U.S. Department of Health and Human Services

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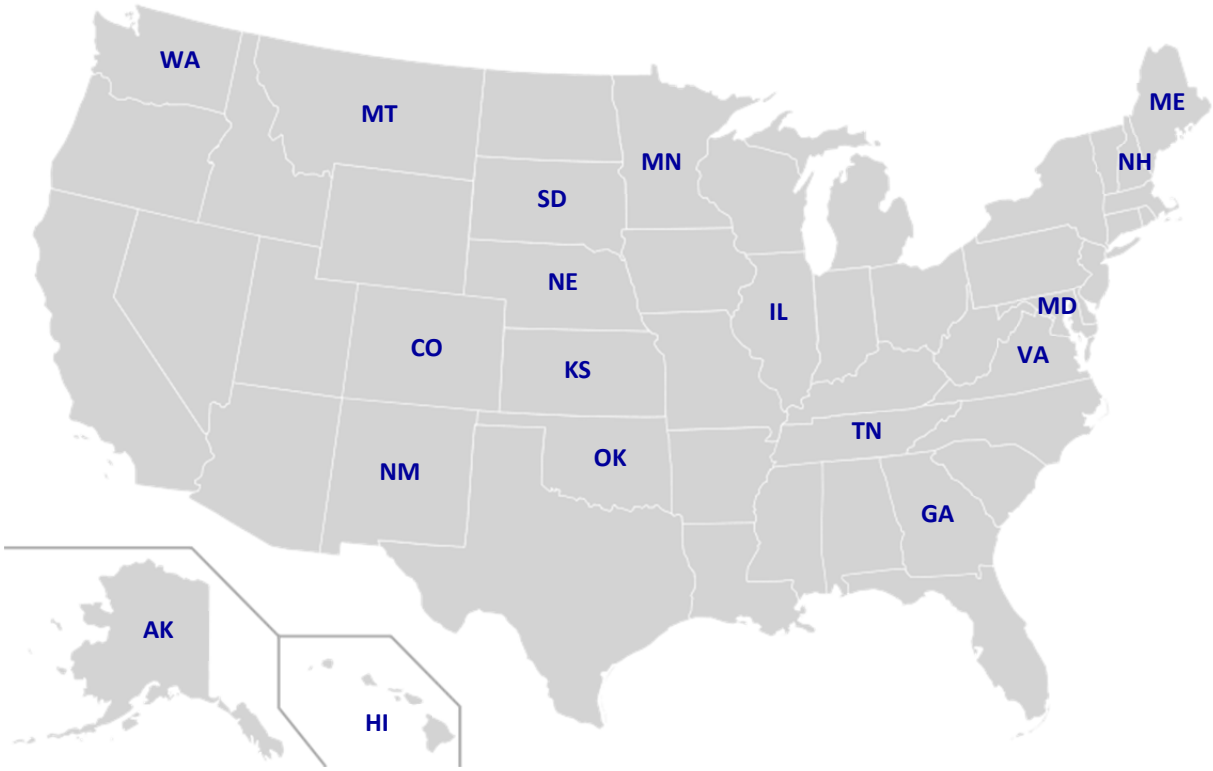
Health Resources and Services Administration

Source Book

Rural Health Workforce Development Grant Program

2010 - 2013



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2010 – 2013 Rural Health Workforce Development Program

The Rural Health Workforce Development Program was authorized under Section 330A (f) of the Public Health Service (PHS) Act, as amended (42 U.S.C. 254(c)). The CFDA number for this program is 93.912.The President's 2010 Budget created the new "Improving Rural Health Care Initiative," which will re-organize the way rural programs are currently administered to focus on building an evidence base for ways to improve health care in rural communities. Workforce and rural recruitment and retention are a critical component of the 2010 President's Rural Initiative. As part of the Initiative, the Office of Rural Health Policy (ORHP) created the Rural Health Workforce Development Program.

The purpose of the Rural Health Workforce Development Program is to support the development of rural health networks that focus on activities relating to the recruitment and retention of primary and allied health care providers in rural communities. This program provides support to established and sustainable rural health networks to develop innovative community-based educational and clinical health training programs, and the recruitment and retention of health professionals (students and residents) to train and eventually practice in rural communities.

As such, it is vital to develop rural health networks so they and their programs may continue to thrive and to increase the number of rural providers after Federal funding ceases. These networks emphasize using community-based training opportunities to interest students and/or residents in rural health practice. This can, in turn, help reduce recruitment costs, creating a potential revenue stream for continuing the network after Federal funding. Achieving the above will fundamentally lead to strengthening the rural health care delivery system. The program's goals are:

1) Providing students and residents training opportunities and experiences within culturally competent, community focused rural settings, which builds and reinforces ties within communities;

2) Improving the viability of the network partners by enhancing recruitment and retention of needed health care professionals within their rural communities;

3) Identifying innovative approaches for using a network model to train health care professionals in rural community-based clinical settings;

4) Providing an opportunity for students/residents to become involved in community activities so that they become engaged in the community; and/or

5) Establishing viable rural health networks to serve as ongoing vehicles for addressing workforce challenges.

This Source Book provides a description of the 20 initiatives funded under the Rural Health Workforce Development Grant Program in the 2010 – 2013 funding cycle. The following information for each grantee is included: Organizational Information, Network Partners, Community Characteristics, Program Services, Outcomes, Challenges & Innovative Solutions, Sustainability, and Implications for Other Communities.

2010 - 2013 Rural Health Workforce Development Grant Recipients

(Listed by State)

Alaska

Kodiak Island Health Care Foundation

Organizational Information	
Grant Number	G98RH19715
Grantee Organization	Kodiak Island Health Care Foundation
Organization Type	Rural Health Center
Address	1911 East Rezanof Drive, Kodiak, AK 99615
Grantee organization website	www.kodiakchc.org
Name of Workforce Development Network	Alaska Rural Family Medicine Community Health Center Clerkship Network
Your Project Director	Name: Patricia Bustos
	Title: Workforce Manager
	Phone number: 206-783-3004 ext. 20
	Fax number: 206-783-4311
	Email address: tbustos@nwrpca.org
Project Period	2010 - 2013
Funding level for each budget period	September 2010 to August 2011: $131,859
	September 2011 to August 2012: $197,541
	September 2012 to August 2013: $199,613

Network Partners		
Partner Organization	Location	Organizational Type
Kodiak Community Health Center	Kodiak, AK	Community Health Center
Iliuliuk Family and Health Services, Inc.	Unalaska, AK	Community Health Center
Peninsula Community Health Services of Alaska	Soldotna, AK	Community Health Center
Providence Kodiak Island Medical Center	Kodiak, AK	Critical Access Hospital
Northwest Regional Primary Care Association (NWRPCA)	Seattle, WA	Primary Care Association
Andrew Taylor Still University (ATSU) – School of Osteopathic Medicine, NWRPCA Campus	Portland, OR	University – Regional Medical School serving AK, ID, OR, WA

Community Characteristics

A. Area

The rural Alaskan communities served by the grant included Kodiak, Unalaska, Soldotna, Seldovia, and Glennallen. Additional rotations are scheduled for the Alaska communities of Galena and North Puget Sound.

B. Community description

The rural Alaskan communities served by this grant have many unmet health needs, influenced by a number of factors. These factors represent barriers to care that include: significant challenges in recruitment and retention of providers due to remoteness of rural clinics, limited access to care/providers, low-income populations, lack of health insurance, language and cultural barriers, inadequate transportation, transient lifestyles, and a simple lack of experience in seeking out the preventive care that promotes good health. Specifically, this population includes individuals and families with low-incomes, the uninsured and underinsured, those who have multiple psycho-social issues, and immigrant populations who experience cultural and linguistic barriers to care. When compared to the overall state of Alaska, rural Alaskans exhibit higher reported rates of smoking, alcohol use, obesity, and/or physical inactivity. Chronic diseases that may occur based on these lifestyle choices include diabetes, heart disease and strokes – which are noted to be the most preventable with access to healthcare.

C. Need

The Network was designed to address the inadequate numbers of practicing health professionals in Alaska rural communities by developing an innovative community-based clinical health training program to ultimately improve recruitment and retention of family practice providers in rural Alaskan Community Health Centers.

According to the Alaska Physician Supply Taskforce, Alaska has a myriad of challenges affecting recruitment, which include an overall general shortage of current practicing physicians, a limited supply of medical and resident students to recruit or grow their own, a physician workforce that is more aged than other states, as well as a physician workforce gap that will require 100 more physicians per year to keep pace with the expected population growth in the next 20 years.

Recruitment and retention in rural areas has long been a challenge for health care organizations in Alaska, particularly for rural Community Health Centers. At the highest level, there is an inadequate number of practicing health professionals in rural areas. While 20% of US residents live in rural communities, only 9% of all physicians work there. Furthermore of the more than 2,000 rural counties in the USA, 77% are primary care Health Professional Shortage Areas. A large percentage of physicians (and dentists) are close to retirement. Fewer people (per capita) are choosing to become physicians, adding to the inadequate numbers of physicians. Additionally, those who do choose careers in medicine are far less likely to choose board certification in family practice. Both of these trends are relatively new. The Association of American Medical Colleges indicates a need for a 30% increase in physicians in order to meet the demand for health care in the year 2015.

Some of the key reasons that there has been such a shift away from family practice include:

- Cost of schooling (Average first year of medical school for a resident attending a public university is $25,209 and for non-residents is $44,094 for the 2009/2010 academic year)
- Length of schooling and residency
- High costs of malpractice insurance
- Low reimbursement levels
- Increases in overhead costs such that 50% of all practice income goes toward overhead (and that excludes taxes)
- Increased insurance paperwork
- Low pay (family practice is the lowest paid board certification discipline)

Finally, most post graduate training programs are located in urban centers; the majority of those selecting family practice are typically undertrained to work in a truly rural environment.

Over the long term, the Network strives to develop a sustaining cycle of clerkship trainings leading to a reliable pool of medical providers dedicated to embracing the challenges of healthcare in underserved areas and promoting rural health.

Program Services	
Target Population	
Medical Students – Primary Care (Doctor of Osteopathy)	

A. Description

The Network provided third and fourth year osteopathic medicine students with rural four-week community health center family medicine clerkships in five Alaskan clinics. The clerkship included a combination of hands-on care and shadowing in the delivery of primary care services. The well-rounded clerkship exposed students to the health care needs and treatments for a low-income, racially, and linguistically diverse population of all ages. During this clerkship, students gained experience working with special populations in the clinic that included patients with substance abuse and/or mental health issues, the homeless, and the elderly - all of whom often have complex health needs due to co-morbid conditions. In addition to the in-clinic experiential training, the students were required by the School of Osteopathic Medicine to complete weekly reading assignments on 26 pre-selected health areas and participate in rural community outreach projects.

Clinics and preceptors benefited from having medical students capable of preliminary charting, pre-screening, conducting educational outreach. The health center also benefited from the opportunity to recruit these future providers, retention of current staff by becoming an integral part of the educational process, and participation in an innovative program to nurture students. Preceptors within these clinics received Adjunct Faculty status provided through ATSU, had access to online library materials, Continuing Medical Education (CME) credits, had access to preceptor development materials available on the NWRPCA website, and attended free Preceptor Training Sessions at the spring and fall NWRPCA conferences.

Over the course of the grant, the Network conducted activities focused on the development and growth of the network. Additionally the partners pursued opportunities to promote their rural training model, which resulted in an outreach and best practices training session at the Spring 2013 NWRPCA Conference in Anchorage, AK, entitled *The Culture of Training – Growing Your Own Clinicians*.

B. Role of Network Partners

Kodiak Community Health Center (KCHC)

- Grantee and Community Health Center training site
- Major responsibility for leading and coordinating Network and the Grant
- Maintains all Network financial information and submits financial reports
- Governance - Network Governing Committee Chair

Iliuliuk Family and Health Services, Inc. (IFHS)

- Community Health Center training site
- Governance - Network Governing Committee

Peninsula Community Health Services of Alaska (PCHSK)

- Community Health Center training site
- Governance - Network Governing Committee

Providence Kodiak Island Medical Center (Providence)

- Critical Access Hospital training site in conjunction with Kodiak CHC
- Governance - Network Governing Committee

ATSU SOMA - NWRPCA Campus

- Faculty at accredited Health Professional Training Program – Medical School
- Trains and monitors students' progress for exemplary learning experience
- Coordinates student rotation schedules and documentation with KCHC and Project Director
- Governance - Network Governing Committee

Northwest Regional Primary Care Association (NWRPCA)

- Community health center support and Regional Medical School partner
- Governance - Network Governing Committee
- Contract Project Director responsible to ensure project goals were met
- Contract Finance Manager to provide assistance and coordination

Outcomes

The Network oversaw 35-four week rotations for ATSU SOMA medical students, providing an opportunity for 33 medical students to travel and train in five rural Alaskan communities. Although 35 rotations were offered, 33 medical students were assisted as two students were offered longitudinal rotations in Alaska with training in two different health centers. Within each of these training sites, the community, patients, a designated senior clinic administrator, rotation coordinator, and preceptor were engaged through the student training experience.

