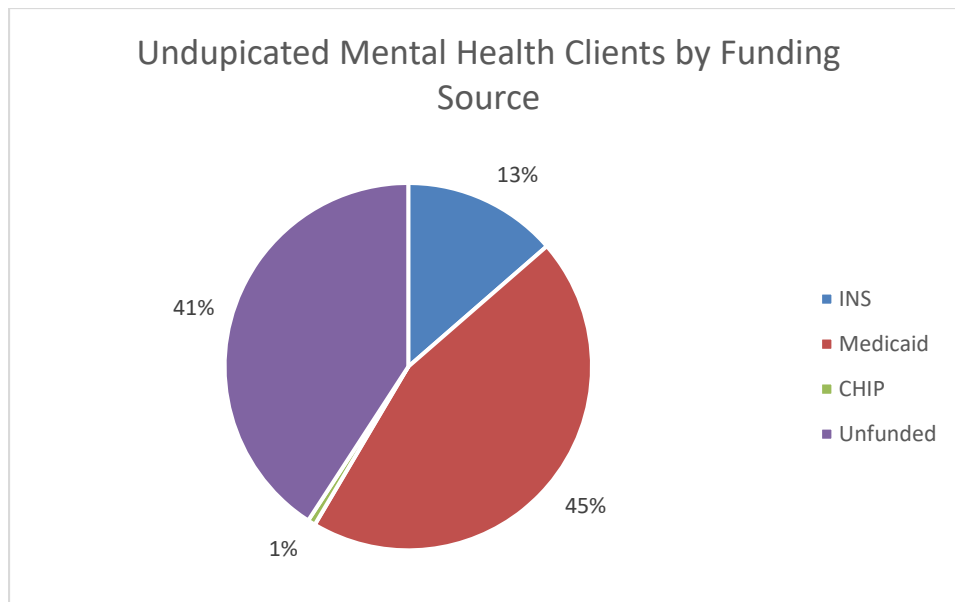
The answer to all four of our evaluation questions is a resounding Yes. Supporting the success of our efforts in the dental program.



Mental Health

Mental Health was the second focus area of our Outreach project. Again, when looking at our evaluation question the answers were supporting success of the project. The Mental Health program has some impressive individual client outcomes. The process of integrating MH services into primary care has been rewarding and hugely successful. All the physicians that man the pediatric and family practice services are routinely referring patients. Patients are very receptive to utilizing the service as part of their regular care. The dentist is even referring clients for counseling in relation to anxiety management.

The fact that about half of our clients are funded by Medicaid demonstrated the lack of providers. The fact that about half of the clients are unfunded demonstrates a need being fulfilled.



Service coordination

This originally was not one of our primary focus areas for the Outreach project. It is definitely an ongoing project. I has had some of the most rewarding and positive outcomes. The attitude of the providers and staff are transformed. The atmosphere of cross service support and cooperation is amazing. This is hard to document with data but is very visible to the observer. Our evaluation questions all get a positive response with the qualifier that they are ongoing or works in progress.

Efficiency of Systems

The implementation of the EMR was time consuming and painful but has been transforming to our project. It has facilitated the coordination of care. It has standardized our notes across the age span of clients. It has allowed all providers access to the notes. It has greatly increased the efficiency and ease of conducting telemedicine visits, because it is web based and available to providers at any location. It has improved our coding and increased our third-party reimbursements. We are still learning the full potential of the EMR program. We are pleased with the system selected because it is very user friendly, flexible and adaptable to our program needs.

B. Recognition

The most valuable recognition is the utilization of the clinics by the population it was designed for. The acceptance of the project by the local and area medical/dental providers is acknowledgement of our service to the community. There have been some small articles in the county newspaper. We have been recognized with invitations to present at various professional meetings. We have had several requests to visit our project from other communities thinking about implementing a program.

Part VI: Challenges & Innovative Solutions

- Providers – Recruiting providers for the rural areas, especially if can only afford part-time. The use of retired providers has been one solution. The other solution is a partnership with the medical school to become a training site for residents. The ongoing huge challenge is professional providers' time to provide services. The scheduling and availability of providers is a constant battle. The only solution is very willing partners and lots of communication along with flexibility and patience.
- Selecting an EMR – This was a time consuming and tedious process. We had to have a system that was user friendly, quick and easy to learn, because we have frequent rotating residents. We needed a system compatible with numerous specialty areas, family practice, pediatrics, and mental health. We also had to have a system that would be affordable in the long term after the grant expired. We had to have a system with billing features that did not charge per provider, due to our rotating providers. With much research and numerous demo sessions, we adopted a system. We have been pleased, the company is smaller but has good support and can adapt templates to our needs. The billing function has greatly increased our third-party reimbursements.
- EMR implementation – EMR company training sessions via web and guided video conference assisted the staff in learning the system. The time required to convert from one old EMR system (family medicine) and paper charts (pediatrics), plus MH notes

on paper was overwhelming. We hired one extra temp person during the summer to scan paper charts and archives them correctly and securely. The clinic staff spent summer hours when clinic not as busy to hand transfer key information from old EMR to new. This process reinforced the learning curve of staff on the EMR system, while not overburdening them with the entire chore.

- Keeping designated dental time for children – The rapid growth of the dental clinic and the acceptance of adult clients created some scheduling challenges. Our priority was to be a preventive program and serve children first to try to delay the onset of dental disease. The tremendous need of the adult population tended to crowd out the less urgent needs of children. We finally blocked a portion of each day for children only, and limited adults to a set number accepted per appointment day.
- Telemed schedules require coordination with two medical offices and the client. This is often a challenge that requires staff to be very organized, diplomatic, persistent, patient, excellent communicators, and advocates for the patient.
- Providing services on school campus to students around their class schedule can be very challenging. Clinic staff are trying to maintain confidentiality while dealing with school office staff, teachers, principals. The school is focused on meeting educational requirements of students in class, while the clinic is dealing with providers' available times. The key is communication, patience, flexibility and a cooperative attitude on both sides. The clinic staff must be willing to constantly negotiate with school officials to keep a positive working relationship.
- Keeping equipment updated and operational is a constant process. The operation of the program requires numerous computers, laptops, Telemed equipment, dental equipment, point of care diagnosis equipment, etc., all which have to be maintained and updated regularly. Our solution has been a retired individual willing to tackle this chore on a part-time arrangement.
- Constant credentialing of providers with insurance company and Medicaid. This is a time consuming frustrating process. Every provider must be individually credentialed with every insurance company and Medicaid vendor in order to bill for services. The forms are specific to each company. Our only solution has been the executive director completes the forms and then gets the providers to approve before she submits.
- Clients' educational levels. – This is a challenge in giving directions and delivering health education. It is one of the primary reasons for a client not keeping appointments. The staff must constantly repeat instructions and simplify to insure the clients are clear on what they are being told. This required constant staff education and support to ensure they remain focused and supportive of the clients.
- No Show rates for clients is an ongoing challenge. This is the number one reason for loss of productivity of the staff. Our only solutions have been numerous reminder calls of appointment time, adjusting the schedule to have clients that can fill no-show times, marking client charts to flag likely no-shows, and constant education of clients.

Part VII: Sustainability

A. Structure

The consortium will continue. All members are devoted to the program and its mission. The consortium has become an integral part of the overall program operations. The relationships and level of participation of the consortium members have made true partners in program operation.

The need is real and on-going and must be addressed. The consortium has been an effective means of addressing the need. All four members of the consortium will continue, with plans to add at least two more members.

B. On-going Projects and Activities/Services to Be Provided

i) Will all, some or none of the elements of the program be sustainable once Outreach grant funding has ended? Please check the appropriate selection.

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained (i.e. the program will completely end after the grant period)

ii) Identify the projects and activities that will be sustained beyond Outreach grant period.

We are striving to continue all activities of the Outreach project. Future grant funding will be a determining element in how activities are continued. There will be some modifications made to insure program stability.

Dental services will continue. Till additional funding is secured we will not replace a departing dentist. That will reduce dentist days by four a month. We will make some adjustments to our co-pay for services.

Mental Health services will continue with onsite and Telemed sessions. We will not jeopardize the program with any major changes. If necessary will adjust co-pay policy.

Coordination of care will continue. It is a process that strengthens the program at very little cost. The EMR is critical and will be continued.

Some of the **efficiency of systems** activities will be enhanced to look for ways of increasing productivity and reimbursement.

C. Sustained Impact

As a result of the Outreach project, the PFRHA board, staff and providers feel we have: improved our service model, made positive changes in our practices, definitely increased our capacity and developed new skills in staff and providers. Economic Impact is monumental. The dollar value of the services provided, many of these services to unfunded clients. The future healthcare cost savings as a result of our services. The impact to the local economy of the jobs provided. The training of community members as staff in the clinic. Some of the trainings will open employment doors after the project ends. Every dollar spent in small communities helps maintain life in rural areas. The educational impact is multi-fold. The school students are learning at an early age to be wise healthcare consumers. The unfunded client population is experiencing and learning the value of quality healthcare. The educational efforts in prevention will not only save individual suffering but will save dollars in the future. The educational opportunities the project afforded to medical students and residents will increase their understanding of rural issues and hopefully motivate some to practice in rural areas. The atmosphere of cooperation across service disciplines in our small project will demonstrate the value to professional providers and lead to cooperation in other settings. The overarching impact of improving the quality of life for every individual we touch.

Part VIII: Implications for Other Communities

Our program can be replicated in any rural community with a small group of motivated individuals working together. The use of a combined school-based health center and a community clinic is a model that would fit lots of small rural communities. Most communities have a school which is usually the center of community activity, the introduction of healthcare into that existing facility can provide healthcare access in a cost-effective manner. The partnership with the medical school is an avenue of supplementing local providers, while at the same time exposing the future physicians to rural medicine. The demonstration of coordinated comprehensive care in that setting is a powerful testimony to what can be accomplished with a strong consortium of partners. The use of telemedicine to make a variety of health care available in the local community has ever expanding possibilities and very positive outcomes. Our experience with extensive utilization of the program and services by clients from surrounding communities demonstrates the need in other communities. Other programs creating similar projects should anticipate growth beyond their targeted population via word-of-mouth and desperate need. The rapid growth can be a challenge to providers, staff and funding.

Part IX: Success, Increased Capacity, and Contributions to Change

A. Defining Success

- i) How do you define "success" for your grant program? Please check the appropriate selection(s). You may choose more than one option. If other, please describe.
- Access to a new or expanded health service
 - Increased number of people receiving direct services
 - Improved quality of health services
 - Operational efficiencies or reduced costs
 - Integration of process improvement into daily workflow
 - Continuation of program activities after grant funding
 - Continuation of network or consortium after grant funding
 - Health improvement of an individual
 - Health improvement among your program participants
 - Health improvement among your community
 - Enhanced staff capacity, new skills, or education received
 - Improved capacity to adapt to changes in healthcare
 - Other: EMR implementation, coordination or care across services

- ii) Do you believe that your program has achieved success? If so, how?
Our grant program has definitely achieved success for the various reasons set out heretofore

B. Organizational Capacity

How has the federal funding of your grant program increased local capacity at your organization, within your network, and/or in your community? Please check the appropriate selection. If other, please describe.

- Formalized networks or coalition
- Developed new partnerships or relationships
- Enhanced skills, education, or training of workforce
- Enhanced data collection and analysis
- Other: Integration of dental and mental health care into primary care setting

C. Contributions to Change

- i) Please provide a story or two about how your program made a difference in individuals' lives, your organization or network, or your community. (Please do not use actual individuals' names.)
Our individual stories are our most impressive outcomes. Individual contributions can often have a much larger impact in the community and upon the future. We have numerous stories, following is a brief synopsis of a few:

Unfunded middle age female appears as a new patient in clinic requesting care, states has been refused care in four other facilities due to funding issues. On exam has a huge draining lump in her breast, extremely painful. Family states they know it is cancer and she is dying. Family indicates the patient is not mentally capable of taking care of herself and seeking appropriate care. Physician see patient in our clinic request referral for biopsy and possible surgery. Clinic staff case manages, gets patient on Medicaid, makes home visits, referral for counseling support, get referral appointment. Patient has surgery and follow-up chemotherapy. Today lady is living alone and managing her own business. Currently is cancer free and is waiting for reconstructive surgery of her breast. She routinely tells anyone who will listen that our program saved her life. She is constantly bringing friends to our program.

The grant funding allowed us to partially fund the ongoing training of our mental health staff to implement EMDR. (Eye Movement Desensitization and Reprocessing). EMDR is an evidence-based psychotherapy for Posttraumatic Stress Disorder (PTSD). We have experience some amazing results utilizing this tool with veterans and victims of child or spousal abuse. We are very excited about the results. The addition of this tool to our staff capability will have a long-lasting effect on our ability to address our clients' needs.

Elderly gentleman has been patient of clinic for several years. Takes on a personality change where he cannot control his rage and has several public outbursts. He drops out of all community activities as Lions club, volunteer fire department, church, etc. He is a gifted artist and has sold numerous items locally. He totally stops all art activities and does nothing but stay locked away at home. He no longer drives except in his small one street community. He then begins to have severe high blood pressure issues, resulting in numerous ER visits. His hypertension did not respond to medication. The primary care physician refers him to the mental health counselor. It is discovered he is a Viet Nam vet suffering from long untreated PTSD. The mental health counselor starts him on EMDR therapy via Telemed sessions. In two short months his blood pressure is under control with one medication. He is now back to all his community activities. He has volunteered to talk to other patients about the positive benefits of EMDR therapy and now volunteers to transport clients without transportation.

Elderly unfunded man presents in dental clinic with numerous loose and decayed teeth. States he has not been able to eat solid food in over two years. The dental clinic extracts all his teeth and finds a clinic in the larger city that will make him low cost dentures. Clinic staff finds a church willing to assist him with the cost of the dentures and volunteers to transport him to the denture clinic. He now has dentures and can eat what he wants. He is extremely happy and tell all his friend we changed his life.

Unfunded lady comes to clinic with "sore on her face". Exam reveals it is a dental abscess that has developed a draining fistula on her face. Antibiotic therapy and extraction of the tooth with healing time totally eliminated the "sore" on her face. She states she had been dealing with the sore "off and on" for about three years.

8-year-old unfunded child comes to clinic for a well-child visit with request for a note to not participate in PE. Child has severe shortness of breath during activity. Has been seen in two other clinics but refused note. Child is family adopted with limited

access to previous health records. Physical exam reveals a congenital heart defect. The family is case managed and referred to Children's' Miracle Network. He has since undergone surgery in a Children's' hospital in Dallas.

- ii) Please provide an example of how your grant program may have directly or indirectly contributed to policy changes, systems changes, or environmental changes. Examples may include passing school nutrition policies, implementing Lean process improvements within your organization, or enhancing walkable spaces in your community. Our Outreach project has increased our ability to provide needed services to our communities. It has insured the continued existence of services locally. The program has enriched the lives of those depending on its services. The educational component of our program will hopefully impact the future health decisions of our clientele. The project has moved our organization forward in some very positive ways. It has improved our daily organization and patient flow. The staff involvement in implementing and evaluating the project has resulted in individual growth and a more cohesive staff. The staff is much more aware of the struggles to be sustainable.

The long term lasting operation effect will be the utilization of the EMR. The initiation of coordination of care model has and will continue to impact the professional providers approach to care. The fact that one facility is utilized as a teaching site for medical students and residents will impact future physicians approach to providing comprehensive care including primary, dental and mental health care as part of the overall treatment plan.

Vermont

Part I: Organizational Information

Grant Number	D04RH28383
Grantee Organization	Bi-State Primary Care Association
Organization Type	Primary Care Association
Address	61 Elm Street; Montpelier VT 05602
Grantee organization website	www.bistatepca.org
Outreach grant project title	Bridges to Health
Project Director	Name: Kate Simmons
	Title: Director, VT Operations
	Phone number: 802-229-0002
	Fax number: 802-223-2336
	Email address: ksimmons@bistatepca.org
Project Period	2015 – 2018
Funding level for each budget period	May 2015 to April 2016: \$199,997.69
	May 2016 to April 2017: \$199,999.82
	May 2017 to April 2018: \$199,999.79

Part II: Consortium Partners

* Indicates those consortium partners who have signed a Memorandum of Understanding/Agreement

Partner Organization	Location (town/county/state)	Organizational Type
Bi-State Primary Care Association*	Montpelier / Washington County / VT	Primary Care Association
University of Vermont (UVM) Extension*	Burlington / Chittenden County / VT	University
The Open Door Clinic*	Middlebury / Addison County / VT	Free Clinic

Part III: Community Characteristics

A. Area

Bridges to Health provides outreach and care coordination services to immigrant farmworkers in twelve of Vermont's fourteen Counties:

- Addison County
- Bennington County
- Caledonia County
- Essex County
- Franklin County
- Lamoille County
- Orange County
- Orleans County
- Rutland County
- Washington County
- Windham County
- Windsor County

B. Community description

Vermont has a strong history in agriculture and dairy farming. To provide support to this struggling industry, the number of immigrant farmworkers (predominately Spanish-speaking dairy workers) has grown to comprise at least 50% of the farmworker population. Needs assessments have shown that this population has a desire and need for health care services, but significant barriers of language, knowledge of where and how to access care, transportation, and fear of deportation preclude access. Generally, the population is relatively young and healthy, though the population exhibits an inordinate number of workplace-related health concerns, often lives in substandard housing, and has poor health literacy/education. Additionally, Vermont's immigrant farmworkers are dispersed throughout the state, making it unrealistic for any existing health centers to develop expertise in serving the population.

C. Need

Vermont's immigrant farmworkers were not accessing health care services. Health issues were going undiagnosed/untreated because farmworkers did not know about, have transportation to, or feel comfortable accessing services that were available in their communities. In some instances, accessing such services was complicated and required care coordination, which previously was unavailable. Additionally, health care access points were often inadvertently creating barriers to accessibility.