The rotation sites included partner training sites of Kodiak CHC, Iliuliuk Family Health and Services, Inc., Peninsula Community Health Services of Alaska, as well as the additional sites of Cross Road Medical Center and Seldovia Village Tribe. The Network continually outreached to other rural Alaskan Community Health sites throughout the grant.
To assess program implementation and short-term program outcomes, the Network contracted with the Center for Health Innovation (CHI) at Hidalgo Medical Services to design and implement the program evaluation for the student clerkships.

As of November 2012, 20 medical students from ATSU SOMA had completed 22 clerkship rotations at community health centers in rural Alaska. Students and preceptors were asked to provide background information and complete surveys evaluating various aspects of their experiences. The responses from five preceptors and 19 students were collected to assess the positive outcomes and possible

challenges associated with the clerkship rotations. Data was organized to identify trends among students and preceptors attesting to the value of the clerkship rotations and suggesting possible changes and/or improvements. Preliminary evaluation findings include:

Overall

- Sixty-eight percent (68%) of students reported that their clerkship rotation had transformed their view on rural practice in Alaska
- Clerkship rotations were viewed as positive and valuable experiences for both students and preceptors.
- An overwhelming majority of students reported that the clerkship had increased their interest in rural practice in Alaska as well as their understanding of rural healthcare needs.

Students

- Students were generally very pleased with their experiences at the rotation clinics.
    - Students reported high levels of satisfaction with adequacy of resources, interactions with staff and preceptors, and orientation to clinic routine.
    - Challenges that students experienced were minimal, and often associated with specific clinics. (e.g., difficulty with EMR training and limited internet access)
- Students were very positive about their experiences with preceptors, consistently expressing satisfaction across various aspects of this relationship
- Students also highly valued opportunities for community involvement, reporting in all but one case that they were exposed to rural community life/experiences and felt welcome in the community
    - The most common reasons students would consider returning to rural practice were school loan repayment and interest in underserved populations
    - The most common reason students would NOT consider rural practice was isolation from family and friends
    - There was some variation in influential factors (both positive and negative) between students of rural vs. non-rural backgrounds to consider rural practice, including rural students being more concerned about professional isolation that limits their career and inadequate clinic resources versus their non-rural counterparts.

Preceptors

- Preceptors perceptions' of the students' performances throughout the clerkship rotations were very positive
    - Preceptors reported that students were very motivated to learn, responsive to feedback, professional, and compassionate when caring for patients
    - Preceptors also indicated that students demonstrated growth in four assessed categories of professional development, including: progression in problem solving skills, increased understanding of health promotion and disease prevention in a rural area, progression in medical knowledge, and a greater understanding of the unique healthcare needs of rural populations.
- Despite the time commitment required to mentor, preceptors reported that they enjoyed having the students at their clinics and that students were well liked among staff and patients
- All preceptors expressed that they had developed a positive professional relationship with each student mentored, intending to continue future professional contact in most cases
- Major factors influencing preceptors to consider rural practice were somewhat different than those reported by students, with strong patient relationships and continuity of care being the most frequently reported
    - The most common challenge of rural practice for preceptors, isolation from family and friends, was also the most significant barrier to students returning to rural practice

The preliminary evaluation findings were used by the Network partners to inform mid-course adjustments to the program around the areas of clerkship pre-training, student community involvement, and logistical issues within individual clinics.

Challenges & Innovative Solutions

Once the Notice of Award was received, the Network created the Network program based on the grant and the governance structure. The time frame for creation, implementation, and completion in Program Year 1 (PY1) was challenging. Outreach to identify students and training site partners was under way and required immediate attention to strategically identify ideal students for the scholarships and place them at appropriate sites.

The Network formation included creating an operations plan and by-laws, identifying the governance committee, the initial creation of a logic model, and a strategic plan. With the resignation of the Project Director/Executive Director at Kodiak Health Center in PY1 and no appropriately skilled candidates on the Island, the Network recruited and hired NWRPCA for this position. Finally, an evaluator was to be hired. After the creation of the evaluation surveys, the clinic staff, preceptors and leadership staff were required to complete additional paperwork, creating challenges surrounding health center resignations and time limitations. With the assistance of HRSA and the technical assistance provided, the Network was able to create a strong Network foundation in a timely manner.

As referenced above, the Network strategically navigated the turnover of key health personal including the Project Director, Grantee Executive Director, and two champion preceptors from the partner sites. The contingency plan identified in the Operations Plan was implemented and the Network was able to alleviate those challenges through outreach to additional rural training sites and identifying key personal as co-leaders or action leads, therefore mitigating the impact of resignations. The health centers also acted quickly to recruit preceptors and leaders to continue their mission of training.

Sustainability

A. Network Structure

The Network Governing Committee agreed to continue the Network's commitment to training medical students in community health centers. The original grantee, KCHC, will continue in the role of leading and coordinating the Network. The KCHC CEO will be responsible for overseeing KCHC's role and responsibilities per the Network Memoranda of Agreement (MOA) and chairing the Network Governing Committee. The Network Governing Committee will consist of representatives from each of the Network Partners. The primary responsibilities of each partner are listed below.

Kodiak Community Health Center (KCHC)

- Grantee and Community Health Center training site
- Major responsibility and role for leading and coordinating Network
- Maintains all Network financial information and submits financial reports
- Governance - Network Governing Committee Chair

Iliuliuk Family and Health Services, Inc. (IFHS)

- Community Health Center training site
- Governance - Network Governing Committee

Peninsula Community Health Services of Alaska (PCHSK)

- Community Health Center training site
- Governance - Network Governing Committee

Providence Kodiak Island Medical Center (Providence)

- Critical Access Hospital training site in conjunction with Kodiak CHC

ATSU SOMA - NWRPCA Campus

- Faculty at accredited Health Professional Training Program – Medical School
- Trains and monitors students' progress for exemplary learning experience. Coordinates student rotation schedules and documentation with KCHC and Project Director
- Governance - Network Governing Committee

Northwest Regional Primary Care Association (NWRPCA)

- Community health center support and Regional Medical School partner
- Governance - Network Governing Committee
- Contract Coordination responsible to ensure coordination of Network Partners, students and surveys. Plan is to identify an Alaskan based organization to transfer duties from NWRPCA.

Changes to the Network include Kodiak Providence Hospital becoming a supporter of the Network instead of a continued Network Partner with governance responsibility. The Network will move forward to identify an appropriate Alaska-based organization to handle coordination of network activities, a role currently held by the NWRPCA Project Director.

B. On-going Services and Activities

With the continuation of the Network as described above, the Network services that shall continue after the grant include: student clerkship rotations, Network Partners and rotation sites providing in-kind on-site student and health center support, stipend distribution, necessary administrative documentation, and assistance to students as they enter and exit the program. Preceptor, financial, and IT staff will continue to be provided by Network Partners and other supporters as needed. Project direction provided by the NWRPCA will be transitioned to an Alaskan organization as a project coordinator position assisting the continued outreach and on-boarding of students and health centers.

A goal of the Network is development of a business plan that builds and expands upon the current model of Alaskan rotations. Initial approaches considered include implementing a training model that incorporates additional disciplines (e.g., nurses, physician assistants) and sites serving underserved populations. Ultimately the Network seeks to establish this training model as a best practice to be implemented in other communities outside Alaska.

In order to sustain the services, the Network Partners will continue to provide in-kind services, student rotations costs will be absorbed where possible, the NWRPCA Campus will budget support scholarships and outreach to Alaska based foundations has been prioritized.

C. Sustained Impact

As a pathways program training medical students, the Network is relying on these rural training experiences to inform the Doctor of Osteopathy medical student's opinions and ultimately their behaviors, resulting in a return to Alaska for practice. Student's ultimate return to practice in Alaska will be measured once they become practicing physicians after residency. The Network Grant has had significant impacts in the following:

Changes in knowledge, attitudes and behaviors: Based on early evaluation findings, the power of training in a rural community is an overall positive and life-changing experience for future providers. A large majority of students have reported that the rural rotations have transformed their view on rural practice. The impact to the students, preceptors and health center staff has been an overall positive experience. The anecdotal evidence from training site leadership and patients describes the welcoming of a new-comer to their community and the exposure to diverse students as a satisfying community experiences.

Improved Recruitment and Training Model: Based on the lessons learned from the evaluation, the effective recruitment of rural providers can be targeted to physician groups based on the upbringing of the physician as rural or non-rural. The model also identified specific recommendations including preceptor/student frank conversations to alleviate student's concerns about rural practice. Where available, training sites provided students with interdisciplinary training with office staff, other clinical staff (including Physician Assistants and Family Nurse Practitioners), and executive staff to facilitate a better understanding and appreciation of all roles, preparing students for a team-based model of care.

Training Site/Population: The Network medical school rotations throughout six rural Alaskan communities impacted each of those communities economically. Communities and patients benefited through the promotion of healthy lifestyle choices and Preceptors felt supported by their health center and valued their relationships to the students.

On-Going Impacts of Collaboration: The Network was able to invite one new training partner and two additional training sites. As the Network progressed, discussions and outreach to state organizations, including Alaska AHEC, Alaska Primary Care Association, attendees at the Alaska Public Health Conference, Alaska Department of Health and Human Services, the Foraker Group, and Rasmuson Foundation introduced opportunities for communication, coordination, and collaboration regarding the Network and training. The NWRPCA also hosted a session at the NWRPCA Conference to community health center leaders promoting the training model entitled *Culture of Teaching: Growing Your Own Clinicians* that recognized the innovative model at a regional level.

Implications for Other Communities

There are a number of important lessons learned that may be of benefit to other organizations or communities considering implementation of a similar program.

LEADERSHIP

- Student rotation logistics are key.
- Clinic should create opportunities to prepare staff to welcome and recruit students.

STAFF

- As with the recommendation above, clinic staff should understand how important it is for recruitment or return to practice intentions and work to always insure students are involved in Alaskan community life and recreational experiences as much as the seasons permit.
- Student training prior to arrival at the rotation site helps students orient themselves to daily procedures and understand goals and expectations more quickly.

PRECEPTORS

- Continue to foster positive student-preceptor relationships so that preceptors value mentorship experiences and are enthusiastic about future opportunities to mentor.
- Emphasize the importance of "informal teaching discussions" to promote students' understanding of the benefits and challenges of frontier/rural medical practice.

RECRUITING STUDENTS FOR RURAL PRACTICE

- Clinics hosting medical student rotations should proactively address students' concerns about return to practice in rural Alaska. This effort can probably occur subtly in promotional materials for recruitment and directly during the rotation through preceptor and staff interactions—whether the concerns are stated or unstated. Students' concerns about return to rural practice should be addressed in more individualized ways that are based on their different backgrounds (i.e. rural vs. non-rural upbringing).

Colorado

Plains Medical Center, Inc.

Organizational Information	
Grant Number	G98RH19714
Grantee Organization	Plains Medical Center, Inc.
Organization Type	Community Health Center
Address	Box 1120, Limon, CO 80828
Grantee organization website	N/A
Name of Workforce Development Network	Eastern Colorado Health Occupations (ECHO)
Your Project Director	Name: Denise Denton
	Title: Director
	Phone number: 303-941-0181
	Fax number: 719-775-2638
	Email address: ddenton@d2inc.biz
Project Period	2010 - 2013
Funding level for each budget period	September 2010 to August 2011: $200,000
	September 2011 to August 2012: $200,000
	September 2012 to August 2013: $200,000

Network Partners		
Partner Organization	Location	Organizational Type
Lincoln Community Hospital	Hugo/Lincoln County/CO	Critical Access Hospital
Morgan Community College	Limon/Lincoln County/CO	Community College
Area Health Education Centers	Greeley and Denver/Denver-Weld Counties/CO	AHEC
Seven Emergency Medical Services providers in the service area	Bennett, Strasburg, Byers, Deer Trail, Limon, Hugo, Stratton/Adams, Arapahoe, Lincoln/Cheyenne/CO	Fire Departments, ambulance services
Strasburg School District	Strasburg/Adams/CO	School
Four Facilities serving seniors in the service area - Prairie Creeks Assisted Living Center, Lincoln Community Hospital Nursing home, Aspen Leaf Assisted Living, The Bee Hive Assisted Living	Strasburg, Hugo, Flagler/Adams, Arapahoe, Lincoln/CO	Assisted Living Facilities

Community Characteristics

A. Area

Communities served include the towns of Bennett, Strasburg, Byers, Deer Trail, Agate, Limon, Hugo, Stratton and Flagler. The counties include Lincoln, and Cheyenne Counties, as well as the far-eastern portions of Adams and Arapahoe.

B. Community description

Almost all the ECHO service area is considered frontier. The largest town in the service area is Limon, with only 1,884 people in 2011. The population of the service area is only about 17,000, and they are spread out over 5,000 square miles (approximately the size of Connecticut). Compared to state averages, the ECHO service area has a much higher percentage of seniors, higher rate of people living in poverty, higher percentage of people without health insurance, and a lower percentage of Hispanics. Most of the service area is designated underserved for primary, dental, and mental health.

C. Need

The grant that supported the activities of the Eastern Colorado Health Occupations Network was designed to enhance the

recruitment and retention of health care workers in the communities of Colorado's Interstate 70 Corridor.

Program Services	
Target Population	
Assisted Living Facility service providers	Medical Students – Primary Care
Certified Nurse Aid students	Middle School Students
Dentistry Students	Pharmacy Students
Dental Assistant Students	Preceptors – Primary Care
Emergency Medical Services providers	Preceptors - Specialists
High School Students	

A. Description

ECHO worked extensively with EMS agencies as part of its workforce program. After completing a health workforce inventory, it was determined that one of the greatest workforce needs in the service area was emergency medical services providers. In the service area, this includes fire departments and ambulance services, all of which operate at least in part, and often solely, on volunteer labor. ECHO worked with the agencies to provide necessary trainings for volunteers ranging from critical stress management workshops to basic emergency response training. ECHO also assisted with trainings for paid personnel, including addressing a critical need for a greater number of certified paramedics in the service area. ECHO provided funding for three EMS Cadet programs.

ECHO partnered with assisted living facilities in the service area to help create a more highly trained senior workforce. This included helping fund Qualified Medication Administration Personnel (QMAP) training, certified nurse aid training, fall prevention training, and Alzheimer's training for employees working with seniors. ECHO worked extensively to provide pipeline programs for middle school and high school students to help foster an interest in careers in health care. The long-term goal of these pipeline programs is to recruit local students into pursuing educations in health care careers with the hope that they will someday return to rural areas to practice. Youth programs included Scrubs, a two-day hands-on medical camp for high school students and The Body Shop, a weeklong human anatomy camp for middle school students. At Scrubs, local providers in 12 health careers shared with students what it means to practice in their chosen field (physical therapy, dentistry, laboratory work, nursing, etc.), the education required, and why they chose to practice rurally. They also did hands-on activities with the students. These activities ranged from IV administration to making a temporary crown. All were very well-received.

At the Body Shop, middle school students studied a different system of the human body each day and then dissected an organ of that system. Diagrams, group activities, and self-guided experiments were part of the program. ICD-10 training was identified as a great need of rural health care providers as the transition to an electronic records system occurs. ECHO funded such training for employees of seven different health care agencies in the area. ECHO helped to improve the funding capacity of local communities by offering grant writing workshops. These workshops, which were open to all community members, featured experienced grant writers who educated participants on the various aspects of grant writing.

B. Role of Network Partners

ECHO identified an EMS Coordinator who participates in, and is familiar with, EMS activities on the I-70 Corridor. This Coordinator communicated frequently with EMS agencies, some of the most engaged ECHO partners, to identify the best ways to meet the needs of EMS providers in the service area. Fire chiefs and ambulance service directors all played a role in determining the best way in which ECHO could provide meaningful assistance for providers of emergency medical services and response.

Morgan Community College's role was to provide insight on existing programs and what activities ECHO could support to further prepare secondary students for entry level health career training. The college also provides training for EMS providers and was a key partner in developing EMS trainings.

Plains Medical Center, specifically the dental clinic, expressed interest in hosting dental students from the University of Colorado Dental School. As a result of this expressed interest, ECHO assisted the clinic with starting a dental student rotation at the Strasburg site.

The area assisted living facilities came to ECHO with proposals for addressing training gaps that exist for their employees who work with seniors. These included fall prevention training and education on best practices for caring for patients with Alzheimer's and dementia. As a result of this partnership, various trainings were provided to help foster a better trained geriatric care

workforce.

The Strasburg School District, namely science teaching staff at Hemphill Middle School, played an important role in directing Grow Your Own activities, namely The Body Shop camp for middle school students. These individuals implemented the curriculum and provided insight into the best ways to administer it.

All partners agreed that one of the best ways to improve health care workforce recruitment in the service area would be to provide increased career exposure to youth. In addition to the Scrubs and Body Shop camps, partners determined a health careers video aimed at middle school students would provide another opportunity for health careers exposure. ECHO partnered with providers, who co-starred in the video along with students, to film the video.

Outcomes

ECHO's work with emergency medical services agencies resulted in the recruitment of more than a dozen youth into the emergency medical services training programs. Recruitment drives supported by ECHO resulted in the successful recruitment of 20 volunteers on the I-70 Corridor. Nearly 50 existing EMS workers benefitted from one or more trainings provided because of the strong partnership formed with EMS agencies. Several fire chiefs and ambulance service directors said ECHO's assistance was an invaluable way to create a more highly trained workforce.

Evaluations of Scrubs and Body Shop were encouraging. The majority of students left with an increased interest in at least one health care career, often several. Middle school students said that the Body Shop experience helped them think about whether or not they might consider a career in health care.

Attendees of grant writing workshops said that not only did the speakers increase their knowledge of the grant application process, but that this knowledge made them more confident in their application. Two attendees, both first-time grant writers, were awarded grants for their respective agencies after attending several ECHO workshops. Evaluations were conducted at each workshop, all of which received solely positive reviews.

Evaluations were also completed by attendees of several workshops geared toward those working with seniors. Attendees said the information they received would be of great benefit at the respective assisted living facilities, where sometimes trainings are limited due to distance from the city.

Challenges & Innovative Solutions

One difficulty ECHO faced was finding a way to reach out to all members of the community to ensure everyone was aware of funding, trainings, and programs available to them. In order to reach as many audiences as possible, ECHO subscribed to an email newsletter program, www.mynewsletterbuilder.com. This was an innovative way to work toward a solution - at events and trainings, ECHO staff recorded as many emails as possible (with permission). Any time a program or funding opportunity came up, an e-blast in the form of a newsletter with the ECHO logo was sent to all of those on the list. In doing so, recipients could forward information to colleagues and acquaintances. By utilizing the program, and using local newspapers heavily, ECHO staff found that more people became aware of offerings.

ECHO also experienced a challenge in determining the needs of health care employers in the service area. Although a health workforce inventory was conducted to help address this problem, ECHO staff found they still were not getting an accurate picture of how ECHO could best assist employers. To address this challenge, ECHO staff called each health care employer to inform them of funding opportunities. Staff found that sometimes administration/management had changed and, as a result, was not informed of programming. In other cases, employers didn't have a thorough understanding of how they could utilize ECHO. By contacting them by phone, ECHO had greater success in innovatively finding ways to help employers take advantage of available funding.

Sustainability

A. Network Structure

While the ECHO Advisory Council explored the feasibility of forming a new 501(c)(3) organization, they decided not to develop an

entity that would compete with the existing not-for-profit organizations in the area. Instead, the Council found ways to strengthen the existing infrastructure. The ECHO Network will not continue in its current form. There will be no staff or management for the Network.

B. On-going Services and Activities

The ECHO project trained 12 medical interpreters (11 Spanish; 1 Somali) who will continue to provide benefits to the service area. The training and educational tools and materials purchased through ECHO will continue to enhance EMS training for years to come. The ECHO project brought together EMS agencies who had not previously collaborated. Hopefully, those collaborations will continue.

The ECHO health facilities and communities made a strong, positive impact on the medical, dental, and pharmacy students who rotated through the area. Hopefully some of these students will return to the area to practice, or at least consider another rural setting.

The relationships and collaboration stimulated by the ECHO project will continue for years to come. The inclusion of the local workforce center and their role in serving the unemployed both to find jobs and expand their education was particularly valuable.

While the Scrubs Camps and Body Shop program will likely not be continued, ECHO provided a strong foundation for health careers for 65 local middle and high school students. Hopefully, in a few years, these students will become health professionals, and practice in the ECHO service area.

C. Sustained Impact

Although the ECHO Network will not be sustained as it currently exists, the sustained impacts are many. Trainings and programs supported by ECHO will have lasting impacts, leaving new skills with hundreds of members of local communities.

It can't be known at this time, but the Grow Your Own activities supported by ECHO may indeed have long term impact. Scrubs and The Body Shop provided our rural students with opportunities to learn about careers in health care that might not otherwise have existed. The health careers video produced by ECHO will be shown in science classrooms throughout the service area for years to come, certainly a demonstration of long-term impact. The avenues ECHO helped create to provide students with an increased exposure to health care careers may result some day in the pursuit of such a career. And some day, as multiple data sources bear out, it's likely some will return to practice in their communities.

ECHO has helped create a more highly trained healthcare workforce. This is important because better-equipped employees generally express greater job satisfaction, increasing the likelihood they will be retained in the local workforce. The EMS Cadet program will help ensure that local fire departments have a supply of well-prepared trainees at the ready as they come of age. The supplies ECHO helped support, such as training manikins, will be left with local agencies and used for at least the next 10 years.

The implementation of the dental student rotation at Plains Medical Center may also have far-reaching impact. Students who have participated in the Strasburg rotation have provided positive feedback on their experiences, and several said they would consider a career at a rural clinic. Someday, this may impact local communities when they look to hire new providers.

Lines of communication between agencies were also improved because of the partnerships developed by ECHO. Groups of people from institutions who otherwise were not familiar with, or who hadn't worked with, each other were brought together as important stakeholders in the ECHO Network. The establishment of these relationships can only benefit our communities in the future.

Implications for Other Communities

The ECHO Network Project offers lessons for health care career programs in other rural/frontier communities. The members of the Advisory Council will be delighted to discuss what worked, and what didn't, throughout the three-year project.

Georgia

Georgia Mountain Health Services, Inc.

Organizational Information	
Grant Number	G98RH1907
Grantee Organization	Georgia Mountain Health Services, Inc.
Organization Type	FQHC
Address	75 Bypass Road, Morganton, Georgia 30560
Grantee organization website	http://gamtnhealth.org/
Name of Workforce Development Network	Georgia's Rural Health Experience (GRHE)
Your Project Director	Name: Suzanne Young
	Title: Director of Georgia Rural Health Experience, APRN,WHNP, BC
	Phone number: 706-889-3552
	Fax number: 706-946-4647
	Email address: syoung@gamtnhealth.org
Project Period	2010 - 2013
Funding level for each budget period	September 2010 to August 2011: $200,000
	September 2011 to August 2012: $200,000
	September 2012 to August 2013: $200,000

Network Partners		
Partner Organization	Location	Organizational Type
Philadelphia College of Osteopathic Medicine (PCOM)	Suwannee, Gwinnett County, GA	Medical School
Primary Health Care Center(PHCC)	Rossville, Walker County, GA	FQHC
Georgia Association of Primary Health Care (GAPHC)	Decatur, DeKalb County, GA	Association
Georgia Mountain Health Services (GMHS)	Morganton, Fannin County, GA	FQHC
Blue Ridge Health Education Center (AHEC)	Rome, Floyd County, GA	AHEC
North Georgia College and State University	Dahlonega, Lumpkin County, GA	University

Community Characteristics

A. Area

This Rural Health Workforce Development project served primarily Dade, Chattooga, Fannin and Gilmer counties in Georgia as well as a secondary service area of Walker, Murray, Whitfield, Pickens, and Towns counties.