Part IV: Program Services

A. Evidence-based and/or promising practice model(s)

Outreach, using a community health worker, lay health promoter ("promotora de salud"), or outreach worker, is an evidence-based model proven to reduce barriers to care and improve appropriate use of health services and health status for underserved populations. Bridges to Health utilizes a modified community health worker or lay health promoter model to reach the migrant farmworker target population. This is a promising practice for VT, in which local bilingual (and often bicultural) staff of local organizations incorporate health outreach into their existing employment positions. Bridges to Health utilized Migrant Education Program "recruiters" to take on an additional role of health promoter.

B. Description of Activities

Bridges to Health provides outreach and care coordination services to farmworkers to link them to appropriate health care access points. This includes the creation and maintenance of a bilingual health resource guide, outreach and health education on farms, assistance making health appointments, and care coordination to ensure appointment follow through. Bridges to Health (Bridges) additionally sponsored direct health services (i.e., through consortium member Open Door Clinic and utilizing clinical farm visits). Additionally, to ensure project sustainability, Bridges staff provide cultural competency information and accessibility technical assistance to health care access points, to help them understand and remove/mitigate barriers to access for the population. Bridges also cultivated relationship with other social service access points (e.g., VT 211) and remained involved in various farm/farmworker coalitions and task forces.

C. Role of Consortium Partners

Bi-State Primary Care Association provided: consortium management and monitoring, management of sub-recipient agreements, federal reporting, strategic and sustainability planning, facilitation of technical assistance to health care access points (including technical assistance focused on: social determinants of health data capture), state and federal policymaker education.

UVM Extension provided: outreach services for farmworkers (UVM Migrant Health Coordinator and five part-time Recruiter/Promoters), curriculum development for use with the Vermont Migrant Education Program Educators and Recruiters/Promoters, and collaboration with the UVM College of Medical and Nursing Sciences.

The Open Door Clinic (ODC) provided: in-clinic and outreach services for farmworkers (bilingual Administrative Assistant, Outreach Nurse, and Patient Services Coordinator), and collaboration with Middlebury College.

Part V: Outcomes

A. Outcomes and Evaluation Findings

- In Y1, Bridges to Health provided direct outreach services to 449 (or approximately 45% of) Vermont's farmworkers. In Y2, Bridges to Health provided direct outreach services to 468 (or approximately 47% of) Vermont's farmworkers. Y3 results have not yet been calculated.
- In Y2, 92% of farmworkers who expressed interested in accessing health care services were successful in accessing care (480 out of 521).
- In Y2, Bridges staff visited 48 VT farms.
- Since May 2015, Bridges to Health has distributed a total of 1500 health access guides
- Since May 2015, Bridges to Health has provided community health worker training to 8 individuals.
- 12 health care and other access point organizations made over 25 policy and/or procedural changes to reduce barriers to care (e.g., to reduce financial burdens, improve interpretation services, etc.). Most of the sites that Bridges to Health has worked with now provide telephonic, video, or in-person interpretation in the exam room.
- In survey results, farmworkers have reported an increased comfort in accessing health care services in VT.

B. Recognition

Through the Bridges to Health Program, staff have worked across the state to build understanding of the healthcare needs, barriers to care and experience of farmworkers living in the state.

ODC's work providing health care services to migrant farmworkers who attend the Mobile Mexican Consulate was highlighted in a local newspaper (The Addison Independent). "The Most Costly Journey" a companion comic book project of Bridges to Health was profiled on Vermont Public Radio and in both a local and a statewide newspaper (The Addison Independent and Seven Days Vermont). Another companion project focusing on kitchen gardens and coordinated by the program's Migrant Health Coordinator, was also highlighted on Vermont Public Radio.

In Spring 2016, the UVM Migrant Education Director and the ODC Outreach Nurse provided educational sessions on migrant health at a statewide Agrimedecine course. The ODC Nurse was also asked to participate in Middlebury College's "Immigration and Vermont's Diverse Communities" MiddView orientation program as a community nurse and clinic ambassador. She coordinated a panel of five migrant workers and family members to share their experiences living and working in Vermont. Additionally, the ODC Outreach Nurse gave an online lecture entitled "Health access and migrant farm workers" to Norwich University nursing students as part of the "rural and migrant health" section of their "Community Health Nursing" course. Later in the year, she went in person to present on collaborative storytelling as a tool to mitigate loneliness, isolation, and despair among Vermont migrant dairy farm workers." Over fifty student cadets and civilians as well as faculty members attended. Bridges to Health presented to the statewide Vermont Farm Health Task Force about the program's successes and ongoing challenges. Attendees included key players from the state government and organizations across the state with an interest in farm health. Bridges to Health was selected to be on the "Coming to the USA: A Focus on Healthcare Challenges" panel hosted by the University of Vermont's Department of Family Medicine in partnership with the Office of Diversity and Inclusion, the College of Nursing and Health Sciences, the Office of Medical Student Education, and the Office of Primary Care and AHEC Program. Over 100 future health professional students, faculty, and staff attended. Finally, Bridges to Health participated in a panel for 100+ students in a Race and Culture class at UVM to speak about health access challenges within Vermont. Over a dozen new volunteers were identified as a result of these presentations.

In 2018, Bi-State's Board of Directors honored the Bridges to Health Program and Migrant Health Coordinator Naomi Wolcott-MacCausland with its Vermont Public Service Award.

Part VI: Challenges & Innovative Solutions

Challenge	Resolution/Solution
Community Health Worker Staffing: Vermont does not have a large population of bilingual Latino community members who could be recruited into the role of promotores/promotoras.	Bridges to Health utilized the bilingual (often bicultural) Migrant Education Program Recruiters in the community health worker role. These individuals were often already known and trusted by the farmworkers. This model also encouraged sustainability and allowed a statewide scaling, as hours could be added to different Recruiters' FTE, proportional to the need in the region.
Accessibility Technical Assistance (TA): Bridges learned that health care access point administration felt uncomfortable about and thus resisted the idea of Bridges staff testing their phone accessibility (i.e., by calling in Spanish and attempting to make an appointment). This had been a large component of how Bridges had planned to kick-off accessibility TA.	Bridges staff instead coached prospective farmworker patients to attempt to make needed appointments. When these attempts did not succeed, Bridges staff interpreted for the farmworker through a 3-way call so that the appointment could be made. Bridges staff then reached out to the health care access point and explained the barriers to care that one of their actual patients faced. Health care access points were much more receptive to receiving feedback about actual patient experiences.
Access Barrier: The majority of Vermont's farms fall within 100 miles of the Canadian border and consequently within the jurisdiction of Immigration and Customs Enforcement (ICE). ICE activity and the perception of ICE activity has increased, especially since January 2017, and farmworkers are showing even greater reluctance to leave their farms to access services.	Bridges' outreach workers are trusted sources within the community, however Bridges is quite conscious that its staff are powerless to provide security or assurances against deportation. Bridges staff provided 48 clinical farm visits in Y2 (which provided access to some health care services without leaving the farm); however these on-farm visits are not an efficient use of resources and cannot offer the full range of needed services.

<p>Consistent Language Access: Less than 1% of all residents in Vermont's rural counties have Limited English Proficiency. Clinics in rural Vermont are unaccustomed to providing language services and the need is inconsistent which results in uncertainty of response when LEP patients do need to access care. Additionally, there are few trained local interpreters or bilingual practitioners, and with such small LEP populations it is not cost effective to translate vital documents. These issues make it challenging for practices to provide services in languages other than English.</p>	<p>Bridges has encouraged the use of language lines and has supported practices in keeping open a consistent language line from when the patient presents at the front desk and through the exam/appointment (e.g., through cordless phones, tablets, etc.). Bridges has shared best practices and problem-solved with health access points to figure out how to right-size their interpretation services. Bridges has also extensively coached patients on how to schedule appointments and request language line services.</p>
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Part VII: Sustainability

A. Structure

The Bridges to Health Consortium has proposed a continuation of the project and expansion of scope to include mental health services. This application is under consideration, with a decision expected in May 2018. Bridges is hopeful that the award will be made, as depression and anxiety are growing health issues with the population. Bridges has invited VT Care Network (the VT network of community mental health centers) to join the consortium for this project.

If that application is not funded, the consortium will become dormant. The individual outreach partners (ODC and UVM Extension) will continue activities as they are able. ODC has funding to sustain current level of effort through December 2018; UVM will likely sustain current effort through June 2018 and phase down activities, as necessary, over the remainder of the year. Both entities will also independently seek funding to support those activities. While doing so, they will be mindful of the other's needs and where there might be a strategic advantage to joint applications, etc. There is no plan for a consortium management structure to sustain consortium-level activities.

B. On-going Projects and Activities/Services To Be Provided

i) Will all, some or none of the elements of the program be sustainable once Outreach grant funding has ended? Please check the appropriate selection.

- All elements of the program will be sustained
- Some parts of the program will be sustained
- None of the elements of the program will be sustained (i.e. the program will completely end after the grant period)

ii) Identify the projects and activities that will be sustained beyond Outreach grant period.
 The Consortium has built a winning model for outreach that taps into existing resources. We have built capacity of local staff to enhance their knowledge and ability to inform farmworkers and farmers of local health care services when they are already on the farms. We applied for 2018-2021 Outreach funding to continue current activities and expand the model to include support for accessing mental health services. This is a large and growing unmet need for our target population and the obvious next area for the consortium to focus efforts.

In the event of not receiving Outreach funding, we would be forced to modify our program approach significantly. Our organizations would individually each still do what work they could to support services for this vulnerable population, but the consortium as an aligning entity would become dormant. Consequently, in this section, we will be discussing the organization partners' continuation of activities separately.

ODC has stated that they would maintain their front desk and Outreach nurse staff for 2018, but would need to seek out other funding sources or potentially restructure the program in 2019. ODC would start to integrate patients into one of the FQHCs in Addison County. However, these sites are not culturally and linguistically accessible, the sites are geographically farther from the County's farming hub, and the services would cost more for the patient (because ODC is a free clinic and designed for the uninsured population).

Within a period of two years, UVM has noted that there is at least a 50% turnover rate of workers on farms. Therefore, some sort of outreach always needs to be occurring in order for farmworkers to know where to go for care. UVM would still hand out local health resource information to all farm owners and farmworkers that they encounter via the VT Migrant Education Program (MEP) as a standard practice. They would also continue to coordinate emergent health care needs for

any families/individuals enrolled in the MEP and complete WIC and Medicaid applications and distribute the corresponding information for all MEP enrolled kids and families where/when eligible and applicable. They would still try to offer health education (on keeping a healthy home, sanitation and germ prevention, STDs, family planning, pest management etc.) as part of their weekly education visits via the MEP, but these classes are primarily only attended by the MEP enrolled students. An estimated 80% of VT farmworkers are ineligible for MEP services because they are above the age of 21 or have graduated from high school.

Clinics will be better prepared as result of the work that has been performed, but farmworkers need close support to ensure a successful visit. We have seen that extensive outreach and care management are what makes a farmworker able to successfully access health care services. UVM would not be able to provide direct transport or interpretation services nor arrange appointments, complete paperwork or follow up for farmworkers not enrolled on the MEP. Consortium members would continue to serve on local farmworker coalitions, as time and organization priorities permit. The ODC would coordinate the health clinic at the yearly consulate visit to their county and UVM would try to enlist a volunteer community member to coordinate a health fair at the other yearly consulate visit.

Bi-State would be able to provide a small amount of coverage for program development in-kind, through their administrative grant from their Primary Care Association grant from HRSA to focus on special populations. This funding would go toward speaking with FQHC CEOs and Medical Directors regarding farmworker needs to ensure linguistic access and brainstorming transportation solutions.

C. Sustained Impact

As noted above, 12 health care and other access point organizations made over 25 policy and/or procedural changes to reduce barriers to care (e.g., to reduce financial burdens, improve interpretation services, etc.). Most of the sites that Bridges to Health has worked with now provide telephonic, video, or in-person interpretation in the exam room.

ODC received two dental awards totaling \$31,000 to build a dental program for their patients.

UVM Extension, ODC, and Bi-State have together built a relationship that will last longer than the consortium. UVM Extension and ODC will continue to work together informally to brainstorm solutions for individual farmworkers. Both know to connect with Bi-State when accessibility barriers are identified at any of VT's FQHCs.

Part VIII: Implications for Other Communities

The care coordination model, utilizing lay health promoters who are trusted within the community, can be further implemented in different variations with other hard to reach and underserved populations including farmworkers, immigrants, and rural residents. Within UVM Extension the initial focus was on the northern regions. Following this initial model, the focus was expanded to include the entire state and UVM Extension Recruiters/Promoters were trained to be lay health promoters for Bridges. As a statewide outreach program, the Bridges outreach program maintains flexibility to ensure that the unique needs of each community are met. Bridges is well positioned to expand the care coordination and outreach strategies to address mental health care needs. For other outreach programs nationwide that include farmworkers as a target population, Bridges' model could be a key to maximizing resources and outreach efforts. The Migrant Education Program is a national program which federally mandates comprehensive Identification and Recruitment (ID&R) strategies. Particularly in other communities that have smaller and more geographically dispersed farmworker populations with a high number of Out of School youth, this model could work well. Finally, Bridges' partnership with the state university and a private university to engage and teach future health professionals who in turn provide language services and complete health promotion projects in the community is also highly replicable.

Part IX: Success, Increased Capacity, and Contributions to Change

A. Defining Success

- i) How do you define "success" for your grant program? Please check the appropriate selection(s). You may choose more than one option. If other, please describe.
- Access to a new or expanded health service
 - Increased number of people receiving direct services
 - Improved quality of health services
 - Operational efficiencies or reduced costs

- Integration of process improvement into daily workflow
- Continuation of program activities after grant funding
- Continuation of network or consortium after grant funding
- Health improvement of an individual
- Health improvement among your program participants
- Health improvement among your community
- Enhanced staff capacity, new skills, or education received
- Improved capacity to adapt to changes in healthcare

ii) Do you believe that your program has achieved success? If so, how?

Bridges to Health has been successful educating farmworkers and farm owners/operators about the health care resources available in their communities. Bridges additionally has been successful increasing farmworkers' comfort and success accessing those services. Furthermore, Bridges has been successful in supporting health care access points to make policy changes to improve accessibility.

B. Organizational Capacity

How has the federal funding of your grant program increased local capacity at your organization, within your network, and/or in your community? Please check the appropriate selection. If other, please describe.

- Formalized networks or coalition
- Developed new partnerships or relationships
- Enhanced skills, education, or training of workforce
- Enhanced data collection and analysis

C. Contributions to Change

i) Please provide a story or two about how your program made a difference in individuals' lives, your organization or network, or your community. (Please do not use actual individuals' names.)

The following story was shared by a Bridges' Migrant Health Coordinator:

"I recently received a call from a young female living on a farm in Franklin County, she was feeling sick and had a consistent fever over the past several days. She had only just recently moved to the area and had heard stories about the danger of leaving the farm alone and the risk of getting picked up by immigration. Due to this fear, she had avoided going to the doctor and let her health symptoms continue for days causing her to miss work shifts. She and her husband reached out to Bridges to Health for assistance.

We talked them both through the various options available to them including the community health clinics and urgent care centers. We explained the process of acquiring transportation and interpretation services and the steps in applying for financial assistance for uninsured patients. The client was still reluctant to leave the farm. As the Bridges to Health promoter, I offered to accompany the client to the urgent care center where I could help her register as a new patient, request interpretation services, and apply for financial assistance. Upon arriving to the urgent care center, I encouraged the client to navigate the process independently and ensured that I would be present to help fill in the gaps and aid in a smooth visit. The client was able to use her English skills to the best of her ability to sign in at the clinic, and explain the purpose for her visit. I accompanied the client through the entire visit but suggested she use the clinic's internet interpretation services so that she could become familiar with the system. It turns out that the client did have a strep throat and needed antibiotics to clear the infection.

Ultimately, the client was glad that she decided to seek medical care and to be supported throughout her first experience. She felt empowered after the visit and more confident with her ability to seek medical attention independently or with minimal assistance in the future."

The following story was shared by ODC's Outreach Nurse:

"Rosa (name changed) found a lump in her breast in February. Just recently it had started to bother her. She had had an abnormal mammogram a few years ago. She had gotten an ultrasound and biopsy. Those results had been negative/benign. But now the site of the previous biopsy was palpable. We scheduled an appointment for her to come in two days later. The provider ordered a repeat mammogram and asked us to schedule it. Rosa didn't have copies of the previous radiology studies and couldn't remember where she had had them done. She was able to provide the name of the town and the state.

When the nurse called radiology to schedule the appointment, the radiologist would not schedule it until prior results were received. The radiology technician tried to track down potential clinics in Mission, Texas but was unable to find the correct clinic. ODC's nurse contacted the patient to ask if she could possibly get more information about the location. She realized her sister might be able to help and contacted her. Her sister was able to provide the name of the clinic. The clinic was called. After seventeen minutes on hold we were told that radiology results were stored at another facility. We took that number and called. When we got through, we were told there were two sites that held the records we were requesting and this was not the site we needed. They provided another number. We finally reached the correct site. Since we did not have a signed release of information, they were not able to share any information with us, although they did confirm that they had results for the patient we named. They said they would only release records directly to the radiologist. So, it was back to contacting radiology. The original radiology technician was finally able to call the facility, request the test results, and within a week, receive them. Rosa's appointment was made for two days out.

Unfortunately a large snowstorm hit the area that day, paralyzing traffic and closing businesses. Rosa had to cancel her appointment. We rescheduled for the following week. She made it to her appointment where she was met by an ODC trained interpreter who followed her through the registration process and exam. The results of her mammogram were inconclusive and an ultrasound was ordered. After two stressful hours of waiting, she was provided the results she had hoped for: all was normal. She was entered into the hospital's recall system and will return for a regular mammogram screen in a year.

Examples such as these highlight the importance of the clinic's case management team in insuring that the patient gets the needed care. Without their persistence, this patient could easily have slipped through the cracks. Her need for care could have been mired down by the seemingly impossible task of tracking down her prior records, and eventually unintentionally lost. With the clinic serving as the safety net, she was able to acquire the necessary tests in a timely manner."

- ii) Please provide an example of how your grant program may have directly or indirectly contributed to policy changes, systems changes, or environmental changes. Examples may include passing school nutrition policies, implementing Lean process improvements within your organization, or enhancing walkable spaces in your community.
- Bridges staff met with the leadership team (CEO, CFO and Chief Nursing Officer) of a rural Critical Access Hospital. The hospital was interested to learn more about the migrant worker population as well as barriers to care that had been identified at their own hospital. A focus of the meeting was the denial of financial assistance applications based on immigration status. Bridges staff was able to outline strategies used by other hospitals in the state to consider applications solely based on family size and income regardless of immigration status. The hospital committed to improving their application to make assistance available to migrant workers who qualify based on financial factors. In the meantime, the Recruiter/Promoter has been able to get applications approved on a case by case basis. A young man in need of a surgery was approved for financial assistance. At the same time, the group discussed language access. The Chief Nursing Officer detailed recent efforts to improve language access for all limited English proficiency patients. When a Spanish speaking migrant worker was later seen at the hospital's Emergency Department, he reported back that the language line was used.

Virginia

Part I: Organizational Information

Grant Number	D04RH28395
Grantee Organization	Bay Rivers Telehealth Alliance
Organization Type	Community-Based Health Consortium
Address	629 Hospital Rd, Tappahannock, VA 22560-2256
Grantee organization	www.bayriverstelehealth.org
Outreach grant project title	Bridges to Care Transitions
Project Director	Name: Donna Dittman Hale
	Title: Executive Director
	Phone number: 804-443-6286
	Fax number: 804-443-6195
	Email address: executivedir@bayriverstelehealth.org
Project Period	2015 – 2018
Funding level for each budget period	May 2015 to April 2016: \$200,000
	May 2016 to April 2017: \$200,000
	May 2017 to April 2018: \$200,000

Part II: Consortium Partners

* Indicates consortium partners who signed a Memorandum of Understanding/Agreement

Partner Organization	Location (town/county/state)	Organizational Type
Bay Rivers Telehealth Alliance (BRTA) (applicant)	Tappahannock, VA	Community-Based Health Consortium
Riverside Health System (RHS)*	Newport News, VA	Health System/Hospitals
Bay Aging(BA)*	Urbanna, VA	Agency on Aging
Middle Peninsula Northern Neck Community Services Board (CSB)*	Saluda, VA	Community Mental Health Centers
Riverside Center for Excellence in Aging and Lifelong Health RCEALH)*	Williamsburg, VA	Non-Profit/Health System/University partnership

Part III: Community Characteristics

A. Area

This Project served the rural area that encompasses 2,635 square miles and a population of 131,255 individuals known as the Middle Peninsula and Northern Neck of Coastal Virginia. The following rural counties were served: Essex, Gloucester, King and Queen, King William, Lancaster, Mathews, Middlesex, Northumberland, Richmond and Westmoreland.

B. Community description

Geographic isolation, as well as socioeconomic barriers, limit access to healthcare for rural Eastern Virginians living on the Northern Neck and Middle Peninsula. Those with chronic and complex health conditions suffer even more, with increased hospitalizations and emergency department visits due to lack of resources to manage their conditions. To receive the services of a specialist, travel of over an hour or more is required; public transportation to the adjacent metropolitan areas where specialists practice is virtually nonexistent. Each of the counties served is designated as a Medically Underserved Area (MUA) and a Health Professional Shortage Area (HPSA) for mental health, with six of these counties also designated as Health HPSA's for primary care.

C. Need

The *Bridges to Care Transitions Project* addressed the health-related challenges of its service area by deploying strategies to overcome the geographic and economic barriers faced by patients with chronic disease in these rural communities, who, when

discharged from the hospital, face significant challenges to recovery. By expanding the delivery of health care services in rural communities through a strong consortium, the partners deployed several evidence-based models in order to improve population health and demonstrate improved health outcomes and sustainability. The Project partners provided remote patient monitoring and evidence-based coaching models for Care Transitions, Chronic Disease Self-Management and Behavioral Health. The goals were to lower the rates of re-admission and emergency room visits, and to increase patients' skills and confidence in caring for themselves to improve health status.

Part IV: Program Services

A. Evidence-based and/or promising practice model(s)

BRTA's *Bridges to Care Transitions* project was built around creative integration and adaptation of three evidence-based models of care in order to improve access to and quality of rural health care among an older population with chronic ill health and high rates of hospital (re)admission.

Care Transitions Management and Remote Patient Monitoring (RPM): Through the Rapid Cycle Quality Improvement (RCQI) Process instituted in monthly interdisciplinary Project Team meetings, the project staff of Bay Rivers Telehealth Alliance (BRTA), Bay Aging (BA), Riverside Health System (RHS) and the Middle Peninsula Northern Neck Community Services Board (CSB) adapted the practices by:

- Ensuring that all related departments were included in the process planning
- Conducting interdisciplinary training for RPM Nurses, Home Health staff, Bay Aging Coaches
- Providing demo equipment on-site at hospitals for staff and patient viewing
- Regular meetings with RHS Care Management staff, physicians and administrators at enrolling hospitals
- Expanding diagnosis from 3 initial groups to include all patients at moderate to high risk of readmission

- 1) **The Coleman Model®:** The Care Transitions Coaching Program was originally a 4-week program targeting patients with complex care needs to learn self-management skills that will ensure their needs are met during the transition from hospital to home. The Coleman Model® has been tested in randomized controlled trials lower readmission rates sustained over five months (<https://caretransitions.org/evidence-and-adoption/>). BRTA adapted this model to extend to a 90-day coaching period in order to work with patients to build self-care skills. An RN monitored patients on a daily basis using remote patient monitoring (RPM), while care coaches introduced other opportunities for chronic disease self-management including the Healthy IDEAS model for behavioral health, and the community-based Stanford model for chronic disease self-management, tele-education modules and individual counseling opportunities for learning self-care for chronic diseases.
- 2) **The Healthy IDEAS Model** (Identifying Depression, Empowering Activities for Seniors): an evidence-based community depression self-management program designed to detect and reduce the severity of depressive symptoms in older adults with chronic conditions and functional limitations¹. The development of the Behavioral Health Survey, which combines the PHQ-9 instrument for assessing Mood Disorders, 2 SBIRT questions, which assesses Substance Use disorders, and a Patient Activation Measure question, which assesses patients motivation for health improvement. Patients are evaluated for behavioral health issues when they first enroll in the program, through the Remote Patient Monitoring equipment questions weekly, and at the end of the 90 days or when they withdraw. This ensures that any issues will be identified and addressed appropriately throughout the 90-day project period, and referrals will be made as needed. By making the program available to all patients regardless of their PHQ-9 score, many patients chose to participate in the Healthy IDEAS Coaching even though their scores on the Behavioral Health Survey did not indicate a problem.
- 3) **The Stanford Model for Chronic Disease Self-Management:** An evidence-based model for providing chronic disease self-management through various modalities including small group workshops in English and Spanish, and online programs. The Stanford Model has been shown to help participants improve their health behaviors, health outcomes, and reduce healthcare utilization while also resulting in significant reductions in ER visits (5%) and hospitalizations (3%) among national participants, and creating potential net savings of \$364 per participant.² While the Coleman Model of CDSM education has been readily adaptable

¹ Healthy IDEAS: A depression intervention delivered by community-based case managers serving older adults, *Journal of Applied Gerontology*, 26(2), 139 – 156.

² Ahn S., Basu, R., Smith, M.L., Jiang, L., Lorig, K., Whitelaw, N., Ory, M.G. (2013) **The impact of chronic disease self-management programs: healthcare savings through a community-based intervention.** *BMC Public Health*, 13(1141).

to the program as practiced by Bay Aging's Care Transitions Coaches, the Stanford Model has not adapted well to the program because it requires a minimum of 10 people in-person for the training. Three scheduled training sessions had to be cancelled because we were unable to achieve these enrollment numbers. The on-line modules which were originally planned to be offered and were available for free in the past have been licensed to an organization that is now charging \$250 per person for a minimum of 320 people, which was not feasible in this project budget. In an effort to increase access to CDSM resources, we continued to offer the Stanford Model CDSMP in-person training in the service area, and offer other CDSM options by working with the Diabetes Educators at Riverside Health System, the Honeywell Representative who supports the configuration of the RPM equipment, and the RCEALH Education Department. Four short, one minute videos were developed and are shared by via tele-education with patients, and encourage referral to the CDSM Trainings, alternate sources of information, courses, and one on one sessions offered by Riverside Health System. Group programs have been delivered at Bay Aging Housing facilities via telehealth to provide courses on CDSM skills.

B. Description of Activities

BRTA has developed an innovative approach to health care delivery that improves both access to and coordination of care using multiple modalities. The ultimate goal of the *Bridges to Care Transitions* project is to assist patients in developing chronic disease self-management skills to reduce unnecessary emergency department visits or hospitalizations, as well as to understand when to seek primary care. Working with three long-standing partners, Bay Aging, Riverside Health System, and Middle Peninsula Northern Neck CSB, BRTA has successfully integrated telehealth and face-to-face healthcare for both physical and behavioral health among a rural population whose access to healthcare has been limited by provider shortages, long travel distances, and poverty.

The specific innovations delivered in the *Bridges to Care Transitions* project are as follows:

- 1) **Remote patient monitoring:** BRTA's partner Riverside Health System delivers clinical services to patients including monitoring vital signs remotely (blood pressure, pulse, oxygen saturation and weight) along with programmed specific questions, which are both clinical and administrative in nature. Nurse monitoring supports patients remotely and coordinates care with other departments in the Health System and with other agencies.
- 2) **Care transitions coaching:** The Care Transitions Coaches provided by Bay Aging work with patients to ensure that they understand discharge instructions and how to use the remote patient monitoring equipment for a 90-day period of time post discharge from hospital. Care Transitions Coaches also work with patients post hospital discharge using the evidence-based Coleman Model© for care transitions in order to reduce the risk of re-admission. Care Transitions coaches introduce the availability of other CDSM activities using tele-education modules, referring to evidence based Stanford Model Chronic Disease Self-Management Program offered in the community, and individual counseling services designed to increase patients' skills in self-management of chronic conditions.
- 3) **Integration of behavioral healthcare with chronic disease self-management:** Patients with chronic diseases often face barriers to wellness as a result of unmet behavioral healthcare needs. The Bay Aging Care Transitions Coaches determine if patients are candidates for the Healthy IDEAS coaching to support goal setting and management of mild to moderate anxiety and depression. Referrals for treatment for more severe mental disorders or substance use disorders are made to Middle Peninsula and Northern Neck CSB who can provide specialist support. These practices have been demonstrated to reduce readmissions and improve patient health outcomes.

C. Role of Consortium Partners

On behalf of the Bay Rivers Telehealth Alliance (BRTA), the Riverside Center for Excellence in Aging (CEALH) effectively maintains project management responsibilities of the "Bridges" grant by contracting with the BRTA Executive Director and Project Director, Donna Dittman Hale. CEALH has a management contract with BRTA to provide management services and oversight of the agency and the grant. The HRSA Grant Steering Committee, oversees the work of the Project Team which coordinates three functions: Education, Evaluation, and the Project Implementation Team. The Steering Committee meets quarterly, monitoring progress, assisting with resolving problems, and developing strategies to achieve collaboration objectives. The Project Team has met monthly since May, 2015, to operationalize the work plan, develop work flow, protocols and implement the program.

Project partners implementing key components of the work plan include:

- Bay Aging (BA), which through Care Transitions Coaches, provides home visiting, chronic disease self-management tools using the Coleman Model and the Healthy IDEAS support program for behavioral health needs of patients enrolled in the project. Bay Aging Coaches also provided informed consent to all patients participating in the research

study, shared tele-education on CDSM resources, and assisted patients with the set-up and use of RPM equipment as needed.

- Riverside Health System(RHS) employs Remote Patient Monitoring(RPM) Nurses who monitor and provide phone support to the patients enrolled in the project, leases Honeywell RPM equipment, oversees the Discharge Planning/Care Management, reporting to Primary Care Physicians and the evaluation team and enrollment in the RPM program, as well as some referrals for behavioral health care.
- Riverside Center for Excellence in Aging and Lifelong Health CEALH provides evaluation oversight in partnership with the MBA program at the College of William and Mary, coordinates CDSM education programs, developed CDSM videos, providing project management and training services to all project staff, including training by the Alzheimer's Association.
- Middle Peninsula/Northern Neck Community Services Board (CSB) provides behavioral health supervision and consultations to the Bay Aging Care Transitions Coaches for the Healthy IDEAS program, and when needed, patients are referred for behavioral health services.

Part V: Outcomes

A. Outcomes and Evaluation Findings

BRTA has created significant impact in improving health and healthcare access, quality, and affordability through its *Bridges to Care Transitions* project. While the final analysis of cost savings and ROI is not yet complete, it is estimated that nearly \$1 million in net savings has been achieved when taking into consideration the cost savings for in-patient care, transportation, personal care, and caregiver and community services. The following specific outcomes illustrate how the introduction of remote patient monitoring and care transitions coaching, including chronic disease self-management education and behavioral health screening, coaching and treatment, has improved health care.

Remote Patient Monitoring: Approximately 209 patients have received RPM services through the grant. Between May 2016 and December, 2017, 98 patients participated in the study received remote patient monitoring (RPM) for an average of 51 days ranging from 7-124 days. More than 80% of participants discharged from the program reported they agreed or strongly agreed with the statement, "Since using Telemonitoring I am more motivated to monitor my health." "Telemonitoring helped me improve my health" --75% agreed/strongly agreed. "Telemonitoring technology helped me become more involved with my healthcare" --95% agreed/strongly agreed. Eighty-five percent of participants stated they would recommend remote patient monitoring to others and nearly a third of participants reported they would be willing to pay for remote monitoring if insurance doesn't cover it, but expense is a major factor.

Care Transitions Coaching and Healthy IDEAS Behavioral Health Coaching: During the course of the last year of the grant, approximately 265 RPM patients were offered care transition coaching, completed the Behavioral Health screening, and received Tele-Education on Chronic Disease Management. 157 accepted (over 68%) and 140 completed the full coaching process (over 88%) of those enrolled. Compared to non-grant patients, grant patients were re-admitted 45% less than those who had home-health care but did not receive care transitions coaching. Approximately 19% of patients opted to take advantage of the Healthy IDEAS coaching, proving it to be a popular and valued aspect of care. Patients also spent fewer days in the hospital, and had less frequent outpatient visits and hospitalizations. Data to quantify these results will be available once the Evaluation analysis is completed. A cost-to-savings ratio of approximately 1:4 was demonstrated.

Patient Education and Staff Training activities: Over the course of the grant, 2081 patients participated in Chronic Disease Self-Management Coaching through the Coleman Model; 286 have participated in Stanford Model Chronic Disease Self-Management or Diabetes Self-Management Programs with 23 training as Instructors; and 256 in other chronic disease self-management programming adapted to telehealth in community living communities and other settings. 28 health professionals participated in training provided by the Alzheimer's Association on Building Skills for Dementia Care for all caregivers involved in this project. 58 received training in the use of Telehealth and RPM equipment. STAR Telehealth Training is planned in May at Riverside College of Health Careers for 20 participants.

A. Recognition

BRTA received the HRSA FORHP 2018 Rural Community Health Champion Award for its work with Evidence-Based Practices and an honorable mention for Creative Partnerships, and is listed in the RHI Hub as a Promising Practice for Rural Health Access for persons with disabilities.

Process Change and Enrollment Issues: Following the start-up of the RPM component of the project, ten patients were enrolled in Year 1 of the project and 37 additional patients were enrolled in Year 2. This was well below the number of patients anticipated. Through the Rapid Cycle Improvement Process established by the Project Team, the criteria for enrolling patients was modified twice during the year to broaden the eligible population which may benefit from the program. In August, 2016, the IRB overseeing the program approved enrollment of patients with Acute Myocardial Infarction and who score as moderate to high risk on the BRASS scale which scores the patients risk of readmission to the list of conditions eligible for project participation. This required reconfiguration of the RPM equipment to include questions and parameters related to these conditions. Following repeated meetings with the hospital care managers who enroll patients about the change in this criteria, there has been a steady increase in the number of enrollments to a rate of approximately 10 per month. In addition, equipment sets were made available in each hospital for staff to demonstrate how the equipment works to patients and their families. Changes in Care Management Supervisors in both hospitals also contributed to the need for repeated training visits, and revision of the program brochure assisted in communicating the benefits of the program to patients and their families.

In the fall of 2016, it was proposed by the Cardiopulmonary Manager of one of the hospitals, that the program be offered to frequent users of the Emergency Department. In addition, a patient, who had been offered the equipment as an inpatient and refused, was later convinced by his Primary Care Physician and enrolled in the program through the Care Management Department of the hospital. Because the Emergency Departments use a different enrollment and referral system for the program, it took some time to train these staff and develop the work processes to ensure that communication, workflow, and referrals to Bay Aging coaches are accomplished. These alternate enrollment locations did not catch on as a practice due to insufficient training of staff, the lack of a leadership champion among the physician practices (PCP), and constant turnover of staff. Focusing on training of the Inpatient Care Management Supervisors allowed several patients to be enrolled from PCP offices and brought enrollments up to the maintenance level by the conclusion of the project. Training and support of the enrollment staff was an ongoing process throughout the life of the project.