B. Community description

The primary service area (Chattooga, Dade, Fannin, and Gilmer Counties, Georgia) are Federally Designated Rural Counties and significantly underserved (with a multitude of HPSA/MUA designations). Chattooga County has a Low Income Population Group Primary Care HPSA (14), a Low Income Population Group Dental HPSA (8), a Geographical Area Mental Health HPSA (12), and a Single County MUA (59.70). Dade County has a CHC Primary Care HPSA (7), a CHC Dental HPSA (14), a Geographical Area Mental Health HPSA (12), a CHC Mental Health HPSA (8), and a Single County MUA (62.00). Fannin County has a CHC Primary Care HPSA (4), a CHC Dental HPSA (9), a Geographical Area Mental Health HPSA (12), a CHC Mental Health HPSA (11), and a Single County MUA (53.20). Gilmer County has a Geographical Mental Health HPSA (12) and a Single County MUA (47.50). In addition to HPSA/MUA status, the service area has a large low-income population, a significant uninsured population, rising unemployment, low educational attainment, and poor health status indicators.

C. Need

There are many barriers affecting the ability of organizations in rural areas to recruit and, subsequently, retain quality health care providers. Recruiting, from an organizational standpoint, is very expensive. Organizations serving rural, low-income populations are remarkably underfunded. As a result of this underfunding, these organizations offer limited services, limited educational opportunities for staff/providers, and have few opportunities for peer interaction and exchange for health care providers. Studies, however, suggest that individuals with ties to rural areas (i.e., through birth and/or educational experiences) are more likely to live (and work) in rural areas.

Through this project, Primary Care Medical Students and Nurse Practitioner Students have an opportunity to work with a preceptor/mentor in a rural setting. Through this experience, students are introduced to both the challenges and rewards of working in a rural community.

Program Services	
Target Population	
Medical Students-Primary Care	Physician Assistance Students
Nurse Practitioner Students	

A. Description

The goals of the Georgia Rural Health Experience (GRHE) Network were to provide a high quality educational experience, particularly in regard to the unique medical needs and experiences in a rural population. An emphasis on integrated community involvement allowed the students to experience rural life firsthand. In addition, students were encouraged to participate in fun activities in the community, such as horseback riding, fishing, canoeing, white-water rafting, hiking and other opportunities for community exploration. Involvement with families was encouraged as well.

GRHE served medical students from all five of the medical schools in Georgia: Philadelphia College of Osteopathic Medicine, Emory School of Medicine, Morehouse School of Medicine, Mercer School of Medicine, and Georgia Health Sciences School of Medicine. In addition, the network provided training for nurse practitioners from North Georgia College and State University, Brenau University, Emory University, University of Tennessee, and the University of Alabama. Also, training was provided for nurse practitioners from out-of-state programs that lived in Georgia (Georgetown University).

The students participated in health fairs in rural communities and conducted physicals for Head Start, sports programs, Special Olympics programs at schools, and a Boy Scout camp. There were many other community events, including those at senior centers in which students participated in education on diabetes and cholesterol. Outreach efforts included the provision of urgent care services in a mobile health van that traveled to underserved areas in these communities.

Many community-based service organizations, including Kiwanis, Rotary, and Family Connections, hosted students at their meetings.

B. Role of Network Partners

As a collaborative, all of our network partners attended board meetings and provided continued support with ongoing ideas and suggestions for the network's programs.

Individually, the following roles were:

- Georgia Mountain Health Services (GMHS) and Primary Health Care Center (PHCC) helped to train students and provide an excellent preceptor program for the Medical students and Nurse Practitioner students.
- Area Health Education Center (AHEC) helped with student coordination from all of the medical schools and nurse practitioner schools. They were instrumental in helping to open doors with many of these schools, strengthening the partnerships with each school and enabling the Georgia Rural Health Experience (GRHE) to meet and exceed its goals.
- Georgia Association of Primary Health Center (GAPHC) helped with provider training and a network presentation at the State GAPHC meeting. In addition, they provided meeting space for board meetings and helped with clerical support.
- North Georgia College and State University (NGCSU) introduced the GRHE program to their students and provided continued support in accomplishing the network's mission. NGCSU representative board members are nurse practitioners, and they were able to assist in developing ideas for rotations to provide students with a great experience in rural medicine.

Outcomes

In the area of clinical experience, evaluation efforts indicated:

For Preceptors:

- The program opened a lot of doors with preceptors in the rural area, allowing for the development of quality partnerships with more local physicians/clinics/hospitals.
- Teaching and mentoring students re-energized the preceptors and their practice. This can be a very rewarding experience because they feel like they are influencing the future of medicine. Even if students don't choose rural medicine, hopefully they have learned something from the experience that will impact their future work. One preceptor said, "It keeps your mind young, makes you think you are still doing something worthwhile." In addition, preceptors may also learn about new medical practices/knowledge as they are preparing to work with the student and/or directly from the student.
- The students may save time for doctors. This point was contested among the interviewees. While some spoke about how students could save preceptors' time, others noted they had not seen any evidence of this. It seems like this is more likely to occur if the student has already been through several rotations, while a less experienced student is less likely to save time. Some examples of the services students could provide were research for the preceptor about a case and documenting medical history/physical for new patients.
- Positive experiences really depend on the personality of the preceptors. Some don't want to "let go" of the control in their practice, and so they don't make the best use of the students. Students want to do as much as possible, but some want to do too much. The preceptor must know how to use the student in the best way for both student and practice. This is something that the preceptors learn through experience as they become valuable role models.

For students:

- Students have a unique and high quality educational experience. There has been a lot of positive, anecdotal feedback to program staff from students about their experiences.
- Relationship between physician and patient: In a rural rotation, students are exposed to different types of clinical experiences where the relationship between the patient and the physician is often more personal than it is in an urban setting. There is more focus on the relationship, not just the clinical aspect of the practice.
- Rural practice requires flexibility: Students learn that in a rural setting, primary care isn't always just primary care. Primary care physicians often provide specialized services due to the lack of specialty providers nearby. Students must also learn that patients in a rural setting may be financially limited, so they must be creative in what they prescribe – know generic medicines, cheaper options for treatments, etc.

Challenges & Innovative Solutions

Challenges experienced during this program implementation included:

- Housing: This is a major challenge for this program because rotations are isolated and require temporary housing. The flow of students is irregular and does not warrant renting a house/apartment year-round, which would be the best option economically. Housing must be nice enough to satisfy the school/students; yet, affordable for the program. Some housing solutions included basement apartments and rental property not being used by staff at one of the participating facilities. The students were provided with an internet connection, and the housing was completely furnished.
- Preceptor Involvement: There is a lack of doctors/nurse practitioners/clinics willing to act as preceptors for several reasons (general dearth of primary care physicians, disinterest in teaching, and concern about loss of productivity). Originally, the program was recruiting doctors from within the two Primary Care Centers that are partnered in GRHE; however, it became clear that they could not sustain all of the students coming through the program. Thus, preceptors had to be recruited from outside these clinics to help meet network goals. In addition, preceptors must be trained about teaching students. While GRHE provided preceptors with a formal training opportunity when they began, it became evident that a one-to-one provider training worked better.

  There is a learning curve, and it is preferable to maintain the same preceptors for long periods. By rotating them, it enabled the network to keep preceptors from burning out; thus, keeping them in the program longer. Current preceptors may feel good about their current participation, but, eventually, they are likely to reach the point where they feel they have made their contribution and may ask to rotate off of the current preceptor inventory, at least temporarily. This is another challenge for sustainability of the program.

Sustainability

A. Network Structure and On-going Services and Activities

The GRHE network will continue but on a limited basis. The same network partners are expected to participate in the program, but housing will be greatly affected after the grant. Potential solutions may include local (AHEC/school partner) funds for some student housing. The number of students that the network will be able to accommodate will be reduced.

GRHE network will continue to have medical and nurse practitioner students, but on a limited basis. Full-time staff coordination will not be able to continue after the grant; therefore, coordination of students and preceptors will also be reduced.

Future funding plans include application for the fall 2013 ORHP network program and housing assistance from network partners.

B. Sustained Impact

One of the Nurse Practitioner students that had two rotations in Georgia's Rural Health Experience has joined one of the network partners to work in a rural and underserved area. In addition, two other Nurse Practitioner students indicated plans to work in a rural area after graduation. Many of the medical students indicated that the rural experience has changed their views of working in a rural area.

Evaluation efforts yielded the following information:

Intentions to Practice in a Rural Area

- 4 students changed from disagreeing to agreeing that they plan to pursue employment in a rural setting after graduation; 6 students changed from disagreeing to agreeing that given the option, they would choose a rural placement.
- Students reported a higher number of personal/professional factors that would encourage them to select a rural placement than discourage them.
- Overall, it was more common for students to have positive changes in their assessment of factors that would affect their decisions to work in a rural setting than to have negative changes. The factors with the highest frequency of positive changes were *professional networking, recreational facilities, and educational opportunities for students.*

Satisfaction with GRHE

- 77.5% of students said GRHE exceeded their expectations of a unique clinical rotation.
- 85% would recommend GRHE to a colleague.

The majority of students enjoyed the community activities that they participated in as a part of GRHE and found that they were able to get a taste for life outside the clinic. This engagement in community activities was a unique component of this rotation that was not present in any other clinical rotation experience. One student said *"This was a good component of the program because it showed me things that I couldn't have shown myself…you can learn about rural medicine anywhere, even in a classroom, the rural lifestyle experience was the important part."* Another said it "*brought to light the positive parts of being in a rural environment. They made the experience full and fun."*

Implications for Other Communities

The network's program successes were presented at a 2012 meeting of the Georgia Primary Health Care Association, which increased interest in the program by other FQHCs in Georgia. There are many other areas in Georgia that are interested in joining forces to open other teaching sites, providing greater experiences in rural medicine in the state with the hope of bringing more Physicians and Nurse Practitioners to rural and underserved areas.

Hawaii

The Bay Clinic, Inc.

Organizational Information	
Grant Number	G98RH19712
Grantee Organization	The Bay Clinic, Inc.
Organization Type	Federally Qualified Health Center
Address	224 Haili St, Hilo, HI 96720
Name of Workforce Development Network	Rural East Hawaii Healthcare Workforce Development Network
Project Director	Name: Youlsau Bells
	Title: Director of Development
	Phone number: 808-961-4078
	Fax number: 808-961-5678
	Email address: ybells@bayclinic.org
Project Period	2010 - 2013
Funding level for each budget period	September 2010 to August 2011: $200,000.00
	September 2011 to August 2012: $200,000.00
	September 2012 to August 2013: $200,000.00

Network Partners		
Partner Organization	Location	Organizational Type
Bay Clinic Inc.	Hilo/Hawaii/Hawaii	Federally Qualified Health Center
Hilo Medical Center	Hilo/Hawaii/Hawaii	Hospital
University of Hawaii, Hilo, College of Pharmacy	Hilo/Hawaii/Hawaii	University

Community Characteristics

A. Area

The Rural East Hawaii Health Care Network and its related pharmacy student rotation program serviced the East Hawaii Island area. East Hawaii Island is comprised of the rural communities of Pahoa, Keaau, and Hilo.

B. Community description

The East Hawaii Island community population is very diverse and made up of Hawaiians, Micronesians, Japanese, Filipino, Caucasian, and other ethnicities. Our community is suffering from a dramatic shortage of health professionals that are willing to live and work in our area because of our isolated and rural environment. The majority of the people who make up our population are of Pacific Islander or Asian descent. These groups are at an increased risk of contracting chronic diseases, such as diabetes, based on their heritage alone. Some community members have no experience with the type of healthcare system that is offered in our country. They come from places where preventative medicine does not exist, and when there is illness their only recourse is to report to the hospital for care. There are no outpatient clinics with scheduled appointments for maintenance care. When this is coupled with high cost of living and poor wages, the undertaking involved with caring for the people in the community becomes a difficult task.

C. Need

Access to affordable care in rural East Hawaii is challenged by a limited health care workforce. The number of primary care physicians and specialty providers are decreasing; thereby, limiting access to care. To compound the problem, local physicians are limiting the number of new patients they will admit to their practice, diverting most patients to community health centers. In addition, people seek non-emergency care at hospitals because of the lack of access. The lack of medical providers is exacerbated by our rapidly expanding population. The population of Hawaii County has grown by 12.89% since 2000.

There has been a sustained unmet need for pharmacists through the country. In Hawaii, the pharmacist shortage is most pronounced in rural areas. Studies indicate that pharmacists can strengthen the care provided in a primary care medical home when there is a physician and provider shortage. This is due to their ability to provide medication therapy management for patients, thereby enhancing care access and quality.

Program Services	
Target Population	
Pharmacy Students	Preceptors – Other (Pharmacists)
Preceptors – Primary Care	

A. Description

The Rural East Hawaii Health Care Workforce Development Network (REHHWDN), consisting of Bay Clinic, Hawaii Island Family Medical Center/Hilo Medical Center, and the University of Hawaii, Hilo, College of Pharmacy, was formed to support the training of pharmacists in rural outpatient settings. The training program offers students a wide variety of comprehensive clinical experiences in rural, community based facilities while building students' affinity to the community so that they might choose to live and practice on the island of Hawaii. The program links pharmacists as faculty preceptors and students at the training sites to patients and their primary care providers. The availability of a licensed pharmacist increases the number of providers available to serve patients at the clinic sites. It increases access to care, enhances the delivery and quality of care, and strengthens the primary care medical home for better overall services to the patients.

The primary focus of the Workforce Development grant was the expansion of rotation training options for pharmacy students attending the Hilo University College of Pharmacy at two rural clinic sites. Through these rotations, students had access to a unique and challenging group of patients where, together with their pharmacist preceptors, they were able to provide medication management services. Medication Therapy Management (MTM) is a comprehensive medication counseling encounter with the patient. This session focuses on drug-drug interactions, drug-disease interaction, and any issues that may prevent adherence to medications. The students and pharmacist preceptors provided medication counseling for patients with chronic diseases, such as diabetes, hypertension, dyslipidemia, and coagulation disorders. Each student's experience and duties varied somewhat based on the patients that came to the clinic when they were on rotation. Some students got the opportunity to give immunizations and take vital signs during their clinical rotations. Each student had to present a patient case to a group that consisted of their classmates, the pharmacist faculty, and some of the providers at the clinic in which they rotated. In addition to a patient case the students had to present on a disease state that they studied and applied the knowledge they have to a patient that they counseled in the clinic. These activities provided a comprehensive rotation experience for each student.

Pharmacy student rotations in a rural clinic setting were facilitated by the creation of the Rural East Hawaii Health Care Workforce Development Network comprised of key organizations (Bay Clinic Inc., Hilo Medical Center, and the University of Hawaii, Hilo, College of Pharmacy) that play an essential role in caring for the people of rural East Hawaii Island. Through the Network, these organizations were able to meet and discuss ways in which they could improve pharmacy student training and recruitment of pharmacists to practice in rural areas of the state. With this, a relationship of trust was built between these organizations that would not have been otherwise possible.

A key element of the pharmacy student rotations was the placement of a pharmacy faculty member in the clinic settings with the students. Provider preceptors and pharmacist preceptors learned to work together to bring the best of each specialty to the care of the patients. This team approach to care is known to increase positive outcomes for those patients that are fortunate enough to have experienced a multi-discipline approach to care.

B. Role of Network Partners

The Bay Clinic collaborated with other network members on the number of students to rotate, the allocation to clinic site for each student, and the activities that the students could participate in with regards to the patients that they would have access to. Bay Clinic provided a clinical rotation site for the pharmacy students. They provided provider preceptors who were willing to work with and share their patients with the students and/or the pharmacist preceptor.

Bay Clinic also surveyed the students to gain their perception of the quality of the rotation experience. The preceptors were surveyed regarding the changes to workflow and patient care. The network partners and patients were also surveyed in regards to their thoughts on the quality of the program and the care being delivered at the clinic sites.

Additionally, Bay Clinic provided administrative oversight of the grant.

The Hilo Medical Center collaborated with other network members on the number of students to rotate, the allocation to clinic site for each student, and the activities that the students could participate in with regards to the patients that they would have access to. They provided a clinical rotation site for the pharmacy students. They provided provider preceptors who were willing to work with and share their patients with the students and or the pharmacist preceptor.

The College of Pharmacy collaborated with the other network members on the number of students to rotate, the allocation to clinic site for each student, and the activities that the students could participate in with regards to the type of training that they have received as either a 2nd year pharmacy student or a 4th year pharmacy student.

Outcomes

The Workforce Development grant program met the needs of our community in the following ways:

- Second and fourth year pharmacy students gained the opportunity to engage in a comprehensive, community based, and culturally rooted training program. The experiences obtained were unique and of the highest quality to demonstrate the value of practicing in a rural setting.
- Bay Clinic and the Hawaii Island Family Medical Center gained licensed pharmacists and pharmacy students to expand services and improve access to care to their patients.
- The College of Pharmacy gained clinical training sites in a rural location to expand exposure for their students.
- Patients received the benefit of medication management services provided by the faculty pharmacists to aid in the management of their chronic diseases.
- Rural areas in the state of Hawaii benefitted from having ten pharmacy students who received clinical training through this initiative chose to practice in their communities.

Community awareness is just one of the ways in which the REHHWD Network has had impact. Patients and people of the community are aware of the combined efforts of the College of Pharmacy (CoP) and the two clinical sites working together to improve their health and the health of the entire community. As East Hawaii is a small and tight knit community, the students at the CoP that participate in community service events are the same students that patients recognize in the clinic offices.

The clinical sites have been impacted by the development of the REHHWD Network through the sharing of service ideas and best practices. Because of the Workforce Development program, the two clinics expanded their services to offer patient counseling on anti-coagulation therapy management as well as medication management of other chronic diseases by a pharmacist. The addition of the services provided by the faculty pharmacists frees up physicians in the clinics to treat other acute patients presenting to their clinics daily.

The College of Pharmacy benefits by the relationship built through the Network. There is a level of trust that exists between the clinic sites and the College of Pharmacy because of the quality pharmacists provided to the clinic sites. This trust supports the willingness of the clinic providers to make available their patients and unique types of clinical experiences to the students. Without such trust there would not be a willingness from clinic providers to allow pharmacists (with the help of pharmacy students) to care for and manage their chronic disease patients.

Our network surveyed patient, students, pharmacist preceptor, and provider preceptors. The results from those student surveys were mostly positive. Most students found the information provided by and the helpfulness of the pharmacist and provider preceptors to be "Excellent". They found the rotation to be pertinent to their training as a pharmacist and that working with a team of medical providers enhanced their learning experience. When the students were asked what changes could be made to improve the quality of the rotation, the responses varied from "more time with the preceptors" to being able to "see more patients" or more "access to the medical records".

Patient responses were also overwhelmingly positive. Most of the patients "Strongly agreed" that the providers (pharmacist and providers) spent enough time with them. They understood the information that was being provided to them. They also found the information helpful and indicated that they received a high quality of care.

Preceptors (provider and pharmacist) both agree that the program would enrich the education of pharmacy students as well as any student of medicine that would enter the training site. They also agreed that by providing the students training in a community health environment that they would be able to increase the number of students that are willing to work in such settings. However, the preceptors were somewhat divided in the perceived willingness of the pharmacist or provider to work with one another. What is most interesting is that preceptors commented that they desired more time to work together with the other practitioner and the students.

Challenges & Innovative Solutions

The largest challenge that we identified with our network and our program was the recruitment and retention of preceptors, both at the clinic sites and from the College of Pharmacy. This challenge is a product of our rural location. Some of the professionals that come to work and live in our rural area have spouses that also have professional careers. However, they are not always able to find work in our area within their respective profession. This created stress at home and often led to the resignation of the practitioner and a move for the family. Another challenge related to retention of staff is that some physicians and nurse practitioners are here to fulfill a commitment to a school related scholarship or school related program. Once they fulfill their commitment (working in a rural area for 2 years), many of them move back to the areas from which they came. Although this is a challenge that our network has had to try to overcome, it is also one of the reasons that our network and program was also very necessary. Our network attempted to address these challenges by recruiting practitioners and educators that had a keen interest in rural health and a desire to work with an underserved population. The network looked for individuals who were not concerned with moving to a rural area and perhaps not interested in living "the city life".

Some of the other challenges experienced with the rotation of the students included having enough of the types of patients that were good learning experiences for pharmacy students, having enough room for the students and pharmacist preceptors to work, and getting enough time in the clinic.

Pharmacists can play a major role and have the greatest impact in the clinic by helping manage patients that have chronic diseases like diabetes, hypertension, dyslipidemia, and coagulation disorders. Exposures to those types of patients are the most meaningful learning experiences for pharmacy students. However, by increasing the time spent at the clinic (especially for second year Pharmacy students) this challenge would get sufficiently addressed.

Lastly, the challenge of having the proper amount of workspace for the students and the pharmacist to do their job was a difficult to address. All available space was offered to pharmacists and students to work. This space could sometimes fluctuate depending on which providers were scheduled to work on any given day of the week. However, clinic sites were always as accommodating as they could be to provide workspace.

Sustainability

A. Network Structure

Although Bay Clinic, Hilo Medical Center, and the College of Pharmacy will continue to communicate and support one another, they do not see the benefit of continuing the formal relationship of the Rural East Hawaii Health Care Workforce Development Network. The Network will no long have regular meetings following the grant period.

B. On-going Services and Activities

The College of Pharmacy and Hawaii Island Family Medical Center will continue the student rotation program utilizing their current faculty and staff.

As student rotations are an essential element of pharmacy training, expenses to support this portion of student education are included in the operating budget of the College of Pharmacy. The Workforce Development grant provided the opportunity to expand rotation sites to include rural clinics. Now that the policies and procedures for providing student rotations in this setting are established, the continuation of the rotations will be supported by the overall budget of the College of Pharmacy.

Likewise, Hilo Medical Center will incorporate any expenses related to the pharmacy student rotations at Hawaii Island Medical Center into the operating budget of the clinic.

C. Sustained Impact

The primary sustained impact of the Rural East Hawaii Health Care Workforce Development Network grant program is that ten pharmacy students who were exposed to a clinical practice in a rural area of Hawaii chose to practice in a rural community in Hawaii upon their graduation from the College of Pharmacy.

As a result of their participation in this grant initiative, the Hawaii Island Family Health Center has embraced a team approach to patient care and views the pharmacist as an essential component of that team. They have integrated this approach into their daily practice and will continue to support the training of pharmacy students in their facility.

Another significant impact of having formed the Network is the enhanced relationships among the Network partners. Communications and trust between Network organizations have been improved, which will benefit future efforts to improve care and access to care in the Hilo area of the Island of Hawaii.

Workforce Development grants funds also resulted in improvements to the curriculum at the College of Pharmacy. Grant funds aided in the development of two training laboratories (a retail training lab and a hospital training lab) that were not previously available for student education. With the training labs established, the College of Pharmacy has modified the training curriculum to incorporate this method of training.

Implications for Other Communities

Other communities who are interested in taking on a project such as ours should attempt to address some of the challenges that we faced in advance. Create a network from organizations with a stable employee base. Make sure that there is room available for an appropriate workspace for preceptors and students. Having a separate place where the pharmacist could see patients would be ideal. By having ample room for additional staff you would be able to increase student and pharmacist hours and take care of more patients.

Illinois

Illinois Critical Access Hospital Network

Organizational Information	
Grant Number	G98RH19825
Grantee Organization	Illinois Critical Access Hospital Network
Organization Type	Independent network of critical access hospitals in Illinois
Address	245 Backbone Road East Princeton, IL 61342-1447
Grantee organization website	http://www.icahn.org/
Name of Workforce Development Network	Southeastern Illinois Rural Health Workforce Development Network (SEIgrow)
Your Project Director	Name: Patricia M. Schou
	Title: Executive Director
	Phone number: 815 875-2999
	Fax number: 815 875-2990
	Email address: pschou@icahn.org
Project Period	2010 - 2013
Funding level for each budget period	September 2010 to August 2011: $200,000
	September 2011 to August 2012: $200,000
	September 2012 to August 2013: $200,000

Network Partners		
Partner Organization	Location	Organizational Type
Hamilton Memorial Hospital	McLeansboro/Hamilton/Illinois	Critical Access Hospital
Harrisburg Medical Center	Harrisburg/Saline/Illinois	Hospital
Fairfield Memorial Hospital	Fairfield/Wayne/Illinois	Hospital and AHEC Center
Richland Memorial Hospital	Olney/Richland/Illinois	Hospital
Lawrence County Health Department	Lawrenceville/Lawrence/Illinois	Health department
Frontier Community College	Fairfield/Wayne/Illinois	Community College
Illinois Department of Public Health, Center for Rural Health	Springfield/Sangamon/Illinois	State office of public health
National Center for Rural Health Professions, University of Illinois	Rockford/Winnebago/Illinois	Rural Center of a university
Numerous health professionals	Throughout 13 county area	Individual health providers

Community Characteristics

A. Area

The Southeastern Illinois Rural Health Workforce Development Network (SEIgrow) serves the following thirteen counties located in southeastern Illinois: Clark, Crawford, Cumberland, Edwards, Gallatin, Hamilton, Jasper, Lawrence, Richland, Saline, Wabash, Wayne and White.