Adoption and Retention of Technology by Patients: Since the start of the program 14 patients who enrolled in the program have discontinued use early in the program, five before transmitting their first vital signs and one within the first week. Reasons included feelings of overwhelm by patients or caregivers, the number of phone calls involved in using the service post-discharge. It is not known how many patients may have refused to enroll, but it was reported by the Care Managers that many patients were concerned about the patient financial liability stated on the equipment use consent form in case equipment was lost, broken or stolen. Steps were taken to remedy these issues including revising the consent form, additional home visits by coaches, additional education for Care Coordination, completion of a brochure for patients describing in-home technology, and willingness of in-home technology assistants to make a home visit to assist patients with set up of equipment, access to demo equipment for patients to see how simple it is.

Funding Changes: A key component of the "Bridges to Care Transitions" Project is the pairing of Remote Patient Monitoring equipment with Care Transitions Coaches to reduce re-admissions of patients discharged from the hospital after acute episodes arising from chronic conditions. The success of this model was based on demonstrated results of a Center for Medicaid Services Demonstration Project which was abruptly defunded in Jan. 2016. Because this is such a critical component of this project, the Steering Committee and Board of Directors of BRTA approved budget revisions for the project that provided for increased funding for the Care Transitions Coaches for the remainder of Year 1, 2 and 3. Bay Aging has also received funding for the Care Transitions coaching from their partner health systems in the first year, and then through the Virginia Health Innovations Program. Care Transitions Coaching was included in the Virginia Department of Medical Assistance Services 2016 Application for a Medicaid Waiver for Long-Term Care Support Services. Bay Aging has developed several contracts with Medicaid Managed Care Organizations to provide coaching to their dual-eligible and MLTSS patients as an alternative to Long-Term Care institutionalization.

Behavioral Health Resources: As a part of the work plan, an inventory of behavioral health resources in the service region revealed that long waiting lists, insufficient numbers of providers, significantly impaired health status, and lack of transportation are all barriers to accessing behavioral health services for patients enrolled in the program. Bay Aging received funding to train the Care Transitions Coaches to serve as Behavioral Health Coaches, identifying patients with significant issues and providing support under the supervision of the Psychiatry, Psychology, Counseling and Social Work professionals of the Middle Peninsula/Northern Neck Community Services Board (CSB). This provides behavioral health screening for all patients, and support, education, and care coordination for patients suffering with mild to moderate depression, anxiety, and substance use issues which are

substantially impeding their ability to recover from the physical conditions for which they were hospitalized. In cases of more severe conditions, which require a higher level of care, the CSB, and Riverside's Behavioral Health Center are sources of referral

Chronic Disease Self-Management Training: While the Care Transitions Coaches are introducing patients to the Four Pillars of Self Care using the Coleman Model of Chronic Care Management, this project also proposed to create access to patients through the Stanford Model's Chronic Disease Self-Management Program (CDSMP). While we continue to offer this in-person training in the service area, three sessions have been cancelled due to small enrollment numbers. As an alternative, RCEALH has been working with the Diabetes Educators at Riverside Health System and the Honeywell Representative who supports the configuration of the RPM equipment to develop Mini-learning Modules on Chronic Disease Self Care, including four one-minute videos shared by the Bay Aging coaches' tablets during their home visits. With additional information and referral to the CDSMP Trainings, alternate sources of courses and one-on-one sessions offered by Riverside Health System, and paper tools for updating patients without access to the internet, patients are informed of a variety of ways to access CDSM education. Funds designated for the purchase of patient survey instruments were reallocated for the development of video modules.

Part VII: Sustainability

A. Structure

Bay Rivers Telehealth Alliance is committed to continuing to identify funding for innovative projects to increase access to care through telemedicine. The consortium formed within the BRTA network to implement the project will continue implementation and evaluation in order to maintain momentum and continue business planning in order to identify sources of funding for program components through 2018 and beyond.

BRTA has been approved for a 6-month no-cost extension to continue providing services, evaluating outcomes, and developing sustainability strategies until funds are depleted. This may provide time to identify additional funding, complete the analysis of ROI and outcomes, and present these findings to Health Care payers, providers, policy makers and consumers to support ongoing activities.

B. On-going Projects and Activities/Services To Be Provided

i) Will all, some or none of the elements of the program be sustainable once Outreach grant funding has ended? Please check the appropriate selection.

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained (i.e. the program will completely end after the grant period)

ii) Identify the projects and activities that will be sustained beyond Outreach grant period.

Our partners are committed to the continuation of these activities in the following manner:

Remote Patient Monitoring: Riverside Health System will continue to provide RPM to patients with home health care. They will continue to negotiate with their 3rd party payers to establish agreements in the future around at-risk patients, but they do not have this in place yet. It is anticipated that if demonstrable outcomes result from the evaluation analysis of this project, a case can be made to support RPM services and coaching for uninsured, self-pay patients, employee populations, patients with adequate reimbursement by 3rd party payers, and patients at risk for 30-day readmission, which would be financially sustainable by the Health System and 3rd party payors.

Care Transitions Coaching and Healthy IDEAS Behavioral Health Coaching: Bay Aging has successfully negotiated agreements with several Medicaid Managed Care Organizations (MCOs) to provide Care Transitions Coaching to dually-eligible patients post-discharge. They continue to market these services to MCO's, Medicare Advantage Insurer and other 3rd Party Payers throughout Virginia. In partnership with BRTA, continued funding on a limited basis has been identified to provide the Healthy IDEAS Coaching program to Rural Veterans through FY18-19 from the Virginia Department of Health's Office of Health Equity (Rural Health).

Patient Education and Staff Training: Riverside CEALH will continue to coordinate Chronic Disease Self-Management training with the regional CARE Consortium, Alzheimer's Training and other related activities. They will continue as the liaison working with RHS Diabetes Management, which is a new outcome of collaboration and integration of resources. JenCare is now onboard offering DSMP onsite. BRTA will continue to offer Telehealth Certification training to BRTA

member organizations, and has provided equipment, WEBEX accounts, and training to BRTA member organizations and the Alzheimer's Associations serving this region.

Evaluation and Monitoring: Riverside CEALH will continue to coordinate the analysis and evaluation of the project to keep momentum and dissemination of project results through the period of no-cost extension. They will work with the College of William and Mary faculty and staff and the Project Team to identify dissemination opportunities and with FORHP to include the project in the RHI Hub Evidence-Based practices.

C. Sustained Impact

By far the most influential and sustained impact of this project will be the establishment of enduring partnerships among the participating organizations and the dedicated partner liaisons driving the communication and outreach. All partners meet regularly, communicating and responding quickly to issues, and implementing change when needed. These relationships will still be engaged. Having staff and leadership who are committed to the success of the project is essential. Having the right people at the table from all levels of the organizations involved, who are dedicated, empowered, positioned and willing to compromise to get the project's objective accomplished will result in integration within the health systems, and between internal and external partners.

Centralizing the RPM services in the RHS Nursing Call center has improved communication with the physicians who receiving reports on their patient's vital sign trends. The working relationships between Home Health/Coaches/other direct patient care providers and RPM Nurses are excellent. Patients indicate they have learned a lot about their condition and the importance of knowing their vitals on a daily basis and are more confident in their daily activities as they recover from a hospitalization. Family members are more confident and appreciative that their loved one is being monitored and that a nurse and coach are available for reassurance when necessary.

Patients enrolled in Healthy IDEAS are less likely to readmit and indicate a decrease in depression and/or anxiety at the end of the program. Many patients have been referred for additional community-based services such as Home Delivered Meals, Transportation, Counseling through our Community Services Board, Agency on Aging and other supports. Other sustainable outcomes include: establishing a liaison with the RHS Diabetes Management team, resulting in collaboration and integration of resources. There is a new option through the Riverside Electronic Health Record to refer to a patient navigator, who will determine with the client if there is an appropriate community workshop education for them, and Case Managers are now screening for appropriate patients to receive tele-monitoring.

By using Evidence-based models for patient education and professional trainings through innovative and effective delivery methods, we are finding cost- and time-efficient ways to deliver brief, to-the-point, and live/interactive trainings. Using pre- and post-tests evaluations for all interventions allows better demonstration of positive outcomes. Health professionals and patients have been trained to use technology, such as tablets and monitoring equipment, and are able to recognize appropriate blood pressure and weight, and to deliver tele-education to support the objectives of the coaching for chronic disease self-management, and connect patients with other resources in the community and health system. Additionally, equipment was purchased for three Bay Housing locations throughout the service area to deliver group classes on healthy diets, chronic disease and diabetes self-management education, fall prevention, and other education and trainings via Telehealth.

Part VIII: Implications for Other Communities

The benefits of this project to other communities could include:

1. Forming lasting partnerships between health systems, Area Agencies on Aging and community mental health centers.
2. Addressing the needs of patients with chronic diseases, especially as they face the challenges of recovering from being hospitalized.
3. Providing supportive systems of care for family caregivers
4. Connecting community-based education and outreach programs to the people most in need to the knowledge they have to offer by linking the experience of a teachable moment to the opportunity to learn.
5. Increasing the knowledge of patients, family caregivers, and health professionals about how technology can enhance care systems to provide support for rural populations to access care sooner, when health status is not as critical.
6. Demonstrating to health systems and third-party payers how remote home monitoring and care transitions coaching can reduce the cost of care by intervening in patient care earlier and encouraging access to less intensive services to improve health status.
7. Developing competencies in healthcare providers to utilize telehealth technologies to overcome barriers to access.

A. Defining Success

- i) How do you define "success" for your grant program? Please check the appropriate selection(s). You may choose more than one option. If other, please describe.
- Access to a new or expanded health service
 - Increased number of people receiving direct services
 - Improved quality of health services
 - Operational efficiencies or reduced costs
 - Integration of process improvement into daily workflow
 - Continuation of program activities after grant funding
 - Continuation of network or consortium after grant funding
 - Health improvement of an individual
 - Health improvement among your program participants
 - Health improvement among your community
 - Enhanced staff capacity, new skills, or education received
 - Improved capacity to adapt to changes in healthcare
- ii) Do you believe that your program has achieved success? If so, how?
- Yes, The Bridges to Care Transitions Project has achieved success in demonstrating the value of partnership, use of evidence-based practices, remote patient monitoring, and a holistic approach to patient care which includes coaching, behavioral health, vital sign monitoring, and most important of all, the value of human contact in healing. In addition, the commitment to the organizational partnerships, working together to shift healthcare practices and policies to support and sustain these services indicates a vital and growing alliance to promote innovation and transformation in the delivery of healthcare in the rural communities served by Bay Rivers Telehealth Alliance.

B. Organizational Capacity

How has the federal funding of your grant program increased local capacity at your organization, within your network, and/or in your community? Please check the appropriate selection. If other, please describe.

- Formalized networks or coalition
- Developed new partnerships or relationships
- Enhanced skills, education, or training of workforce
- Enhanced data collection and analysis

C. Contributions to Change

- i) Please provide a story or two about how your program made a difference in individuals' lives, your organization or network, or your community. (Please do not use actual individuals' names.)

Case #1: A Patient on RPM with COPD and cardiac disease. Answered yes to all of his clinical questions which red alerted the RPM nurse. When the nurse called patient noted he had bleeding in one of his eyes and was on blood thinner (Coumadin). RPM nurse triaged him through our nurse triage system (Riverside Nurse) and conferencing the patient to PCP while he remained on the phone, for an appointment the for same day and called Home Health to let them know. Patient had critical lab work for blood thinners which were placed on hold.

Case#2: Patient with Congestive Heart Failure was monitored for 90 days. Vital signs became normalized through coaching from RPM nurse and Bay Aging coach over the course of his monitoring and compliance with diet and medications. Exit PHQ9 score of very high so he was referred for counseling, Bay Aging for support services and an appointment was made with his PCP. He stated he was so appreciative of the program saying "What am I going to do without it". He was given the Riverside Nurse Phone number to call 24/7 with any concerns moving forward.

Case #3: Patient on RPM for 60 days with CHF. RPM nurse noted weight up 4 pounds and oxygen saturation down to 90%. RPM called patient who noted she was having back pain, Shortness of breath and her leg was very swollen, red and tender. RPM nurse directed patient to the Emergency Department. She was taken there by her husband who the RPM nurse also spoke with. RPM nurse placed her clinical info in ED EMR and called to let them know she was on her way. Patient was triaged and admitted to the hospital RTH. RPM updated Home Health as well.

- ii) Please provide an example of how your grant program may have directly or indirectly contributed to policy changes, systems changes, or environmental changes. Examples may include passing school nutrition policies, implementing Lean process improvements within your organization, or enhancing walkable spaces in your community.

Changes in organizations: The program resulted in a reorganization of the RPM program in Riverside Health System, centralized this function in the Nursing call center, and provided regular trend reports on patient's post-discharge to physicians through the Electronic Medical Records system. Previously these services were decentralized in the Home Health Departments in various rural areas.

Bay Aging Coaches are now using tablets and laptops to link their patients at home to services and education via Telehealth by including tele-education for chronic disease self-management, access to behavioral health services, and other services. One example is the FAMILIES program providing counseling to dementia caregivers via telehealth from the home, while coaches provide respite care to the family member with dementia.

Bay Rivers Telehealth Alliance has adopted the Strategic Planning and Sustainability Planning models introduced by the HRSA FORHP Community Based Division and the Georgia Health Policy Center.

Changes in State and Regional Health Delivery: During the project period the Care Transitions Coaching program, formerly known as the Eastern Virginia Care Transitions Partnership led by Bay Aging, transitioned from a successful Medicare Demonstration Project supported by hospital systems to a pilot project funded by Virginia's General Assembly to support a Medicaid demonstration of Care Transitions Coaching. This led to the statewide organizations of Virginia CAAres program of Agencies on Aging managed by Bay Aging which provides care transitions coaching and case management to dually eligible clients through a Medicare Waiver and Medicaid Long Term Care Support Services program funded through several contracts with Medicaid Managed Care Organizations and Medicare Advantage Plans by Bay Aging.

As a result of the project and the introduction of the Healthy IDEAS evidence-based coaching program, BRTA received funding from the Virginia Department of Health/Office of Rural Health (Health Equity) to offer this service to rural veterans in a pilot project to determine if this would be adaptable to this population to serve behavioral health needs of veterans in our isolated, rural service areas.

Virginia

Part I: Organizational Information

Grant Number	D04RH28411
Grantee Organization	St. Mary's Health Wagon
Organization Type	Free Clinic
Address	5626 Patriot Drive / P.O. Box 7070, Wise, VA 24293
Grantee organization website	www.thehealthwagon.org
Outreach grant project title	Expanding Advanced Primary Care for People with Diabetes in Southwest Virginia
Project Director	Name: Dr. Teresa Tyson
	Title: Executive Director
	Phone number: 276-328-8850
	Fax number: 276-328-8853
	Email address: drtysonnp@thehealthwagon.org
Project Period	2015 – 2018
Funding level for each budget period	May 2015 to April 2016: \$150,000
	May 2016 to April 2017: \$150,000
	May 2017 to April 2018: \$150,000

Part II: Consortium Partners

* Indicates those consortium partners who have signed a Memorandum of Understanding/Agreement

Partner Organization	Location (town/county/state)	Organizational Type
Wise County Department of Social Services	Wise/Wise/Virginia	Human Services Organization
The Health Wagon	Wise/Wise/Virginia	Free Clinic
Mountain Empire Transit	Big Stone Gap/Wise/Virginia	Public Transportation Provider
Healthy Appalachia Institute	Wise/Wise/Virginia	Rural Health Organization
East Tennessee State University	Johnson City/Washington/Tennessee	University
LabCorp	Norton/Wise/Virginia	Lab
Dr. Joseph Aloï	Winston Salem/North Carolina	Wake Forest School of Medicine
Appalachia College of Pharmacy	Grundy/Buchanan/Virginia	University
Mountain States Health Alliance	Clintwood/Dickenson/Virginia	Hospital

Part III: Community Characteristics

A. Area

Lee, Scott, Wise, Dickenson, Buchanan and Russell Counties and Norton City

B. Community description

Southwest Virginia is cradled by the Appalachian Mountain system. The area is characterized by deep forested areas, reclaimed strip mining or mountain top removal sites and small communities built around coal camps. The mountain range provides a barrier that separates this population from urbanized areas of Virginia. Economic and social conditions impact health in far Southwest Virginia. The terrain is mountainous, covering 1,715 square miles with numerous locations being geographically isolated. Travel and transportation is a huge barrier to access healthcare; many coal miners and their families lost jobs and are unemployed without insurance now. People in the Health Wagon's six-county service area are:

25% more likely to die from heart disease, 46% more likely to die from chronic obstructive pulmonary disease, 47% more likely to die from pneumonia or influenza, 34% more likely to die from diabetes, 62% more likely to die from chronic liver disease, 61%

more likely to die from unintentional injuries and 72% more likely to commit suicide (Data source: *Virginia Health Statistics, Volume I, 1999 – 2003. These are averages based on age-adjusted death rates for the years 1999, 2000, 2001, 2002, and 2003.*)

C. Need

The need this Outreach grant program was designed to address was the prevalence of diabetes in Central Appalachia. Among people in the region of Southwest Virginia targeted in the grant, the rate of mortality from diabetes was almost twice the rate of the state. This grant provided resources, referrals, a consortium, evidence-based programs, enhanced telemedicine opportunities and solutions to the burden of chronic diseases and diabetes in general.

Part IV: Program Services

A. Evidence-based and/or promising practice model(s)

The evidence-based model chosen for this grant was the National Diabetes Prevention Program. Trained lifestyle coaches identified individuals who are at risk for diabetes utilizing biometric findings. Lifestyle coaches will utilize the pre-diabetes screening test which was validated for pre-diabetes using 2007-2008 National Health and Nutrition Examination Survey data, to identify an additional 50% of population needing coaching to prevent diabetes.

B. Description of Activities

- 1) Formed a rural health consortium to be known as the Health Wagon's Rural Health Care Service Outreach Consortium to develop a network of partners to promote positive health outcomes for the targeted areas,
- 2) Created a network of referral sources to be utilized for underserved individuals across the Coalfield of Virginia. Referral sources will be provided to all consortium partners and local physician groups to promote community awareness,
- 3) Promoted health education and therapeutic lifestyle changes through community outreach and in-clinic counseling utilizing the National Diabetes Prevention Program to prevent and decrease the prevalence of diabetes,
- 4) Expanded telemedicine capabilities for specialized diabetes care by providing specialized medical treatment to individuals who lack access to care,
- 5) Provided free specialized diabetes care clinics with patients with elevated Hemoglobin A1c readings to promote the wellbeing and improve overall community health,
- 6) Adapted Chronic Care Model to meet culturally diverse needs of rural Appalachia to be adapted for a national model, and
- 7) Expanded access to health care through the use of mobile health unit to act as a medical home for areas without access to a primary care facility.

C. Role of Consortium Partners

Partner Organization	Organizational Type	Role
Wise County Department of Social Services	Human Services Organization	Assisted in the resource guide
The Health Wagon	Free Clinic	Existed as the free clinic for patients to be seen in
Mountain Empire Transit	Public Transportation Provider	Provided transportation to sites, health outreaches and appointments
Healthy Appalachia Institute	Rural Health Organization	Provided ongoing data for the program
East Tennessee State University	University	Provided evaluation services for the grant
LabCorp	Lab	Provided labs at no cost for the grant
Dr. Joseph Aloï	Wake Forest School of Medicine	Provided endocrinology services for patients in the grant
Appalachia College of Pharmacy	University	Provided medication and diabetes management education for all patients
Mountain States Health Alliance	Hospital	Existed as the hospital for patients to be seen in

Part V: Outcomes

A. Outcomes and Evaluation Findings

Our evaluation is still in process and is led by East Tennessee State University.

The evaluation report will be comprehensive report looking back across the three-year grant period. We will be looking at:

- Number of unduplicated patients,
- Number of total visits,
- Patients' A1c blood glucose levels,
- Percent of patients who were screened for depression,
- Percent of patients who have a lipid profile,
- Percent of patients who received a test for microalbuminuria,
- Percent of patients who received a retinal exam,
- Percent of patients who received a foot exam,
- Percent of patients who received an influenza vaccination,
- Percent of patients who received a blood pressure check,
- Percent of patients who were prescribed aspirin,
- Percent of patients who received nutritional counseling,
- Percent of patients who were smokers,
- Percent of patients who drink more than weekly,
- Percent of patients with a BMI >25%

Known outcomes of this grant are: minimized silos in the healthcare delivery system, new and update referral and resources, healthier communities, increased diabetes management, expanded telemedicine, expanded endocrinology specialty clinics, increased diabetes foot care and eye care, increased mobile health unit sites and locations, updated health outreach model, updated documentation, assessment results, updated project plans, healthier communities, new funding sources, information, equipment, test results, new general volunteers, new medical volunteers, assessment results.

B. Recognition

Dr. Teresa Tyson, FNP, received 2017 Leadership Excellence Nurse Manager/Director and 2017 Patient Centered Primary Care Collaborative Community Leadership Award

Part VI: Challenges & Innovative Solutions

The largest challenge that we have experienced during our outreach program's development and implementation is changing of patients' telephone numbers and patients' not bringing required paperwork for free medications in the Pharmacy Connect program. Our patients' numbers change, sometimes monthly, so we relied on contacting patients by letter if we couldn't reach them by telephone as most of them changed numbers but lived in the same place consistently.

Part VII: Sustainability

A. Structure

The consortium will continue. The Health Wagon and Board of Trustees are committed to continue the program beyond the initial funding from HRSA. We work very closely with consortium partners and will encourage each partner to continue contributing to the consortium for the benefit of the patients.

B. On-going Projects and Activities/Services To Be Provided

i) Will all, some or none of the elements of the program be sustainable once Outreach grant funding has ended? Please check the appropriate selection.

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained (i.e. the program will completely end after the grant period)

ii) Identify the projects and activities that will be sustained beyond Outreach grant period.

The following will continue to be sustained: rural health consortium partnerships, updated referral and resource guides, endocrinology clinics, telemedicine opportunities, new mobile health unit sites, the National Diabetes Prevention Program,

lab testing such as lipid and full hepatic workups for each patient (LabCorp will continue to provide those free to all indigent patients). Labs that will continue are CBC, CMP, hsCRP, HgA1c.

C. Sustained Impact

The Health Wagon has had an opportunity to support Virginia in becoming a less restrictive state when it comes to Nurse Practitioners and requirements for all Nurse Practitioners. The Health Wagon has been one of the front supporters for the Virginia Bill HB793. This bill would give Virginia Nurse Practitioners full practice authority without the oversight of a physician, after five years of experience or 10,000 hours. The Health Wagon nurse practitioners testified at the House Subcommittee and were asked to testify at the Senate Subcommittee. The Health Wagon visited Virginia's Governor and relayed the reasons we support this bill. The bill has made it through the seven legislative steps and is in the governor's hands for approval. The Health Wagon is a nurse managed clinic, meaning all patients are treated by nurse practitioners. All patients treated through this Outreach grant were treated by nurse practitioners. Nurse practitioners managed out of control chronic conditions, managed out of control blood sugars and blood pressures and connected patients to life enhancing and often times lifesaving services.

Part VIII: Implications for Other Communities

This program could easily be replicated by other communities willing to come together to tackle any large health issue. Some best practices are: include public transportation, utilize medication assistance programs, contract with a private endocrinologist or an endocrinologist at a university medical center, involve faith-based organizations, encourage partnerships throughout your entire program – not just in the beginning, if you are using an electronic medical record, create a system where all data is required for every patient and find ways to extract it for subset of data, such as tracked participants for a specific grant.

Part IX: Success, Increased Capacity, and Contributions to Change

A. Defining Success

- i) How do you define "success" for your grant program? Please check the appropriate selection(s). You may choose more than one option. If other, please describe.
- Access to a new or expanded health service
 - Increased number of people receiving direct services
 - Improved quality of health services
 - Operational efficiencies or reduced costs
 - Integration of process improvement into daily workflow
 - Continuation of program activities after grant funding
 - Continuation of network or consortium after grant funding
 - Health improvement of an individual
 - Health improvement among your program participants
 - Health improvement among your community
 - Enhanced staff capacity, new skills, or education received
 - Improved capacity to adapt to changes in healthcare
- ii) Do you believe that your program has achieved success? If so, how?
We absolutely believe this program has achieved success. This program has introduced partnerships and resourced that otherwise would not have been obtained. Our providers have maintained an average of 6.8 HgA1c, which is great for our patient population. We have added a new partner, Dr. Aloj, and he will continue providing endocrinology specialty clinics for us.

B. Organizational Capacity

How has the federal funding of your grant program increased local capacity at your organization, within your network, and/or in your community? Please check the appropriate selection. If other, please describe.

- Formalized networks or coalition
- Developed new partnerships or relationships
- Enhanced skills, education, or training of workforce
- Enhanced data collection and analysis

C. Contributions to Change

- i) Please provide a story or two about how your program made a difference in individuals' lives, your organization or network, or your community.

The Health Wagon has several patients that make our mission come to reality daily. We have a patient who is a native of Dickenson County, Virginia began seeing Health Wagon nurse practitioners in early 2015. At his initial encounter, he informed the nursing staff he had not been to the doctor since he was in elementary school, approximately 30 years ago. He learned about the Health Wagon from a flyer hanging in a local convenient center advertising an upcoming health fair event. This patient had no insurance, was currently unemployed and had very limited transportation. He lived with a family member and helped care for his elderly, sick father. He put others needs in front of his own and his health has drastically decreased due to this. He made arrangements and attended the health fair where he was able to take advantage of several services such as medical and vision. He reported he had been having frequent headaches and severe dry mouth. After being triaged, he was taken directly to the medical bay and had extremely elevated blood pressure and was also diagnosed as a type 2 diabetic. He was able to have a vision screening to detect if any damage had occurred in his eyes. Thankfully, he sought help from the Health Wagon just in time. He is now a routine patient who has recently had both his hypertension and diabetic medications decreased because he has follow his medical treatment regimen designed specifically for him by his Health Wagon nurse practitioner, participated in the diabetes prevention program, has taken advantage of pharmacy connect to receive his life saving medications for free and has recently been volunteering for the Health Wagon in his spare time. He stated "the Health Wagon is a life saver, I have never felt better in my life. My nurse practitioner calls and checks on me. She truly cares, and it has made a difference.

- ii) Please provide an example of how your grant program may have directly or indirectly contributed to policy changes, systems changes, or environmental changes. Examples may include passing school nutrition policies, implementing Lean process improvements within your organization, or enhancing walkable spaces in your community.

The Health Wagon has been one of the front supporters for the Virginia Bill HB793. This bill would give Virginia Nurse Practitioners full practice authority without the oversight of a physician. The Health Wagon nurse practitioners testified at the House Subcommittee and were asked to testify at the Senate Subcommittee. The bill has made it through the seven legislative steps and is in the governor's hands for approval. The Health Wagon is a nurse managed clinic, meaning all patients are treated by nurse practitioners.

Virginia

Part I: Organizational Information

Grant Number	D04RH31611
Grantee Organization	Strength In Peers
Organization Type	Community-Based Organization
Address	1112 Shipwreck Dr., New Market, VA 22844
Grantee organization website	www.strengthenpeers.org
Outreach grant project title	Trauma Awareness and Resilience Project
Project Director	Name: Nicky Fadley
	Title: Executive Director
	Phone number: 540-217-0869
	Fax number: 540-908-3624
	Email address: nicky@strengthenpeers.org
Project Period	2015 – 2018
Funding level for each budget period	May 2015 to April 2016: \$200,000
	May 2016 to April 2017: \$200,000
	May 2017 to April 2018: \$200,000

Part II: Consortium Partners

* Indicates those consortium partners who have signed a Memorandum of Understanding/Agreement)

Partner Organization	Location (town/county/state)	Organizational Type
Northwestern Community Services Board*	Town of Front Royal, Warren County, Virginia	Regional public behavioral health treatment provider
Shenandoah Community Health Clinic*	Town of Woodstock, Shenandoah County, Virginia	Free clinic
Sentara RMH Medical Center*	City of Harrisonburg, Virginia	Hospital system
Strength In Peers*	Town of New Market, Shenandoah County, Virginia	Nonprofit community-based
Valley Health System*	City of Winchester, Virginia	Hospital system
United Way of Northern Shenandoah Valley*	City of Winchester, Virginia	Community foundation

Part III: Community Characteristics

A. Area

Shenandoah and Page Counties, Virginia

B. Community description

Shenandoah and Page Counties are home to 66,829 people with a population density of 82.5 people per square mile in Shenandoah County and 77.3 people per square mile in Page County compared with 202.6 people per square mile statewide. Socio-economic indicators suggest that the counties are more distressed than state and national averages, as evidenced by low rates of insurance coverage and high rates of poverty, unemployment, and enrollment in public benefits. Behavioral health is a growing issue. In 2016, Valley Health System conducted a community health needs assessment of the target areas, which found that substance abuse was the most frequently mentioned health status issue and was portrayed as growing and serious throughout the region. Mental health was the second most frequently mentioned health issue and, while the community's mental health needs have risen, service capacity has not. Lack of service capacity, cost, transportation, and cultural stigma are barriers that prevent individuals with mental health and substance abuse challenges from getting help.

C. Need

The project targeted individuals who have experienced trauma. A majority of Americans experience trauma at some point in their lives. About 60% of men and 50% of women experience at least one trauma, such as accidents, physical assault, sexual assault, disaster, combat, or witness to death or injury. Studies show that there is a strong relationship between trauma and both mental health and substance use disorders. Additionally, people who report symptoms of post-traumatic stress are more likely to have a greater number of physical health problems. The consequences of trauma in rural communities is of special concern. These communities lack access to behavioral health services and face additional social and economic stresses, including financial pressures and job security. Many people also do not seek care due to cultural stigma associated with mental health and substance abuse challenges.

Part IV: Program Services

A. Evidence-based and/or promising practice model(s)

The program is modeled after three promising programs

- *Peer Support* programs define a peer support provider as someone who has personal experience with behavioral health challenges, and having attained significant improvements in his or her own condition, this person offers formal services and support to peers considered to be not as far along in their own recovery process. The peer specialist offers weekly peer support groups and one-on-one visits. The project provided peer support services based on this model.
- *Buddy-to-Buddy Volunteer Veteran Program* seeks to overcome stigma and promote entry into and adherence with appropriate treatments using peer-to-peer outreach. Developed by the University of Michigan in 2009, it trains volunteer National Guard Veterans to encourage active Guardsmen experiencing post-traumatic stress symptoms to enroll in treatment. The project trained volunteers to conduct peer-to-peer outreach based on this model.
- *Arkansas Yellow Ribbon Task Force* program is a partnership between the Central Arkansas Veterans Healthcare System and community stakeholder groups to promote and encourage engagement in mental health care for rural Veterans. The program provided training to clergy, criminal justice personnel, and postsecondary educators on trauma, behavioral health, and available services. This increased the likelihood of community members experiencing behavioral health issues to get connected with services. The project provided similar training to faith and community leaders, social service personnel, first responders, and others who are likely to come into contact with members of the target population.

B. Description of Activities

The project sought to improve the community's capacity to serve individuals who have experienced traumatic events and are having behavioral health challenges. Activities included the following:

- Outreach and educational presentations to at-risk populations for trauma, post-traumatic stress, and other behavioral health challenges.
- Development of trauma-informed peer support services in Shenandoah and Page Counties.
- Development of behavioral health treatment services at a free clinic.
- Training volunteers in peer support.
- Education to community leaders, social service providers, and primary care providers about trauma-informed practices, supporting people with behavioral health challenges, and making referrals to available community services.
- Training health care and social service providers in Mental Health First Aid.
- Raise awareness in the community about trauma, mental illness, and substance abuse through community events, social media, and mass media.

C. Role of Consortium Partners

The consortium partners are the members of the Shenandoah Mental Health Network. As members of the Network, they each have at least one staff person assigned to participate in activities. These individuals contribute their time and expertise. They also connect the Network to other staff within their agencies. In this project, Network members had the following responsibilities:

- Collaborated on the community needs assessment and strategic plan to design the project.
- Attended quarterly meetings to review project progress and coordinate on objectives.
- Provided guidance and support to the project, including help to overcome challenges and identify new opportunities.
- Collaborated on the development of educational materials about trauma, behavioral health, and community services and distribute the educational materials produced by the Network.

Network members also had specific roles in the project.

- Northwestern Community Services Board helped to organize and facilitate Mental Health First Aid trainings.
- Shenandoah Community Health Clinic provided behavioral health treatment services.

- Sentara RMH Medical Center and Valley Health System allowed their direct service staff to participate in outreach and educational opportunities.
- United Way of Northern Shenandoah Valley helped to market outreach and educational opportunities to the larger nonprofit and social service community.

Part V: Outcomes

A. Outcomes and Evaluation Findings

The project conducted outreach to almost 500 people about trauma, mental health, and available community services in Page and Shenandoah Counties. Project staff provided education to 150 seniors about creating mental health wellness plans in partnership with the Page County Seniors and Law Enforcement Together (SALT) Council. Project staff also provided an educational talk and poetry reading about mental health awareness to 16 seniors in partnership with the Page County Senior Center. Project staff provided presentations about trauma, self-care, and available community services to two emergency rescue squads in Page County and one in Shenandoah County with a combined 44 participants. They provided similar presentations to 136 representatives of civic and social service organizations located in the two target counties. Project staff conducted presentations about mental health awareness at one nearby community college and two universities to 95 students. They participated in five Veterans events in the target counties and provided education to 40 individuals. Finally, project staff developed two key materials for public dissemination. One was a guide to locally available, professional and peer-based behavioral health services that is updated annually. The other was a pocket guide to understanding mental health.

The project has sought to provide one-on-one and/or group peer support services to at least 40 adults. The project has faced challenges to recruiting participants for peer support services. It has succeeded in establishing one weekly peer support group that has been active since March 2017 at the Family Promise emergency shelter in Shenandoah County. The group has had a total of 11 participants. Two other peer support groups were started and then cancelled due to lack of participation, one in each target county. Three individuals have participated in one-on-one peer support. Additionally, the project provided a free training for community members in Virginia's new curriculum for Certified Peer Recovery Specialists and four individuals graduated, all of who were residents of the target counties. At least one has obtained employment as a Peer Recovery Specialist at a behavioral health agency in Shenandoah County. Although peer support services did not experience the expected participation levels, professional behavioral health services did. The project has helped the Shenandoah Community Health Clinic, a Network member, to develop professional behavioral health services. As of the end of year two, the clinic had provided counseling and/or medication management services to 200 individuals.

Additionally, the project has worked to educate community service providers about trauma, mental health, and available community services. It provided training in Mental Health First Aid to 66 staff of community service organizations in partnership with Northwestern Community Services Board. It also held a summit in year two about developing trauma-informed practices with 10 representatives of local community-based organizations.

Finally, the project has worked to raise awareness about trauma and behavioral health among the general population. It has conducted numerous awareness campaigns using social and traditional media and has reached over 70,000 individuals. It also conducted an educational campaign in four high schools in the two counties about resilience and coping with stress reaching over 1,000 students. Project staff have participated in a number of community events to distribute information and resource guides to community members. Project staff distributed at least 500 copies of guide to behavioral health services and the pocket guide to understanding mental health. Network members and other community agencies have also distributed the guides.