B. Community description

The 13 county area of SEIgrow is generally underserved in relation to access and quality of healthcare. There are seven primary care HPSAs based on geographic criteria, with the remaining 6 designated as primary care HPSAs in relation to low income status of the population. Health and healthcare delivery related to both older adults and children in poverty are major issues in this sector of Illinois. The percent of rural residents 65 and older in all 13 targeted counties is well above the average in Illinois and the United States as a whole. At the other end of the spectrum, 11 of the 13 counties have a percentage of children in poverty equal to or higher than that reflected in statistics for the United States in general. While below the U.S. average of 20.7% for uninsured

adults, 4 counties were above the Illinois mean of 15.4%, and 3 more counties were at 15.0 to 15.3% uninsured adults. There is also a comparatively high employment rate in these counties.

Of major significance for health outcomes and workforce development is the percentage of adults in the 13-county area with a college degree compared to Illinois (29.0%) and the United States (27.5%). In Gallatin County, as few as 9.79% of adults have a college education. The best outcomes are in Richland County with 17.98% but well below Illinois and U.S. standards. These figures have implications for practices related to health promotion and disease prevention as well as local solutions to development and retention of a qualified health workforce.

On the more positive side, the percentage of single parent households is slightly lower than in Illinois and the U.S. as a whole. In summary, the family structure characteristics of residents related to two parent families are relatively strong; however, the economic and educational status of residents in the 13 rural counties is substantially disadvantaged. Young people in this area, if given academic and career guidance, not only could benefit from but might strongly consider the attractive and stable employment options that health careers can offer.

C. Need

The health and medical needs of 180,613 residents of 13 Illinois counties (11% of all rural Illinois residents) are being addressed by a total of 113 primary care physicians. Based on Rural-Urban Commuting Access (RUCA) codes, designed to assure comparability between population comparisons in research and evaluation studies, all 13 targeted counties meet rural criteria, with RUCA codes ranging from 6 to 9. Six of the 13 counties have 5 or less primary care physicians. All 13 counties have fewer primary care physicians per 10,000 population than the state as a whole. The Medicaid enrollees to Medicaid physician vendors ratio is significantly higher for the target counties when compared with the state ratio of 82.3 to 1 (the Edwards County ratio is 1,111:1). The percentage of the population on Medicaid in the 13 county region is similarly disparate compared to the state of Illinois as a whole. All counties are above the state rate of 4.0%.

In terms of physician workforce needs, age is an important variable to consider related to health workforce projections of need. Based on data from the American Medical Association Masterfile, the average age for all Illinois rural physicians is nearly 56 years old. In comparison, the average physician age in our targeted 13 counties is 58 years. Further, about one-half of the physicians currently practicing in these counties would be expected to have already retired or do so in the near future. Yet, there is no evidence of a sufficient increase among physicians of younger ages that will be available to provide care in the area. The age distribution of the practicing physicians in the 13 rural counties is shifted toward older ages in comparison to urban areas.

These figures for primary care physicians are just one example of the health professions shortages in rural Illinois. In a white paper on healthcare access in Illinois, the National Center for Rural Health Professions also documented shortages of nurses and pharmacists in rural communities of Illinois. These are combined with severe shortages of mental health professionals in rural areas, where all 13 counties are federally-designated mental health shortage areas.

Given this scenario and the magnitude of healthcare and health professions needs, SEIgrow was designed to address health workforce issues through the accomplishment of five major objectives:

1. Establish a regional approach to ongoing recruitment and retention of health professionals in the targeted 13 counties of rural Illinois through development of a network strategic plan
2. Assess southeastern Illinois regional needs related to rural health workforce development
3. Set up a longitudinal evaluation plan for monitoring the impact of project programs and activities on health professions recruitment and retention in the southeast Illinois counties
4. Identify and recruit potential students, using multiple strategies, for rural health careers to serve the needs of southeastern Illinois
5. Provide community-based educational experiences for health careers students

Program Services	
Target Population	
Allied Health Professional Students – Bachelor's level	Nursing Students - RN
Allied Health Professional Students – Master's level	Nursing Students - LPN
High School Students	Pharmacy Students
Medical Students – Primary Care	Physician Assistance Students
Middle School Students	Social Work Students

A. Description

To aid in the development of a health care workforce in the 13 counties of southeastern Illinois, the SEIgrow Network focused grant activities around the "grow your own" philosophy. The Network created and implemented activities for youth living in the 13 county area as well as implemented and provided opportunities for health professions students interested in a rural experience but not necessarily from the 13 county area. Activities included:

- Health Career Talks for middle and high school students throughout the 13 counties. The SEIgrow coordinator went into local schools and attended Upward Bound sessions to present information about health careers to the students.
- Health Career Shadowing experiences for high school and college students were organized by the SEIgrow coordinator. Shadowing experiences included shadowing an individual health care provider as well as shadowing several departments in a hospital or a health department.
- Rural Health Careers Camp for high school students residing in the 13 county area. Held during the summer, the camps provided hands-on health labs, an accident simulation and tour of a rural hospital. SEIgrow collaborated with two local community colleges, as well as two hospitals, to provide multiple camps.
- Sharing Health Occupations Parent Tour (SHOP). SEIgrow worked with a local hospital to offer a health careers education fair for local high school students and their parents. The hospital provided tours and local health care providers shared information about various health careers related to their profession.
- Rural Interprofessional Health Professions Summer Preceptorship. SEIgrow collaborated with Harrisburg Medical Center in Harrisburg, Illinois to provide a 6 week summer experience for four health professions students during the second and third year of the grant. Students were recruited from a variety of academic institutions and represented the disciplines of medicine, pharmacy, physician assistant, social work and physical therapy. Students resided in the community for 6 weeks, shadowed a variety of health professions and completed a community project.
- 3-day Rural Health Experience (RHE). SEIgrow partnered with four hospitals in the 13 county area to offer a 3 day inter-professional shadowing program for health professions students during the summer. The purpose of the RHE is for students to learn about the social and health characteristics, needs, and resources of a specific rural community, understand the roles and responsibilities of different healthcare providers in a rural community and reflect on a future career as a healthcare provider in a rural community and potential interest in this location as a future career location.

B. Role of Network Partners

Hamilton Memorial Hospital – Hamilton Memorial Hospital has served as the physical location for the grant coordinator in the 13-county region. They have provided office space, computer, phone, copying and other administrative-type support. In addition, the hospital created and implemented the SHOP Tour, provided numerous shadowing opportunities for high school students, participated in the Rural Health Careers camp by providing a hospital tour for students as well as the pharmacist who conducted a hands-on lab for the campers and has also been a host site for the 3-Day RHE. They are an active member of the Advisory and Steering Committees.

Harrisburg Medical Center – Harrisburg Medical Center was not an original network member but came aboard after hearing about SEIgrow's mission. Harrisburg Medical Center has provided numerous shadowing opportunities for high school students, has been a host site for the 3-Day RHE as well as the 6 week Rural Inter-professional Health Professions Summer Preceptorship. Through this grant, the hospital became interested in the NCRHP's Rural Medical Education Program (RMED) and Rural Pharmacy Education Program (RPHARM). The relationship was recently formalized by Harrisburg Medical Center becoming a RMED/RPHARM collaborating hospital. As a collaborating hospital, Harrisburg Medical Center will be training fourth year RMED/RPHARM students during a 16 week rural preceptorship that focuses on clinical skill development in a rural setting and the completion of a community oriented health project. They are an active member of the Advisory Committee.

Fairfield Memorial Hospital – Fairfield Memorial Hospital has helped create, implement and fund the Rural Health Careers camp for rural high school students. They have also been a host site for the 3-Day RHE and an active member of the Advisory Committee.

Richland Memorial Hospital – Richland Memorial Hospital has been a host site for the 3-Day RHE.

Lawrence County Health Department – Lawrence County Health Department has provided numerous shadowing opportunities for college students.

Frontier Community College – Frontier Community College hosted a Rural Health Careers camps for high school students and also started a dual credit Health Careers Program for high school students from five high schools in three SEIgrow counties.

Illinois Department of Public Health (IDPH), Center for Rural Health – IDPH served in a consultant role to the project through involvement on the Advisory Committee as well as helping to disseminate information about grant programs/activities and is an active member of the Advisory and Steering Committees.

National Center for Rural Health Professions (NCRHP), University of Illinois – NCRHP guided content of SEIgrow programs incorporating evidence-based grow your own activities, recruited students for the 3-Day RHE and 6 week summer preceptorship, provided staff to conduct the 6 week summer preceptorship, evaluated SEIgrow activities and disseminated information about grant activities. NCRHP has several faculty and staff who are active members of the Advisory and Steering Committees.

Outcomes

SEIgrow's evaluation plan focused on evaluating programs and activities that focused on:

1. Establishing a sustainable network of diverse organizations to identify and respond to regional needs related to the recruitment and retention of healthcare providers
2. Develop and implement innovative programs to address rural health workforce needs

To that end, each year a survey was administrated to Advisory Committee members soliciting feedback as to how they feel SEIgrow is doing. This feedback is used to adjust programming and/or approaches for the upcoming year.

In addition to surveying Advisory Committee members, each SEIgrow activity/program is evaluated using the following tools:

- Sharing Health Occupations Parent (S.H.O.P.) Tour – post evaluation completed by the parents. Information asked includes quality of content, additional content they would like in regards to health careers information for their child.
- Health Careers Talks – post evaluation completed by the students. Information asked includes quality of content, additional content they would like in regards to health careers, interest/intent in a health career, interest/intent in living and working in a rural community and barriers to pursuing a health careers education.
- Rural Health Careers Camp – post evaluation completed by students. Information asked includes quality of content, additional content they would like in regards to health careers, interest/intent in a health career, interest/intent in living and working in a rural community and barriers to pursuing a health careers education.
- Shadowing – pre/post tool completed by students. Information asked includes quality of content, additional content they would like in regards to health careers, interest/intent in a health career, interest/intent in living and working in a rural community and barriers to pursuing a health careers education.
- 3-day Rural Health Experience (RHE) - pre/post tool and guided discussion with participating students. Information asked includes logistics, quality of experience, level of understanding of different health professions, level of understanding of rural health care and characteristics that will influence their future practice location. The sponsoring hospital is also asked for feedback in regards to logistics of experience, quality of student(s) they received and suggestions for improvement.
- Rural Interdisciplinary Health Professions Preceptorship – pre/post tool and guided discussion with the students. Information asked includes logistics, quality of experience, level of understanding of different health professions, level of understanding of rural health care and characteristics that will influence their future practice location. The preceptors are also asked for feedback in regards to logistics of experience, quality of student(s) they received and suggestions for improvement.

Outcomes focused on the number of participants and the quality of those experiences. Because of the number of years it takes for a health profession student to complete his/her education, grow your own programs need time to be able to show results of increasing the number of health professionals practicing in rural communities. To date:

- 71 parents have participated in a SHOP Tour.
- 31 Health Careers Talks have been conducted reaching over 650 rural high school students. (Strategic plan goal was 25).
- 133 students participated in a shadowing experience of which 25 were at the college level. The remaining 108 students were rural high school students. (Strategic plan goal was 53).
- 3 Rural Health Careers Camps were offered to high school students serving over 70 rural high school students. (Strategic plan goal was to offer 2 camps and serve a total of 50 students).
- 13 health professions students with an interest in practicing in a rural area participated in the 3-Day Rural Health Experience. Of the 13 participating students, 4 were medical students, 4 were pre-med students, 3 were pharmacy students, 1 was a physical therapy student and the other was a speech pathology student.
- 8 students participated in the 6 week Rural Interprofessional Health Professions Summer Preceptorship that was held during the summer of 2012 and 2013. Of the participating students, two were medical students, two physician assistant students,

one pharmacy student, one physical therapy student, one public health student and one social work student. (Strategic plan goal was to serve 8 – 12 students).