B. Recognition

The project received local recognition on TV (WHSV), radio (The River 95.3, and WMRA) and the electric cooperative's monthly magazine (Shenandoah Electric Cooperative – Cooperative Living).

Part VI: Challenges & Innovative Solutions

The key challenges this program has encountered has been difficulty marketing peer support services, which are a new behavioral health service in the target communities, and recruiting participants. These challenges may be higher due to the project's rural setting. Barriers faced by rural residents include the following:

- Many rural residents are more difficult to reach through marketing efforts because they do not access other service providers that might provide referrals, lack access to Internet, are not connected to social media, do not receive or read newspapers, do not encounter community bulletin boards, and do not participate in community events.

- Many rural residents do not have access to public transportation to reach services.
- Many rural residents do not have time to participate in new services because of family responsibilities, work, and longer commutes.
- Many rural residents face cultural stigma associated with behavioral health issues and seeking services.

A key lesson learned has been persistence and flexibility. When mass media marketing efforts did not provide results, the project changed its focus to social media. When behavioral health and primary care agencies did not provide referrals, the project found opportunities to integrate services directly into health and social service agencies. Despite these efforts, recruitment was lower than anticipated. Fully launching peer support services in these communities will take time and positive referrals via word-of-mouth.

Part VII: Sustainability

A. Structure

Strength In Peers will continue to provide the Network a Coordinator. It will absorb the duties of this position and assigned the role to its Executive Director as part of her position description. The duties of the Network Coordinator include organizing meetings, coordinating agendas, distributing minutes, and following up with members regarding next steps and other commitments. The Network Coordinator also serves as the grant writer for most Network projects; although any member can initiate, develop and lead the implementation of a grant project. All Network members will continue to participate in Network meetings and activities.

B. On-going Projects and Activities/Services To Be Provided

i) Will all, some or none of the elements of the program be sustainable once Outreach grant funding has ended? Please check the appropriate selection.

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained (i.e. the program will completely end after the grant period)

ii) Identify the projects and activities that will be sustained beyond Outreach grant period.

The Network will continue to engage in community education campaigns to raise awareness about behavioral health issues and combat cultural stigma. It will annually revise and disseminate a resource guide on locally available behavioral health services. It also will conduct regular social media campaigns with education about relevant topics, such as opiate overdose prevention, adverse childhood experiences, trauma-sensitive practices, etc. Additionally, the Network will participate in community events where it can disseminate educational materials to the general public and answer questions.

Northwestern Community Services Board will continue to conduct training in the community on Mental Health First Aid. The Shenandoah Community Health Clinic will continue to provide counseling services and it is developing the capacity to bill insurance providers to sustain services over the long term. Strength In Peers also will continue to provide peer support services and is fundraising to sustain services over the long-term. All other Network members will continue to participate in regular activities.

C. Sustained Impact

The primary sustained impact of the grant project is the awareness the Network has raised about behavioral health among service providers and the general public. Every effort to discuss behavioral health further destigmatizes these disorders and reduces cultural barriers to accessing services. The quarterly meetings of the Network around this project also have raised awareness among members about the services they provide, the challenges they are facing, the strategic directions they are going in, and opportunities to collaborate. The meetings also continue to help members develop relationships with one another that facilitate collaboration and information sharing.

Part VIII: Implications for Other Communities

Our project's key lessons learned are the benefits of adopting social media as a means to increasing outreach and marketing outcomes. Social media also facilitates developing conversations with individuals and communities that assessed in an evaluation. In comparison, traditional media is typically a one-way conversation and there is very little data that can be generated on the effectiveness of those communications.

Another key lesson learned is that service providers cannot be counted on to make referrals to a new peer support program. Providers were hard to convince of the value of peer support and the sustainability of the new peer support services. The greatest success was achieved with the integration of peer support into organizations' existing services. A key indicator to consider is the development of the relationship between the new program and various community organizations.

Part IX: Success, Increased Capacity, and Contributions to Change

A. Defining Success

- i) How do you define "success" for your grant program? Please check the appropriate selection(s). You may choose more than one option. If other, please describe.
- Access to a new or expanded health service
 - Increased number of people receiving direct services
 - Improved quality of health services
 - Operational efficiencies or reduced costs
 - Integration of process improvement into daily workflow
 - Continuation of program activities after grant funding
 - Continuation of network or consortium after grant funding
 - Health improvement of an individual
 - Health improvement among your program participants
 - Health improvement among your community
 - Enhanced staff capacity, new skills, or education received
 - Improved capacity to adapt to changes in healthcare
- ii) Do you believe that your program has achieved success? If so, how?
- The project has achieved success in many ways. The target community has new behavioral health services that were not available previously. These services are expected to continue after grant funding. The project also has conducted a number of outreach meetings and educational trainings to develop the capacity of local health and social service agencies to provide trauma-sensitive services and make appropriate referrals to available behavioral health services. The Network's willingness to continue meeting and partnering on new projects serves as evidence of this project's achievements and supports the sustainability of these and future activities to close gaps in local behavioral health services.

B. Organizational Capacity

How has the federal funding of your grant program increased local capacity at your organization, within your network, and/or in your community? Please check the appropriate selection. If other, please describe.

- Formalized networks or coalition
- Developed new partnerships or relationships
- Enhanced skills, education, or training of workforce
- Enhanced data collection and analysis

C. Contributions to Change

- i) Please provide a story or two about how your program made a difference in individuals' lives, your organization or network, or your community. (Please do not use actual individuals' names.)
- Sara* participate in an awareness talk at the senior center. She was so moved by the open and honest discussion about mental illness that she disclosed that she has schizophrenia. The woman next to her stood up and exclaimed that she had been best friends with Sara for over 20 years and never knew she had a mental illness.
 - Laura* learned about Strength In Peers on the news and sought out peer support services. She was experiencing feelings of sadness, loneliness and anxiety. She was disabled, lacked transportation, and lived far from services. A Peer Support Specialist worked with Laura in her home. She was able to talk about her feelings, practice coping strategies, and worked to rebuild her relationship with her daughter.
 - Ashley* sought counseling services at the Shenandoah Community Health Clinic for depression and anxiety. Her anxiety was so paralyzing that she was unable to work. Through hard work and therapy, Ashley was able to developing coping strategies. She returned to work in a different field and recovered most of the life she had lost. She improved relationships with her children and reports being overall more focused and able to cope with life.

*Names changed to protect privacy

- ii) Please provide an example of how your grant program may have directly or indirectly contributed to policy changes, systems changes, or environmental changes. Examples may include passing school nutrition policies, implementing Lean process improvements within your organization, or enhancing walkable spaces in your community.
As a result of trainings in Mental Health First Aid and trauma-sensitive practices, the project may have contributed to changes in the way providers respond to clients/patients who display signs of trauma. The project also has increased collaboration among Network members who previously did not meet regularly to discuss gaps in behavioral health services.

Washington

Part I: Organizational Information	
Grant Number	D04RH28420
Grantee Organization	Yakima Valley Farm Workers Clinic
Organization Type	Federally Qualified Health Center, Migrant Health Center
Address	510 West First Ave., PO Box 190, Toppenish, WA 98948
Grantee organization website	www.yvfwc.org
Outreach grant project title	Patient Navigation/Care Coordination to Improve Outcomes for Children with Special Health Care Needs (Children with Special Health Care Needs)
Project Director	Linda Sellsted
	Children's Village Clinic Manager
	Phone number: 509-574-3207
	Fax number: 509-574-6935
Project Period	2015 – 2018
	2015 – 2018
Funding level for each budget period	May 2015 to April 2016: \$200,000
	May 2016 to April 2017: \$200,000
	May 2017 to April 2018: \$200,000

Part II: Consortium Partners		
* Indicates consortium partners who signed a Memorandum of Understanding/Agreement		
Partner Organization	Location (town/county/state)	Organizational Type
Virginia Mason Memorial Hospital*	Yakima, Yakima County, WA	Non-Profit Hospital
Comprehensive Health Care*	Yakima, Yakima County, WA	Non-Profit Mental Health Care
Yakima Valley Farm Workers Clinic*	Toppenish, Yakima County, WA	Federally Qualified Health Center, Migrant Health Center
Memorial Foundation*	Yakima, Yakima County, WA	Health Care Charity

Part III: Community Characteristics

A. Area

Rural cities and communities (defined as eligible for Federal Office of Rural Health Policy grant programs, by *Am I Rural?*), in lower Yakima County: Buena, Grandview, Granger, Mabton, Outlook, Sunnyside, Toppenish, White Swan, Zillah

B. Community description

Rural Yakima County in comparison to Washington State and the United States has a higher percentage of Hispanic individuals (59% vs. 11%, 16%, respectively); a higher percentage who speak a language other than English at home (54% vs. 18%, 20%); a higher percentage which are classified as Low Income (62% vs. 29%, 34%) and a higher percentage of those less than 18 years of age who are without Health Insurance (25% vs. 6%, 8%) (ACS 5yr estimates 2012). These social and economic factors in addition to increased distance to access pediatric specialty care act to decrease utilization of needed services for children with special health care needs.

C. Need

There is a shortage of pediatric specialty services in rural eastern Washington State. In rural Yakima County, access is limited due to distance and travel time to Yakima (30 plus miles), where Children's Village, a regional Neurodevelopmental Center is located. The lack of access to culturally and linguistically appropriate supportive services and a 6 - 9 month wait from referral to actual

Developmental Behavioral evaluation appointment, results in parents misunderstanding the purpose and importance of this evaluation for their child. This in turn results in a relatively high 'no show' rates for these appointments.

Part IV: Program Services

A. Evidence-based and/or promising practice model(s)

The *Patient Navigation/Care Coordination Program for Children with Special Health Care Needs (CSHCN)* utilizes evidence-based and promising practice models to promote healthy development, improve access to timely diagnosis and treatment, and seamless, coordinated care and services for low income, underserved Children with Special Health Care Needs and their families from rural Yakima County as they navigate a complex healthcare delivery system. A nationally recognized evidenced-based patient navigation model developed by Dr. Harold P. Freeman to reduce health disparities and eliminate barriers to timely diagnosis and treatment of cancer in Harlem, NY (<https://www.hpfreemanpni.org/our-model/>), was adapted for low-income, underserved, rural Yakima County children with special health care needs and their families. Freeman's model uses patient navigation to eliminate the following frequently encountered barriers: financial barriers, communication barriers, medical system barriers, psychological barriers and others, such as transportation and need for child care. The adaptations for this program included home visits by a bilingual Community Health Worker and budgeting for transportation costs for home visits (60-80 miles roundtrip to rural families).

CaCoon, a community-based care coordination program for children with special health care needs developed 20 years ago in Oregon State (<http://www.ohsu.edu/xd/outreach/occyshn/programs-projects/cacoon.cfm>) is recognized as a promising practice by the Association of Maternal & Child Health Programs. The **CaCoon** program provides Public Health Nurse home visiting services to families with children and youth with special health care needs at the county level. This program was adapted by using a Community Health Worker (identified as a Patient Navigator in the grant, title changed for consistency in the employing organization), predominantly for pre-evaluation home visits and the Public Health Nurse for post-evaluation phone calls and home visits. The appropriately trained and supported Community Health Worker is able to provide sufficient support and education to families prior to the evaluation, at much lower cost to the program. Working with the corporate performance improvement senior manager, the project team developed workflow processes for the front office team, the community health worker and public health nurse to meet newly referred family's needs and to develop an appropriate care plan. The Community Health Worker and Public Health Nurse promoted optimal child and family outcomes through care coordination and home visiting.

B. Description of Activities

The essential initial activity is to recruit, hire and train bilingual (English/Spanish) and bi-cultural Public Health Nurse and Community Health Worker. Once these employees are hired and trained, they and the project team work with the clinic's senior manager of performance improvement to develop and establish workflows for the Public Health Nurse and Community Health Worker. The team continues to work with the performance improvement senior manager, refining these workflows for continuous improvement and evaluating project data.

The Community Health Worker is responsible for initial contact of rural Yakima County patients referred for Developmental Behavioral Evaluation at Children's Village and contacts in excess of 90% those referred.

The Community Health Worker facilitates through telephone calls, office or home visits: a) completion of provider requested assessments, b) referrals to Early Intervention, Parent to Parent and Behavioral Health and c) successful Developmental Behavioral Pediatric appointment completion.

The Public Health Nurse facilitates through office or home visits: a) referrals recommended by the Developmental Behavioral Pediatric Provider; b) daily huddles with Community Health Worker and Developmental Behavioral Pediatrics Provider; c) weekly case conferencing with Developmental Behavioral Pediatrics Provider. In addition, the Public Health Nurse provides follow-up visits with Developmental Behavioral Pediatric patients after evaluation, which includes assessment of medication effectiveness.

The Community Health Worker promotes Early Intervention at two community fairs or events each project year; The Public Health Nurse and Developmental Behavioral Pediatrician promote Universal Developmental Screening at three meetings of community health care providers and the Children's Village medical advisory committee meetings each project year.

Role of Consortium Partners

The Children's Village Leadership team is composed of members from each consortium partner (*i.e.* Virginia Mason Memorial Hospital, Memorial Foundation, Comprehensive Health Care and Yakima Valley Farm Workers Clinic). These members participate

in the planning and implementation of the Rural Health Care Services Outreach grant through monthly administrative meetings. The Children's Village Operations team, made up of the Children's Village Manager (who is also the grant project director) and supervisors of each program, provide monthly program updates at these partner meetings.

Comprehensive Healthcare participates with all the partners in strategic planning for the Village.

Memorial Foundation is the philanthropy arm of the partnership. They conduct fundraising events in the community and cultivate community donors, as well as providing education on Children's Village programs and services to the community.

Virginia Mason Memorial Hospital's providers refer patients to Children's Village for Developmental Behavioral Pediatric evaluation; Virginia Mason Memorial Family Resource Coordinators (Birth to 3 years Program) work with the Community Health Worker to connect referred families with resources; Virginia Mason Memorial Physical Therapy/Occupational Therapy/Speech providers provide services to patients that are referred for Developmental Behavioral Pediatric evaluation and are able to utilize the Community Health Worker in providing outreach to patients.

Yakima Valley Farm Workers Clinic primary care providers refer patients to the Children's Village for Developmental Behavioral Pediatric evaluation. Yakima Valley Farm Workers Clinic, Outreach and Community Services Departments provide supervision for the Community Health Worker and Public Health Nurse; Yakima Valley Farm Workers Clinic, Quality Department provides guidance on workflow development and process improvement; Yakima Valley Farm Workers Clinic, Information Services assists with electronic health record reporting issues, Yakima Valley Farm Workers Clinic, Planning and Development Department with the assistance of the Memorial Foundation developed the initial grant and Yakima Valley Farm Workers Clinic, Planning and Development Department provides quantitative and qualitative data analysis and reporting for the grant.

Part V: Outcomes

A. Outcomes and Evaluation Findings

Outcomes include: 1) increases in access by rural Hispanic, Children with Special Health Care Needs and their families to culturally and linguistically appropriate care; 2) reduction in barriers to pediatric specialty care for rural Children with Special Health Care Needs; 3) more timely movement of Children with Special Health Care Needs from referral to Developmental Behavioral evaluation, diagnosis and treatment; and 4) improves health, satisfaction and lower costs by timely diagnosis, treatment and coordinated care.

From October 2015 to December 2017, the Community Health Worker served 1,368 patients (Yakima County, overall 1,075; Rural Yakima County 364) referred to Children's Village for Developmental Behavioral Pediatrics evaluation. She provided Telephone Encounters with 305 (260, 160) patient's families, had first Home Visits with 140 families (134, 88) and second Home Visits with 88 (87, 62), and sent 456 letters (375, 181) to families unavailable by telephone.

The project Public Health Nurse provides triage coordination for the new referrals and follow-up medication checks for patients who have completed their Developmental Behavioral Pediatric evaluation. From May 2016 to December 2017, the Public Health Nurse served 1,516 (Yakima County 1,238, Rural Yakima County 325) patients and their families. Her activities included 851 (639, 196) Triage referrals, 1,166 (1,069, 167) Medication check phone calls with family, 183 (163, 34) Medication checks with provider or school of patient, 161 (159, 81) Home Visits, 72 (71, 21) Case Conferences and 51 (45, 11) Letters sent.

The city of Yakima is a metropolitan statistical area located at the northern end of Yakima County. The rural areas of the county are located to the south of the city and have a higher percentage of the population which is Hispanic, as shown in Table I. Areas within the primary flow of commuting to the metropolitan area, do not qualify as rural (see note below table), though many of the bordering areas are locally known as "rural".

I. Yakima County Population		
	Population	Percent Hispanic
Total	247,681	47.7%
Non-Rural	174,626	38.2%
Rural*	74,519	70.4%

**As determined by Am I Rural? locations eligible for Federal Office of Rural Health Policy grant programs.*

Table II (below) provides the number of Developmental Behavioral Pediatric patients seen at Children's Village from Yakima County prior to (10/2012-9/2014) the program's initiation and after it had been in operation for six months or more (1/2016-12/2017).

II. Children's Village Developmental Behavioral Pediatric Patients from Yakima County					
Time Period	Yakima County Patients	% Prefer Spanish	% Rural	% Hispanic	% Rural Hispanic
10/2012 - 9/2014	951	19.6%	24.2%	47.7%	74.8%
1/2016 - 12/2017	1,720	22.8%	27.0%	52.6%	77.4%
New* 1/2016-12/2017	1,065	22.2%	29.8%	52.6%	76.3%

* *New indicates patients not seen in CY2014 or CY2015.*

As can be seen in this table, the number of Yakima County residents seen for Developmental Behavioral Pediatric appointments increased by 81% with this project and there was an increase of 102% in the number of patients who were from rural parts of Yakima County. This is especially apparent when comparing "new" Developmental Behavioral Pediatric patients (those not seen in CY2014 & CY2015), which were 29.8% from rural Yakima County with patients seen before the project was implemented 24.2%. The percent of Hispanic families is higher in the rural areas of Yakima County, therefore increasing the proportion of rural patients also increased the overall percent of Hispanic patients seen by 5% and the percent of patients who preferred Spanish by 2%.

The time from referral to Developmental Behavioral Pediatric appointment has not changed with this project (approximately 6 – 8 months). Primarily this is due to is the increased number of referrals for Developmental Behavioral Pediatric evaluations, a result of training primary care providers and early Head Start instructors in screening with the Ages and Stages Questionnaire (from a recently completed Rural Health Network Development grant).

Preliminary data for CY 2016 indicates that patients that receive any home visits with the Community Health Worker have a 90% completion rate for Developmental Behavioral Pediatric appointments, whereas patients who did not receive any home visits had a 60% completion rate for Developmental Behavioral Pediatric appointments. See Table III below.

III. CY 2016 Developmental Behavioral Pediatric Appointment Completion			
HV by Community Health Worker	Non-Rural Yakima County	Rural Yakima County	Yakima County Overall
Any HV	88.5%	89.8%	89.3%
1 HV	90.0%	77.8%	82.1%
2 HV	87.5%	96.8%	93.6%
None	58.6%	62.2%	59.9%

The Developmental Behavioral Providers express appreciation for the work of the Community Health Worker and Public Health Nurse funded by this project. Because of the interaction with the Community Health Worker, the patients and families come to their Developmental Behavioral Pediatric evaluation with a better understanding of the purpose of the visit and with all the needed instruments completed. A key informant interview with Developmental Behavioral Pediatric providers is planned for mid-April.

Thirty-four participant parents (17 English speaking and 17 Spanish speaking) were surveyed by telephone in February 2018 about their experience with the Community Health Worker and program. 84% of survey respondents **Agree or Strongly Agree** that the Community Health Worker's 'explanations increased my understanding of my child's needs'; 84% **Agree or Strongly Agree** that the Community Health Worker 'helped prepare my family and me for the Developmental Behavioral Pediatric appointment'; 84% **Agree or Strongly Agree** that 'the program motivated me to keep our Developmental Behavioral Pediatric appointment'; 88% **Agree or Strongly Agree** that 'I am satisfied with the program'. In addition, an

open-ended question about the most helpful elements of the program elicited 27 positive responses. Some comments were: it helped me so much to understand the program; I feel the program is helping my son; able to understand the medicine (my child) is taking; helping us to get to the right people; the understanding and compassion – they really cared; reassurance (that) there is an opportunity for my child to learn; understanding that she is the same as other kids and she really liked the provider and staff was helpful and they provided a lot of resources that were helpful.

B. Recognition

The Developmental Behavioral Pediatrician will be presenting a poster on this project at the Society for Developmental & Behavioral Pediatrics 2018 Annual Meeting in Anaheim, California, September 2018.

We are also investigating presenting this project at the 35th Annual Oregon Rural Health conference in Bend, October 2018.

Part VI: Challenges & Innovative Solutions

First Project Year challenges included:

Delay in posting the Community Health Worker position due to corporate changes in classification and supervision of the community health worker. Extended recruiting period needed to find the best candidate for the Public Health Nurse position. This somewhat delayed the initiation of the Public Health Nurse activities.

The **CaCoon** model provides marked flexibility for implementation – therefore the challenge was to define the roles and activities for the Community Health Worker and Public Health Nurse in this project. The project director, Children’s Village nurse supervisor and project analyst met with **CaCoon** developers in Portland, OR and discussed possible training opportunities for the Community Health Worker and Public Health Nurse. Assistance provided by the Yakima Valley Farm Workers Clinic Senior Manager of Performance Improvement also helped the team to define duties and workflow for these two positions.

Backlog of referrals for Developmental Behavioral Pediatric evaluations existed when the Community Health Worker was hired. By the end of the first program year, the Community Health Worker had resolved the backlog of referrals.

Initial contact logs for Community Health Worker did not allow for documenting all the possible referrals made to families. These referrals were included in the electronic health record notes. A new electronic health record with greater capacity for documentation and reporting was implemented in August 2015. Reporting from this new system has lagged behind and currently reports are being written to provide summaries of the Community Health Worker’s referrals to parents and families.

Second Project Year challenges included:

Supervision of the project Community Health Worker and Public Health Nurse by departments external to the project resulted in differing/conflicting expectations for performance of these individuals. This was resolved by discussions between these external supervisors and the project director.

Community Health Worker experienced challenges scheduling home visits and traveling to rural Yakima County. Round trip car travel to rural Yakima County can vary from 40 minutes to 1.6 hours. She is been grouping her home visits by region, but late cancellations or no shows by families complicate the home visiting schedule.

The time from referral to actual Developmental Behavioral Pediatric evaluation appointment did not decrease during this project. A Developmental Behavioral Pediatric Nurse Practitioner left Children’s Village during project year two and needed to be replaced. It took 3.5 months to hire another Developmental Behavioral Pediatric ARNP and then there was adjustment time for the new provider. The number of referrals for Developmental Behavioral Pediatric evaluation increased from baseline during the Rural Health Outreach grant project due to a previous established Universal Developmental Screening project.

On-going Issues:

Reporting from the new electronic health record continues to be a challenge, but progress is occurring.

Part VII: Sustainability

A. Structure

The consortium will continue in its current configuration. The consortium was developed to establish the Children's Village in 1997 and is integral to its continued functioning. The consortium members will continue: Virginia Mason Memorial Hospital, Memorial Foundation, Comprehensive Health Care and Yakima Valley Farm Workers Clinic.

B. On-going Projects and Activities/Services To Be Provided

i) Will all, some or none of the elements of the program be sustainable once Outreach grant funding has ended? Please check the appropriate selection.

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained (i.e. the program will completely end after the grant period)

ii) Identify the projects and activities that will be sustained beyond Outreach grant period.

The Community Health Worker (1 FTE) component is an essential component of the program and will be continued. The workflows for Community Health Worker and Public Health Nurse are maintained with adjustments as needed. The Public Health Nurse (0.5 FTE) function will be staffed. For the first year post-grant these positions will be funded by carry-over funds. In addition, we have applied for the next round of Rural Health Outreach funding for an expanded program that would include other medical specialties located at Children's Village. We are expanding our search for funding from foundations and state level agencies.

C. Sustained Impact

Developmental Behavioral Evaluation of referred children provides for early intervention and treatment that can improve the child and family's functioning and ability to cope with challenges of behavioral, physical, developmental and emotional issues. The benefits for children, their families and communities are lifelong.

The Patient Navigation/Care Coordination program for Children with Special Health Care Needs is a useful model for other sites and communities that wish to improve care for children with special health care needs and their families. Workflow mapping to develop the processes used by the community health worker and public health nurse, was a first in our corporation and laid the groundwork for other departments to use this method for instituting process changes and improvements. In addition, the use of the community health worker and public health nurse provides more efficient patient visits with the Developmental Behavioral Pediatric providers. This increases the provider's time usage for synthesizing the patient information and acts to improve provider job satisfaction. Well-prepared families can get questions answered during the provider visits and feel more effective in acquiring adequate assistance for their child.

Part VIII: Implications for Other Communities

The model of utilizing a Community Health Worker and Public Health Nurse to increase access and support for low income, mono-lingual patients referred for medical specialty services can be used to increase the efficiency of other health care services. This support allows providers to work at the top of their license more consistently, which improves provider satisfaction and retention.

Part IX: Success, Increased Capacity, and Contributions to Change

A. Defining Success

i) How do you define "success" for your grant program? Please check the appropriate selection(s). You may choose more than one option. If other, please describe.

Access to a new or expanded health service

Increased number of people receiving direct services

Improved quality of health services

Operational efficiencies or reduced costs

Integration of process improvement into daily workflow

Continuation of program activities after grant funding

- Continuation of network or consortium after grant funding
- Health improvement of an individual
- Health improvement among your program participants
- Health improvement among your community
- Enhanced staff capacity, new skills, or education received
- Improved capacity to adapt to changes in healthcare

ii) Do you believe that your program has achieved success? If so, how?

Yes, the project is successful. The number of Yakima County residents seen for Developmental Behavioral Pediatric appointments increased by 81% with this project and there was a doubling in the number of patients who were from rural parts of Yakima County.

B. Organizational Capacity

How has the federal funding of your grant program increased local capacity at your organization, within your network, and/or in your community? Please check the appropriate selection. If other, please describe.

- Formalized networks or coalition
- Developed new partnerships or relationships
- Enhanced skills, education, or training of workforce
- Enhanced data collection and analysis
- Other: Development of a Community Health Worker model that assists low literacy, mono-lingual families navigate specialty pediatric care and access resources to assist their child with special health care needs.

C. Contributions to Change

i) Please provide a story or two about how your program made a difference in individuals' lives, your organization or network, or your community. (Please do not use actual individuals' names.)

The community health worker recently had an office visit with a family from rural Yakima County. The community health worker had previously scheduled a Developmental Behavioral Pediatric evaluation at Children's Village for the family's eight year old daughter, secondary to a referral from the child's physician. The parents had concerns about the child's behavior and safety. They indicated their child was referred to Children's Village and her appointment is four months in the future, but they wanted to know what they could do now. The parents were anxious and confused about how to help their daughter. The community health worker explained the purpose and process of the Developmental Behavioral Pediatrics evaluation. She explained the need for each form used in the evaluation. She also offered to assist the family with the paperwork, either over the phone or in a home/office visit. In addition, the community health worker shared resources the family could access before the Developmental Behavioral Pediatric evaluation, to help them understand the issues associated with caring for a child with special health care needs. One of these resources was PAVE, an organization that offers support, training, and informational resources to empower families, and individuals with special needs. The mother expressed interest in Sib Shops, workshops supporting siblings of children with special health care needs. She said her other children would benefit from Sib Shops. The community health worker told the parents about a family event scheduled at the end of the month and then introduced the parents to the Program Coordinator for Parent 2 Parent, Children's Village parent support program. The coordinator shared that she had two sons diagnosed with autism, and discussed her family's personal journey at Children's Village. The parents opened up about their own challenges, and laughed about some of their daily struggles. The parents visibly relaxed and appeared less anxious after this interaction. The family connected to the Parent 2 Parent program by registering for the family event, and took more information with them for each one of their children. When the family left Children's Village they were more confident and less anxious about dealing with their daughter's special needs. The family further understood the Developmental Behavioral medical specialty appointment, but most importantly, they left Children's Village with more knowledge, a feeling of support, and new enthusiasm on how to move forward as parents.

ii) Please provide an example of how your grant program may have directly or indirectly contributed to policy changes, systems changes, or environmental changes. Examples may include passing school nutrition policies, implementing Lean process improvements within your organization, or enhancing walkable spaces in your community.

The pairing of a community health worker and public health nurse with a medical specialty provider, is a first for our organization. The increased Developmental Behavioral Pediatric appointment completion rate seen with community health worker home visits has resulted in obvious economies in provider usage. Yakima Valley Farm Workers Clinic Operations has expressed enthusiasm for expanding this program to other medical specialties at Children's Village. In addition, this project

was the first at Yakima Valley Farm Workers Clinic to utilize the services of our senior manager of performance improvement. Mapping of workflows for our proposed project and utilizing these workflows for developing process improvement strategies, gave form and direction for the project.

Wisconsin

Part I: Organizational Information

Grant Number	D04RH28427
Grantee Organization	Prairie du Chien Memorial Hospital Association, Inc. (dba Crossing Rivers Health) (CRH)
Organization Type	Critical Access Hospital
Address	37868 US Hwy 18, Prairie du Chien, WI 53821
Grantee organization website	https://www.crossingrivers.org/
Outreach grant project title	Mental Health through Telemedicine
Project Director	Name: Rick Peterson
	Title: Community Resource Director
	Phone number: 608-357-2087
	Fax number: 608-326-4882
	Email address: rick.peterson@crossingrivers.org
Project Period	2015 – 2018
Funding level for each budget period	May 2015 to April 2016: \$200,000
	May 2016 to April 2017: \$196,223
	May 2017 to April 2018: \$193,702

Part II: Consortium Partners

* Indicates consortium partners who signed a Memorandum of Understanding/Agreement

Partner Organization	Location (town/county/state)	Organizational Type
*Crossing Rivers Health	Prairie du Chien/Crawford/Wisconsin	Critical Access Hospital
* Crawford County Health and Human Services (CCHHS)	Prairie du Chien/Crawford/Wisconsin	Health and Human Services
* Richland County Health and Human Services (RCHHS)	Richland Center/Richland/Wisconsin	Health and Human Services
Rural Wisconsin Health Cooperative (RWHS)	Sauk City/Sauk/Wisconsin	Rural Healthcare Network

Part III: Community Characteristics

A. Area

- Crawford County, Wisconsin (2017 Population: 16,729) consisting of 1 city, 10 villages, 12 townships and 20 unincorporated communities/areas.
- Richland County, Wisconsin (Population: 17,495) consisting of 1 city, 5 villages, 16 townships and 33 unincorporated communities/areas.
- Portion of Northeast, Iowa (Clayton and Allamakee counties) is served by Crossing Rivers Health (Approximately 2,700)

B. Community description

Crawford and Richland counties in rural Wisconsin have been identified as Health Professional Shortage Areas for Mental Health services. Community Health Needs Assessments ranked Mental Health issues, including access to services, as one of the top three issues facing our targeted rural communities. Our Mental Health through Telemedicine initiative was designed to overcome health disparities caused by an extreme rural geography. Consortium agencies constantly struggled to provide mental health services due to a lack of local psychiatrists and psychologists in our local workforce. Prior to our HRSA Outreach funding, all agencies contracted with mental health providers located in Madison, Wisconsin necessitating a 2.5-hour one-way commute. The five-hour drive time dramatically reduced doctor availability on contracted days and forced mental health clinics to pay rates of \$160 and \$250 per hour even during the commute time.

C. Need

Our Mental Health through Telemedicine initiative was designed to implement a much-needed telemedicine/telehealth system that would dramatically enhance the availability of specialized mental health services accessible in our remote, rural locations throughout our target rural areas in Southwest Wisconsin. Our intent was/is to dramatically reduce travel time for both patients and providers, with a focus on improving access to much-needed psychiatric and behavioral health services. We also centered on improving health outcomes of patients with mental health issues, increasing knowledge levels about the functionality of Telemedicine to support primary and specialty health care areas with providers, patients and consumers.

Prior to our HRSA Outreach funding, the Crossing Rivers Telehealth Consortium and the use of telehealth services, patient wait times between appointments were estimated at 117 days. Our most recent data, indicates that wait times have been reduced to 30 – 45 days. Due to the reduction in wait times at our local clinics, 45% of our patients have not had to travel to urban areas for appointments. We have also seen an estimated \$90,000 annual savings between consortium agencies by reducing provider travel time. Additionally, telemedicine patient surveys have indicated that 95% of them were very satisfied or satisfied with telemedicine services and 96% were willing to continue with telehealth services.

Part IV: Program Services

A. Evidence-based and/or promising practice model(s)

“Telemedicine-Based Collaborative Care (TBCC)” is the selected evidence-based model chosen by CRTC. Telemedicine-Based Collaborative Care was designed to improve patient depression outcomes (response and remission) in rural primary care practices that lack on-site mental health specialists. The critical needs in Crawford and Richland counties duplicated these design foundations – indicating that if the program model was replicated with fidelity, similar positive outcomes could be anticipated.

Three types of providers are required to implement the intervention: on-site primary care providers, off-site telephone nurse care managers (CMs), and off-site telepsychiatrists. The on-site primary care providers screen all patients for depression, make diagnoses, and prescribe antidepressants, which are supplied to patients through the pharmacy. The CMs conduct biweekly telephone discussions with patients diagnosed with depression. During the discussions, the CMs are guided by a Web-based decision support system (NetDSS) that includes evidence-based instruments and scripts. The CMs provide patient education; assess barriers, preferences, and comorbidities; assist with patient self-management; and monitor symptoms, adherence, and side effects. The off-site telepsychiatrists provide clinical supervision for CMs during weekly meetings to discuss new patients and patients failing treatment. The telepsychiatrists also make treatment recommendations to primary care providers and conduct consultations with patients via interactive video. Telepharmacists and telepsychologists also may be involved in care. Telepharmacists conduct medication histories, address side effects of medications and non-adherence to protocols and assess issues when patients do not respond to antidepressant therapy. Telepsychologists provide evidence-based psychotherapy via interactive video. Intervention duration ranges from 8 months (2 months acute phase and 6 months continuation phase) to 12 months (for patients not responding in the acute phase or relapsing in the continuation phase). The intervention uses a stepped-care model in which treatment intensity is increased for patients failing to respond to lower levels of care by involving a greater number of intervention personnel with increasing mental health expertise. The sequence is as follows: (1) the patient and provider choose either watchful waiting or antidepressant therapy; (2) if the patient does not respond to antidepressant therapy, the telepharmacist conducts a medication history and provides pharmacotherapy recommendations to the primary care provider; and (3) if the patient still does not respond to anti-depressant therapy, a telepsychiatrist provides a patient consultation followed by additional treatment recommendations to the primary care provider.

While the model had been proven effective for adult populations, it did not include the use of telemedicine for youth patients. Consortium agencies have expanded the existing model, modifying it to meet the specific needs of Crawford and Richland counties – where there is a desperate shortage of child- focused mental health providers. We have utilized the basic concepts of this model to address patients with a variety of diagnoses beyond depression.

We have begun to integrate the “**Patient-Centered Medical Home**” model into our telemedicine delivery system to meet behavioral health and substance abuse needs. The medical home model encompasses five primary principles, functions and attributes: Patient-Centered, Comprehensive Care, Coordinated Care, Access to Care, and Systems Approach to Quality and Safety.