Challenges & Innovative Solutions

Most challenges were minor and are addressed through the Steering Committee. Distance between the partners as well as the vastness of the 13-county area was a challenge. The Steering Committee meets monthly via phone conference and corresponds via e-mail as needed between meetings. Creating a Dropbox file helped bridge the distance in that all partners were able to access electronic documents related to the grant. Participation of members seemed to ebb and flow depending on SEIgrow activities and their involvement with those activities. After the first year, we made a conscious effort to provide members with specific tasks to accomplish which improved network participation. The Steering Committee adjusted their perspective as well in regards to attendance at Advisory meetings. Members, who were unable to attend, were contacted by phone and asked how things were going in relation to SEIgrow. Members' contributions were acknowledged and shared publically.

Sustainability

A. Network Structure

With grant carry over monies and financial support from NCRHP and ICAHN, many grant activities will continue on a year-by-year basis. Network activities will continue to be guided by the Steering and Advisory committee members including ICAHN, Hamilton Memorial Hospital, IDPH Center for Rural Health, Illinois AHEC, NCRHP and local health care providers and educators. The "grow your own" philosophy will continue to be the focus of SEIgrow's rural health workforce network and activities.

Moving into the next year, SEIgrow will continue to be staffed by a coordinator located at Hamilton Memorial Hospital. The activities and work plan of the coordinator will be directed by SEIgrow's Steering Committee. In addition, NCRHP's Assistant Director of External and Pipeline Programs will continue to be available to SEIgrow coordinator as needed. Evaluation of SEIgrow's programs/activities will be conducted by NCRHP.

B. On-going Services and Activities

As mentioned above, the "grow your own" philosophy will continue to be the focus of SEIgrow's rural health workforce network and activities. SEIgrow activities for next year include health careers talks and shadowing for middle and high school students, SHOP Tour(s), Rural Health Careers Camp for high school students and the 3-Day Rural Health Experience for health professions students who have completed at least their sophomore year of undergraduate education. Grant carry over monies and financial support from NCRHP and ICAHN will support SEIgrow's coordinator for another year. In-kind support from numerous health professionals in the area will support the health careers talks, shadowing, SHOP Tour and Rural Health Careers Camp. Carry-over grant monies will support the 3-Day Rural Health Experiences. Additional grants will continue to be sought as well as the possibility of moving SEIgrow activities under the Illinois AHEC umbrella. Evaluation of SEIgrow activities will be provided in-kind through NCRHP. Hamilton Memorial Hospital will provide in-kind office space, computer, phone and copier to the SEIgrow coordinator.

C. Sustained Impact

The Rural Health Workforce Development grant from HRSA allowed a unique group of organizations to come together to provide workforce programs and activities to a particularly challenged geographic area. While the activities themselves were important, the grant brought organizations together to work on workforce issues rather than multiple organizations working on the issue but not knowing what other organizations were doing. The grant allowed the efforts to be more coordinated and activity results evaluated than if each organization was doing their own activities separately. While many of these organizations were familiar with each other, and some may have worked together on certain projects in the past, this grant brought the organizations together to work on rural health workforce. It is intended that this network will continue to come together and, hopefully, will be the genesis for an advisory board for Illinois AHEC.

In addition to the activities implemented, an unforeseen benefit was the addition of Harrisburg Medical Center as a collaborating hospital for the University of Illinois' rural medical education program (RMED) and rural pharmacy program (RPHARM). This relationship will be ongoing.

Through evaluation of our SEIgrow activities, the Network realized the need to involve the parents of youth as well by providing information about college in general and health career professions specifically. By becoming more familiar with the organizations in the geographic area, the Network realized the need to adjust the 6-week summer preceptorship to accommodate what the hospitals could actually provide – thus the creation of the 3-Day Rural Health Experience (RHE).

Implications for Other Communities

SEIgrow's experience and program outcomes could benefit other communities interested in a "grow your own" approach. SEIgrow's approach involved employing evidence-based activities to create health career awareness among rural youth and provide exposure to different rural areas within the 13 county area for health professions students. This approach involves engaging with communities to build programs and activities that build on the assets of the community.

Kansas

Hays Medical Center

Organizational Information	
Grant Number	G98RH19705
Grantee Organization	Hays Medical Center
Organization Type	Hospital
Address	2220 Canterbury Drive - Hays, KS 67601
Grantee organization website	www.haysmed.com
Name of Workforce Development Network	Rural Health Workforce Development Program
Your Project Director	Name: Terry Siek
	Title: CNO
	Phone number: 785- 623-5103
	Fax number: 785-623-5030
	Email address: terry.siek@haysmed.com
Project Period	2010 – 2013
Funding level for each budget period	September 2010 to August 2011: $200,000
	September 2011 to August 2012: $200,000
	September 2012 to August 2013: $200,000

Network Partners		
Partner Organization	Location	Organizational Type
Hays Medical Center	Hays/Ellis/KS	Hospital
North Central Kansas Technical College	Hays/Ellis/KS	Technical College
Rawlins County Health Center	Atwood/Rawlins/KS	Hospital
Citizens Medical Center	Colby/Thomas/KS	Hospital
Lane County Hospital	Dighton/Lane/KS	Hospital
Kiowa County Memorial Hospital	Greensburg/Kiowa/KS	Hospital
Graham County Hospital	Hill City/Graham/KS	Hospital
Clara Barton Hospital	Hoisington/Barton/KS	Hospital
Sheridan County Health Complex	Hoxie/Sheridan/KS	Hospital
Edwards County Hospital	Kinsley/Edwards/KS	Hospital
Rush County Memorial Hospital	LaCrosse/Rush/KS	Hospital
Pawnee Valley Community Hospital	Larned/Pawnee/KS	Hospital
Minneola District Hospital	Minneola/Clark/KS	Hospital
Ness County Hospital	Ness City/Ness/KS	Hospital
Norton County Hospital	Norton/Norton/KS	Hospital
Logan County Hospital	Oakley/Logan/KS	Hospital
Decatur Health Systems, Inc.	Oberlin/Decatur/KS	Hospital
Phillips County Hospital	Phillipsburg/Phillips/KS	Hospital
Rooks County Health Center	Plainville/Rooks/KS	Hospital
Gove County Medical Center	Quinter/Gove/KS	Hospital
Grisell Memorial Hospital	Ransom/Ness/KS	Hospital
Russell Regional Hospital	Russell/Russell/KS	Hospital
Scott County Hospital	Scott City/Scott/KS	Hospital
Smith County Memorial Hospital	Smith Center/Smith/KS	Hospital
Cheyenne County Hospital	St. Francis/Cheyenne/KS	Hospital
Trego County-Lemke Memorial Hospital	WaKeeney/Trego/KS	Hospital

Community Characteristics

A. Area

The Rural RN Residency Program serves the following Kansas counties: Barton, Cheyenne, Clark, Edwards, Ellis, Gove, Graham, Kiowa, Lane, Logan, Ness, Norton, Pawnee, Phillips, Rawlins, Rooks, Rush, Russell, Scott, Sheridan, Smith, Thomas and Trego.

B. Community description

The communities impacted by the Rural Northwest Kansas RN Residency Program (RN Residency Program) are the twenty-three counties served by the Critical Access Hospitals (CAH) in the Northwest Kansas Health Alliance. These counties are rural, very rural, and frontier in nature, comprising 20,518 square miles. These counties struggle with RN recruitment as 13 of the 23 counties have an RN FTE per 100,000 population, which is lower than the average for the state of Kansas. The aging RN workforce also affects this rural part of the state, and recruiting new graduate RNs to the CAHs is a key concern.

C. Need

Counties served through this program are all frontier, rural, and densely populated rural areas, and the recruitment/retention of allied health professionals is a challenge. Because these health professionals play a critical role in the quality of care for the patients they serve, the Northwest Kansas Health Alliance and Hays Medical Center (HMC) developed a Rural RN Residency Program. Through this program, RN residents receive coaching and complete a training program designed to improve their competence and confidence levels for providing quality patient care. These new graduate nurses also feel an organizational commitment to their CAH, which increases workforce retention.

Program Services

Target Population	
Post Graduate RNs	

A. Description

Critical Access Hospitals face many challenges and barriers to training, recruiting, and retaining health care professionals: distance to traditional health care training centers, a limited workforce pool from which to recruit, clinical managers with multiple areas of responsibility, and limited time to focus on new employee orientation, mentoring and training. With small staffs and a single Director of Nursing, they continue to face all the same obstacles of larger health care facilities but with significantly fewer resources.

As a result, HMC created a 12-week Rural RN Residency Program for new graduate RNs hired at Northwest Kansas Health Alliance Network CAHs. This program incorporates classroom and simulation training as follows:

- First six-week period is an orientation, where new RNs (defined as graduated from nursing school within a year and no acute care experience) are paired with coaches. During this period, new RNs have 144 supervised clinical hours and 96 didactic hours.
- During the second six-week period, new RNs have 192 clinical hours without coach supervision and 48 didactic training hours.

B. Role of Network Partners

Hays Medical Center, as the applicant organization and supporting hospital for the Northwest Kansas Health Alliance, assisted the network's Critical Access Hospitals with clinical and administrate needs. HMC also provided staff to coordinate the network, served on the Network Council, and employed the Project Director for the Rural RN Residency program. The Project Director, with consultation from HMC staff, developed the Rural RN Residency curriculum and evaluation tools, as well as delivered the training program.

The Critical Access Hospitals were responsible for identifying new RNs within their facility to participate in the RN Residency Program. Once identified, a coach was assigned to each RN during the 12 week program. The CAHs were responsible for providing qualified, trained coaches and adhering to best practices for RN resident success.

The Northwest Kansas Technical College assisted HMC and the network CAHs in developing the Rural RN Residency Program. They shared equipment, resources and hosted simulation labs for the Rural RN Residency Program.

Outcomes

The Rural RN Residency Program, as of June 2012, assisted 31 new graduate nurses at thirteen of the NWKHA CAHs. Another 12 will participate in the program during 2013; however, evaluation results are not yet available for these residents.

Program evaluation results, to date, indicate:

1. 31 students successfully transitioned to NWKHA CAHs.
2. 100% of nurses in the Rural RN residency program indicated they improved their level of competency and confidence, exceeding the program goal of 75%.
3. 93% indicated the Rural RN residency program improved their organizational commitment, exceeding the program goal of 85%.
4. 86% of Rural RN residents were retained after one year, exceeding the program goal of 85%.
5. 100% of Rural RN residents felt competent in giving quality patient care.

Additionally, since the program's inception, 74% of nurses who have completed the Rural RN Residency program are still employed at their CAH.

Challenges & Innovative Solutions

Program Challenges	Mitigation Strategies Used
Developing buy-in from CAH administration (high turnover of DONs and CEOs presents challenges)	-Attended CAH meetings and present program information, as well as outcomes and results.
Adapting the curriculum to address the differences among the CAHs.	-Implemented CAH-specific competency checklist for each resident.
Keeping the curriculum current.	-Project Director re-evaluated curriculum after each class and made adaptions.
Ensuring good coaches for new graduate RNs.	-Coaches attended a half-day training session. -The importance of good coaches was emphasized with participating CAHs.
Keeping CAHs on track with the 12-week orientation.	-Project Director emphasized the importance of the 12-week orientation and followed-up with CAHs. -Project Director built rapport with CAHs and had an open discussion policy.
CAHs are struggling with health reform and the proposed changes.	-Sustainability was frequently discussed with CAHs. -Technical assistance regarding sustainability was received. -Network partners engaged in sustainability planning.

Sustainability

A. Network Structure

The NWKHA will continue, as it has since 1991, with CAHs and HMC as network partners. Together, these network partners provide a coordinated effort to bring quality health care services to Northwest Kansas.

The governing body for the Northwest Kansas Health Alliance is the Network Council. This council is composed of the CEO, or designee, of Hays Medical Center, the CEO from each Critical Access Hospital, and the Network Coordinator as designated by HMC. HMC provides the management of the network with existing staff in the Rural Development office and will continue to do so.

B. On-going Services and Activities

Members of the NWKHA have decided to continue the Rural RN Residency Program after the grant has ended. The structure and design of the program will shift slightly; however, the curriculum and program design will remain the same. Hays Medical Center will offer the Rural RN Residency Program semi-annually, in January and June, but will combine some of the core class coursework with the HMC RN Residency Program. The design will include four weeks of a blended core class, sharing information both the Rural RNs and the HMC RNs need to know. The job expectations, which are extremely different, will require the final eight weeks to be separated. The Rural RN Residents will be trained in the curriculum developed by the Rural RN Residency

Program, focusing on CAH job expectations and generalist nursing skills. CAHs will have the option to utilize the ITV system or come to HMC for classes. Using the internet and Skype are also being explored as a possibility for CAHs in remote areas.