B. Description of Activities

All consortium agencies have a regular presence at their respective county fairs, senior expos, schools and other community healthcare events. We continually work with neighboring hospitals and primary care clinics to educate them on our tele-behavioral health services and how we can assist them in meeting the needs of their patient base.

An example of our outreach activities was seen in Richland County when seventy-four workers were displaced, with no notice, after a Foundry closing. Richland County Health and Human Services was there to educate workers on crisis management and other available counseling services. Additionally, all of the displaced workers received a follow-up letter to emphasize counseling services available to assist them in overcoming their respective hardships.

Outreach activities held at the aforementioned sites have reached an average of fifty persons per site. A variety of screening tools are made available at events including tools to diagnose depression, mood disorders, and adult ADHD among others. Participants at these events have the opportunity to meet with Advanced Practice Psychiatric Nurse Practitioners, and/or Licensed Clinical Therapists and Social Workers. We have seen an increase of approximately 25% of unique patients receiving direct services by our consortium agencies since our baseline in 2015. Of that unique patient group, over 59% of patients aged 12 and older have been formally screened for clinical depression using an age appropriate standardized tool with a follow-up plan developed. Furthermore, we reached over 90,000 persons annually through indirect services: billboards, flyers, rack cards, mailings, newsletter and other mass media including social media. We attribute a significant portion of our success to outreach activity expansion, direct contact with providers and increased awareness of telehealth services available.

In February 2018, Crossing Rivers Health, Crawford County Health and Human Services, Crawford County Circuit Courts, Gundersen Health System, and Mayo Clinic Health System collaborated to hold a Town Hall meeting entitled *"Responding to Addiction in our Community"*. This Town Hall was held to address substance abuse and mental health co-occurring disorders, the impact it has on children, families and to address how we, as a community can respond. Over 120 people attended this meeting to learn about co-occurring disorder (addiction and mental health) problems facing our rural communities. The panel of experts included Crawford County Circuit Court Judge, License Clinical Social Workers, and Clinical Mental Health Therapists. Issues covered included treatment court alternatives to incarceration, current telemedicine and other treatment services available, and a call to action to identify the community's role. A follow up meeting to push forward the Call to Action is already scheduled for April 2018. The momentum generated from this event will continue well beyond Outreach funding.

C. Role of Consortium Partners

All consortium agencies were actively engaged in project design and implementation of the Mental Health through Telemedicine initiative. Crossing Rivers has served as the lead agency in the Rural Health Care Services Outreach grant. They have served as the lead for technology, broadband and infrastructure planning and training. Consortium IT department has worked collaboratively with CCHHS and RCHHS IT departments to test and ensure compatibility and functionality. CRH has provided management for all aspects of the grant and managed fiscal activities.

Consortium members have collectively developed best practices and telemedicine procedures documents. Each agency site has provided a telemedicine service delivery space and coordinated scheduling of the providers. We have established a consensus model to make decisions related to our Outreach grant. The Crossing Rivers Telehealth Consortium has met quarterly (in-person, phone, or virtually) at least during the Outreach program with a primary representative from each agency engage in planning, implementation and evaluation. These meetings will continue beyond Outreach funding. All consortium members have collected and disseminated data relative to telemedicine services to meet reporting requirements.

Part V: Outcomes

A. Outcomes and Evaluation Findings

We have seen an increase of approximately 25% of unique patients receiving direct services by our consortium agencies since our baseline in 2015. Of that unique patient group, over 59% of patients aged 12 and older have been formally screened for clinical depression using age appropriate standardized tools with a follow-up plan developed. Furthermore, we reached over 90,000 persons annually through indirect services: billboards, flyers, rack cards, mailings, newsletter and other mass media including social media. We attribute a significant portion of our success to outreach activity expansion, direct contact with providers and increased awareness of telehealth services available.

Telemedicine services have proven to reduce patient wait times between appointments, reduced patient and provider travel time, increased provider accessibility and been more cost effective. Evaluation results to date have shown patient wait times being reduced from an initial baseline of 117 days to approximately 30 – 45 days. We have also seen an estimated \$90,000 annual

savings between the consortium agencies by reducing provider travel time. Telemedicine patient surveys indicate a 95% very satisfied or satisfied rate with telemedicine services in our remote, rural area for the first time. Data collected early in this process indicated that 95% of patients were either very satisfied or satisfied with their tele experience and 96% would continue to use telehealth for future appointments.

B. Recognition

We have been able to share our lessons learned in three different venues over the past couple of years. Rick Peterson, Project Director, presented on our Mental Health through Telemedicine initiative as part of the Behavioral Health Grantee Panel discussion at the HRSA Rural Outreach Partnership Meeting in Rockville, Maryland in October 2016. This allowed us the opportunity to share our challenges, lessons learned and successes with our HRSA colleagues.

Mr. Peterson also presented at the “Innovations from the Field: Connecting Communities with Telebehavioral Health” Outreach Peer Learning Summit 2017 in Atlanta, Georgia. This invitation to present at the summit stemmed from our Technical Assistance provider, Lynne Kernaghan and was hosted by the Georgia Health Policy Center. Mr. Peterson was again able to demonstrate our progress to date by presenting and disseminating our White Paper, entitled *“Mental Health through Telemedicine: An analysis of the benefits and barriers of Telemedicine”*. Despite barriers along the way, with the help of the Rural Health Care Services Outreach grant we have been able to provide Telemedicine services in our rural areas while reducing costs and patient wait times. The current edition of our White Paper findings and conclusions can be found at <http://www.crossingrivers.org/mentalhealththroughtelemedicine>

We also presented our Telemedicine learnings as part of the SAMHSA-HRSA Center for Integrated Health Solutions, CIHS National Webinar Behavioral Health Integration for Older Adults webinar on February 15, 2017. Amanda Pettit, Clinic Nurse Manager; Marcia Erickson, Psychiatric Nurse; and Ashley Hady, MSW; shared the transition process utilized to facilitate older patients from primary care settings into behavior health.

Part VI: Challenges & Innovative Solutions

Provider shortage: It is estimated that there is 1 psychiatrist for every 30,000 people in need in Wisconsin. The mental health provider ratio for Crawford and Richland counties is 1,170:1. The recruitment and keeping a Psychiatrist was our main challenge during the fourteen months of our Mental Health through Telemedicine initiative. Initially, we attempted to hire a full-time psychiatrist to share among our three consortium sites via Telehealth and in person. We learned that few, if any, psychiatrists wanted to relocate to our remote, rural area. That barrier was well documented in our monthly calls with Christina Villalobos, HRSA Project Officer, and Lynne Kernaghan, TA provider.

We began contracting with a Madison based provider in August 2016 to provide psychiatric telehealth services to provide approximately 18 hours per week of telepsychiatry services to the consortium sites. In February 2017, that provider decided to move onto other organizations creating a gap in service we had to fill again. We have been able to fill that gap by contracting with InSight Telepsychiatry and Regroup Therapy Telehealth Services. Utilizing these services, we currently have a child/you psychiatrist based in New Jersey and an adult psychiatrist based in Chicago. We feel this strategy will offset future provider challenges, barriers, increase efficiencies, increase access and lower costs to patients and consortium agencies promoting sustainability.

Electronic Health Records: Additional challenges during this process stemmed from different Electronic Health Records (EHR) for patient documentation at each site. There was a significant learning curve for the prescribers and facilitators at each site involving the EHR processes and e-prescribing functions. Led by the nurse manager at each site, we have created work around methods to facilitate documentation and e-prescription features. The nurse managers also provide training on the processes and protocols

Rural Location: Our target population resides in remote, rural areas (Crawford 16,400; 570 square miles/29 people per; Richland 17,500; 587 square miles/31 people per square mile). Prior to HRSA Outreach support, there were only two locations providing behavioral health services. With the introduction of telehealth, we currently have four sites available to receive assistance, which has reduced wait time between appointments and reduced travel time for patients and providers.

Telemedicine certification: As government entities, Crawford and Richland counties has more difficult time getting their telehealth services certified by the State of Wisconsin then CRH had as a public organization. The consortium remedied this by streamlining all process from intake to patient/provider visit to follow up plans.

Patient Acceptance of Telemedicine: This is the first time in our rural area that telemedicine services were being offered in our respective behavioral health clinics. Because of Wisconsin regulations, both counties still had to offer face-to-face and tele services. Initially, many established patients still wanted face-to-face but new patients were willing to try tele because of the reduction in wait times. Data collected early in this process indicated that 95% of patients were either very satisfied or satisfied with their tele experience and 96% would use telehealth for future appointments. This was also new ground for psychiatric nursing staff that would be facilitating the process and patient/provider tele visit. We learned in early in the process that the right nurse manager would be critical to the success of telehealth. Throughout our consortium sites, we have been fortunate to have chosen the absolute perfect folks for that position.

Reimbursement/Limited Funding: We had to go through several steps with all of our third-party payers to determine who, what and how to bill for telehealth services and what billing codes to use. This learning curve issue that was overcome by each agency's billing department. Reimbursement for any and all behavioral and mental health services will continue to an issue for organization that provides that service. Our current payer mix is as follows: Uninsured/Self Pay – 12%; Dual Eligible (Medicaid and Medicare) – 15%; Medicaid only – 31%, Medicare only – 14%; Third-party Payer – 28%. Through the use of telehealth services and reduction of provider travel time, we estimate a savings of \$90,000 per year across the three consortium agencies. Currently, the Wisconsin Hospital Association, Health and Human Services Association, and Human Service Director's Association are advocating for higher MA reimbursement rates. Without a change in MA and other third-party reimbursement it will continue to be difficult to put forward a balance or cost-effective budget for behavioral health services.

Part VII: Sustainability

A. Structure

The following sources of support will ensure that the Crossing Rivers Telehealth Consortium and our "Mental Health through Telemedicine" initiative will sustain mental and behavioral health services and have a positive community impact beyond Outreach grant funding.

- **One-Time Purchases:** Telemedicine equipment and installation expenses have had reasonable costs to date making updates beyond the initial funding period realistic. Future equipment upgrades, installation, and maintenance costs will be sustained as part of each agency's budget. Each partner has their own IT departments that will be responsible for routine equipment maintenance and connectivity issues. To enhance that effort, IT staff from each agency will collaborate for problem solving on an as needed basis.
- **In-Kind:** Key leaders and front-line staff from each organization will continue to meet to evaluate on-going behavioral health needs and to leverage shared provider usage. At this point in time, consortium behavioral health providers are also meeting with local Gundersen Health System and Mayo Clinic Health System providers to identify unmet needs for behavioral health patients in our remote, rural area. This continuing dialogue will allow partnering agencies to work together to identify and address future challenges. Systematic meetings will provide and allow for collaboration to change and grow to responsively address the ever-changing healthcare needs in our shared region.
- **Financial:** All consortium agencies will continue to contract with mental health professionals utilizing the telemedicine framework to serve patients in Crawford and Richland counties beyond the initial funding period. Utilization of the telemedicine framework will continue to reduce and/or eliminate travel time for providers, increase provider availability and reduce patient wait time between appointments. In year two of our current project, through the use of telemedicine agencies saved approximately \$90,000 by reducing provider commute time. Furthermore, Patient wait times between appointments were reduced from 117 to approximately 35 days in most situations. A project director position will no longer be necessary as the consortium moves forward with key leaders and behavioral health staff from each agency taking on an increased role in consortium maintenance.
- **Absorption of Activities:** Outreach education activities focused on behavioral health will continue as their regular occurrence has become an expected activity within health focused events already taking place in the communities. Many of these events are already led by consortium agencies. Advisory committee meetings will continue beyond the initial funding period. These meetings will be led by key stakeholders from within the behavioral health clinics and provide a regular, formal communication pathway for consortium agencies to facilitate continued collaboration to improve health outcomes throughout our targeted rural community. Currently, behavioral health providers are meeting on a quarterly basis to avoid duplication of services, identify gaps in service, and to look for additional funding to enhance and expand consortium activity.

In an effort to expand our reach and increase sustainability, the Crossing Rivers Telehealth Consortium has collaborated with Southwest Health Center, a critical access hospital located in Platteville, WI (Grant County) and Southwest Wisconsin Technical College located in Fennimore, WI (Grant County) to create the "Southwest Rivers ACCESS Network. We have submitted a HRSA

Rural Health Care Service Outreach Program grant to support the further development of the Southwest Rivers ACCESS Network. This effort will expand the scope and geographic areas served through our telemedicine project. The creation of this network infrastructure will further enable sustainability, ongoing collaboration, shared processes and costs, self-evaluation and assessment. We will continue to utilize the evidence-based “Telemedicine-Based Collaborative Care” model. In addition, we will integrate “Patient-Centered Medical Home” model into our telemedicine delivery system to meet behavioral health and substance abuse needs.

A. On-going Projects and Activities/Services to Be Provided

i) Will all, some or none of the elements of the program be sustainable once Outreach grant funding has ended? Please check the appropriate selection.

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained (i.e. the program will completely end after the grant period)

ii) Identify the projects and activities that will be sustained beyond Outreach grant period.

All elements of our Outreach program will be sustained to some extent beyond our initial grant period as explained in more detail under Structure A above. The impetus of our project was to design and implement a much-needed telemedicine system to dramatically enhance the availability of specialized mental health services accessible in remote, rural locations throughout Wisconsin and we have accomplished that purpose and will continue to provide telehealth services into the future.

In reflecting back to the original outreach grant request for funding, there were four purposes we wanted to address to improve health care services in our region:

- Expand the delivery of health care services to include new and enhanced services exclusively in rural communities. *Telehealth is new to our rural area and has enhanced delivery of mental health services to meet that objective.*
- Deliver health care services through a strong consortium, in which every consortium member organization is actively involved and engaged in planning and delivery of services. *Each consortium member has been engaged in every phase of our telehealth project including selection of equipment, development of tele processes and guideline, selection of providers, and implementation of services.*
- Utilize and/or adapt an evidence-based model in the delivery of health care services. *As earlier mentioned, we chose “Telemedicine-Based Collaborative Care” to improve patient depression and other mental health outcomes and adapted this model to serve our youth population. Additionally, we are integrating the “Patient-Centered Medical Home” model into our telemedicine delivery system to meet behavioral health and substance abuse needs.*
- Improve population health, demonstrate health outcomes and sustainability. *This as well has been accomplished to some extent. The Crossing Rivers Health Consortium will continue to provide telemedicine services for mental/behavioral health patient resulting in reduced appointment wait times and costs.*

B. Sustained Impact

Our Mental Health through Telemedicine initiative has changed the way we provide mental and behavioral health services in our rural area. Prior to HRSA Outreach grant funding, consortium agencies provided mental health services only by face-to-face which created unacceptable wait times between patient visits and significant travel-time and costs for providers. With the introduction of telehealth, we have seen decreases in patient wait times, reduced costs relate to patient/provider travel, and a general increase in patients seeking health care in their local area due to the generic locations of our behavioral health clinics leading to a reduction in the stigma associated with seeking behavioral health treatment.

With broader use and acceptance of telehealth services, patients will continue to seek out and trust treatment in their local area thus foregoing a trip to urban areas. As we integrate the Patient-Centered Medical Home model into our telemedicine delivery system will get the integrated care they need. This coordinated care method will engage all elements of the broader health care system, including specialty care, hospitals, home health care, community services and support systems. Patient needs will be identified and treated quicker reducing crisis conditions and reducing emergency situations.

Our lessons learned are somewhat simplistic in nature. 1) always have multiple strategies for provider/patient recruitment and retention – make your clinic the one they want to work at 2) stream-line your referral and prep process; 3) talk up your provider and tele service – remind patients of convenience, travel time and expense saved; 4) always have a back-up plan for technical difficulties; 5) be willing to collaborate with partners to maximize providers time; 6) eliminate barriers with electronic health records; 7) create a balanced payer mix to sustain services and meet community needs; 8) be open to engaging other community members and stakeholders; 9) find your own niche by integrating your program into what others are already doing; 10) make sure your patient telemedicine visit mirrors a face-to-face encounter; 11) hire an exceptional RN to keep provider and patient happy – they are the one that establishes a relationship with the patient.

Part IX: Success, Increased Capacity, and Contributions to Change

A. Defining Success

- i) How do you define “success” for your grant program? Please check the appropriate selection(s). You may choose more than one option. If other, please describe.
- Access to a new or expanded health service
 - Increased number of people receiving direct services
 - Improved quality of health services
 - Operational efficiencies or reduced costs
 - Integration of process improvement into daily workflow
 - Continuation of program activities after grant funding
 - Continuation of network or consortium after grant funding
 - Health improvement of an individual
 - Health improvement among your program participants
 - Health improvement among your community
 - Enhanced staff capacity, new skills, or education received
 - Improved capacity to adapt to changes in healthcare
 - Other: Increase of the use and acceptance of telehealth in our rural area
- ii) Do you believe that your program has achieved success? If so, how?

B. Organizational Capacity

How has the federal funding of your grant program increased local capacity at your organization, within your network, and/or in your community? Please check the appropriate selection. If other, please describe.

- Formalized networks or coalition
- Developed new partnerships or relationships
- Enhanced skills, education, or training of workforce
- Enhanced data collection and analysis

C. Contributions to Change

Some of the children are initially a little shy but by the end of the telehealth session they are fist-bumping or giving high fives to the doctor on screen or just mesmerized by the “robot doctor.”

Most elderly clients seem to take telehealth in stride as just one more thing they have to adjust to in this fast-paced society. An eighty-year-old lady, all dressed in purple with a diagnosis of chronic schizophrenia was enthralled with the clarity of the video and told the tele-provider “I just love your pretty white teeth!”

Our policy and system changes have all occurred within our consortium agency environments. The changes are directly seen in the way we are providing behavioral health services with the use of telehealth which had never happened prior to Outreach Program funding.