HMC will also continue offering a coaching/mentoring class. This is for experienced RNs who are coaching/mentoring new graduate RNs. This four hour program will be offered four times per year and will be available to HMC and network CAHs. A supportive network is a critical aspect of the residency program, and CAHs will have an opportunity to train coaches/mentors for their new graduate RNs.

C. Sustained Impact

During sustainability planning, network members focused on two sustained impacts of the Rural RN Residency Program:

1. Improved nurse retention
2. Improved patient safety

These impacts are an important part of viability, as the CAHs need nurses who are capable of providing quality patient care. New nursing staff also needs to be competent and feel confident in their skills. By utilizing the simulation lab, as part of the Rural RN Residency Program, new graduate nurses are able to practice their skills on a simulated patient and gain valuable experience for working the floor at their CAH.

Implications for Other Communities

The Rural RN Residency Program provides a curriculum specific to challenges facing rural CAHs, such as barriers to training, recruiting, and retaining health care professionals. Examples of these challenges include limited health care training available, few allied health professionals, financial challenges and minimal resources dedicated to training/orientation. This program can be replicated in other states or regions facing similar RN shortages, with a network of CAHs willing to work together and pool resources to provide a similar program. Through collaborative Workforce Development Networks, this program allows small rural facilities to benefit from residency programs that are historically only available in large, urban centers.

Maine

Stephens Memorial Hospital, Inc.

Organizational Information	
Grant Number	G98RH19716
Grantee Organization	Stephens Memorial Hospital, Inc.
Organization Type	Community-based Hospital
Address	181 Main Street Norway, Maine 04268
Grantee organization website	http://www.wmhcc.org
Name of Workforce Development Network	Tufts/Maine Medical Center Longitudinal Integrated Clerkship
Project Director	Name: Robert Trowbridge
	Title: Director, Longitudinal Integrated Clerkship
	Phone number: 207- 662-4618
	Fax number: 207-662-6254
	Email address: trowbr@mmc.org
Project Period	2010 - 2013
Funding level for each budget period	September 2010 to August 2011: $199,802
	September 2011 to August 2012: $199,802
	September 2012 to August 2013: $199,802

Network Partners		
Partner Organization	Location	Organizational Type
St. Mary's Regional Medical Center	Lewiston, Maine	Hospital
Franklin Memorial Hospital	Farmington, Maine	Hospital
MidCoast Hospital	Brunswick, Maine	Hospital
Stephens Memorial Hospital	Norway, Maine	Hospital

Community Characteristics

A. Area

The project served four communities in Western and Coastal Maine including Norway and surrounding Oxford County, Brunswick and northern Cumberland County along with parts of Sagadahoc County, Farmington and surrounding Franklin County, and Lewiston and surrounding Androscoggin County.

B. Community description

The demographics of the involved communities vary significantly, although there are several common characteristics. Each has a sizeable population residing in a rural area and often at a significant distance from healthcare facilities (population density in Franklin County 18.1/square mile; Oxford County 27.8/square mile). All of the communities face a substantial deficit in terms of healthcare provider availability and have struggled with recruitment and retention of physicians willing to make a long-term commitment to the region. The involved communities have high rates of poverty (e.g. 16.8% in Franklin County), and the burden of chronic disease is high (65% of adults in Oxford County are overweight or obese; rate of diabetes in Franklin County is nearing 10%).

C. Need

Each of the involved communities represents a region that is underserved in terms of access to medical care and faces a looming crisis in physician availability. Each has struggled with recruiting qualified physicians to the area and is facing an aging physician workforce. Given the relatively small size of the medical staffs at each of the involved hospitals, the retirement or departure of even a small number of physicians has the potential to significantly and negatively impact both access to care and quality of care.

One of the strongest predictors of where a physician will enter practice is the location and setting in which he/she completed clinical medical training. This work force development program was designed to promote the education of medical students in these rural areas, exposing students to the concept of rural medicine and strengthening their ties to the regions, increasing the likelihood of them establishing long-term practices in the area.

Program Services	
Target Population	
Medical Students – Primary Care	Preceptors – Primary Care

A. Description

The program served to facilitate the establishment of Longitudinal Integrated Clerkships (LICs) at each of the involved sites for third-year medical students from the Maine Track Program within Tufts University School of Medicine. The third year of medical school is traditionally the most formative period of medical training as it serves to introduce medical students to clinical medicine after they have spent several years studying the scientific foundations of the profession. LICs depart from the traditional block model of clinical education (a model in which students spend short discrete blocks of time studying within each of the major disciplines of medicine, such as Internal Medicine, Pediatrics and Surgery) by assigning mentors to students in each of the major specialties and then having these mentors guide the students over an extended period of time. This allows for the development of a mentor-mentee relationship while also establishing a strong degree of continuity of education and supervision.

LICs, which included six major specialties of Medicine (Internal Medicine, Family Medicine, Pediatrics, Surgery, Obstetrics/Gynecology and Psychiatry), were established at each hospital. Lasting nine months, the clerkships allowed students to work longitudinally with role models in each of the specialties (the majority of whom practiced primary care) and learn about the practice of rural medicine while also becoming enmeshed in the communities themselves. An emphasis was placed on the longitudinality of care as well as the role of the physician in the community.

B. Role of Network Partners

Each hospital was responsible for the planning and implementation of the local LIC with central administrative support provided by Tufts University and Maine Medical Center. As such, each hospital identified a local site director, recruited faculty in each of the six specialties, and individually constructed the local financial framework for director and educator compensation. Sites additionally set student schedules and established adequate housing and support systems for students. Hospitals also worked to develop a broad base of support for the program among clinical staff, employees, and the community at large, including patients. These efforts included newspaper articles, development of informational materials for patients and staff, extensive signage, informational sessions, and community outreach.

The local site directors and individual faculty members were responsible for identifying faculty development needs and for making determinations of how participation would affect clinical productivity and workflow. They also worked to ensure that there was adequate administrative support for the program.

Outcomes

By all accounts, the program has been a success. In the inaugural class, fifteen students participated in the LIC, eighteen students in the second year, and twenty students the third year. Student satisfaction with the program has been very high with all students stating that they would choose the LIC again if given the choice. The overall student ranking of the program was 4.4 on a scale of 1 (poor) to 5 (excellent). Student performance has been excellent with all metrics of LIC student performance being at or above the mean for the Tufts class as a whole. Faculty satisfaction has similarly been very high with a faculty retention rate of near 100%. There is also anecdotal data suggesting that faculty job satisfaction has increased with program participation and that presence of the program has helped with physician recruitment to these areas. Perhaps most impressively, three other rural hospitals in the state have joined the LIC program as a result of the positive experiences of the four inaugural sites, allowing the student complement to grow to twenty. Further expansion of the program is also planned over the next several years.

As the students are just starting residency training, it is too early to determine the long-term effect on the supply of physicians to rural areas. The choice of residency programs among the initial class, however, is encouraging. Of the 15 students in the LIC, 12 chose to pursue training in Internal Medicine or Family Medicine. Furthermore, many students chose residency programs in the state of Maine, and others chose Family Medicine programs centered in rural areas of other states (Alaska, Wisconsin and Oregon).

Challenges & Innovative Solutions

The most significant challenges faced by the program included administering the program over a wide geographic area (especially considering the significant educational regulatory issues), the need for faculty development, and the requirement of substantial financial outlay in implementing the program. The geographic issues were dealt with by quickly forming a cohesive and collaborative group of site directors along with an overall LIC director. These site directors met frequently at rotating sites and shared challenges and best practices in designing and implementing the program at their sites. The dedication and energy of this group was one of the major factors in the success of the program as a whole.

The faculty development needs varied substantially by site. Several of the sites had been deeply involved in medical education for years and had many experienced clinician-educators on staff. Other sites had a lesser degree of educational involvement. As such, an individualized faculty development plan was designed for each site. Some had each preceptor complete an intensive teacher-training course while others focused mainly on LIC-specific development.

In terms of overcoming financial barriers and the need for significant investment, the most powerful tool was the goal and vision of the program itself. It was made clear that the program existed to bring students and physicians to rural medicine and to grow the rural workforce. Given this understanding, it was clear to most decision makers that the program was worthy of support.

Sustainability

A. Network Structure

As described above, the network is continuing to function and has actually expanded in scope since its inception several years ago. In the second year of the program, one hospital joined as a new partner (Miles Memorial Hospital in Damariscotta) and in the third year two more hospitals joined (Mount Desert Island Hospital in Bar Harbor and Redington-Fairview General Hospital in Skowhegan). It is anticipated that another hospital will join in 2014. The administration of the program will not change and remains a collaborative relationship between the local sites, Maine Medical Center in Portland and Tufts University School of Medicine in Boston.

B. On-going Services and Activities

The program will continue in the form in which it was initially implemented. Each hospital will continue assuming the responsibility for the education of several third-year medical students within a nine-month Longitudinal Integrated Clerkship. It is not anticipated that delivery of the program will change with the close of the grant period, especially as several new sites have joined without grant support. Although the current healthcare environment is significantly challenging for all hospitals and medical centers, it is hoped that the continued positive impact of the program will ensure its long-term viability.

C. Sustained Impact

There are several real and potential long-term effects of the program on the community. The simple presence of the program appears to have increased the professional satisfaction of the involved faculty, potentially increasing the likelihood they will remain in the community and helping with the recruitment of physicians to the medical staff. Participation has enriched their teaching skills and expanded their educational capabilities. Similarly, the program has enriched the careers of the local site directors and, at least on the level of the individual physician, strengthened bonds between several of the rural hospitals. The program has also likely instilled an increased sense of pride in the physicians, the medical center staff, patients and community at large. It is also likely that the visibility of the medical students has had an effect on the local youth, making it clear that a career in medicine may be a viable career option (especially when medical students have their origins in the towns surrounding the hospital).

Although the data is not yet available, it is anticipated that the program will also result in an increased number of physicians in the participating rural areas and beyond. Anecdotally, many of the students participating in the program found their commitment to rural medicine to be strengthened and solidified by their experiences. As these past students return to these communities as fully trained physicians, the process will become a self-perpetuating one; as former students assume the role of faculty and role models for the next wave of medical students.

Implications for Other Communities

Overall, the most significant finding associated with the grant is that the design and implementation of a rural-based Longitudinal Integrated Clerkship spread over a wide geographic region is both feasible and realistic. If the long-term effects are as positive as is currently anticipated, the rural-LIC may serve as a partial but generalizable solution to the current physician workforce issues in rural areas.

Maryland

Western Maryland Area Health Education Center

Organizational Information	
Grant Number	G98RH19710
Grantee Organization	Western Maryland Area Health Education Center
Organization Type	AHEC
Address	39 Baltimore Street, Suite 201, Cumberland, MD 21502
Grantee organization website	http://www.wmahec.org
Name of Workforce Development Network	Garrett Allegany Health Workforce Development Network (GAHWDN)
Your Project Director	Name: Susan K. Stewart
	Title: Executive Director
	Phone number: 301-777-9150
	Fax number: 301-777-2649
	Email address: sstewart@wmahec.org Network website: http://www.gahwdn.org/
Project Period	2010 - 2013
Funding level for each budget period	September 2010 to August 2011: $200,000.00
	September 2011 to August 2012: $200,000.00
	September 2012 to August 2013: $200,000.00

Network Partners		
Partner Organization	Location (town/county/state)	Organizational Type
Allegany County Health Department	Cumberland/Allegany County/MD	Local Health Department
Garrett County Health Department	Oakland/Garrett County/MD	Local Health Department
Garrett County Health Planning Council	Oakland/Garrett County/MD	Local Health Improvement Coalition
Garrett County Memorial Hospital	Oakland/Garrett County/MD	Hospital
Maryland AHEC Program Office	Baltimore/Baltimore County/MD	AHEC
Mountain Laurel Medical Center	Oakland/Garrett County/MD	FQHC
Tri-State Community Health Center	Cumberland/Allegany County/MD	FQHC
Western Maryland AHEC	Cumberland/Allegany County/MD	AHEC
Western Maryland Health System	Cumberland/Allegany County/MD	Hospital
Workgroup on Access to Care	Cumberland/Allegany County/MD	County Level Network
University of Maryland School of Medicine – Department of Family and Community Medicine	Baltimore/Baltimore County/MD	University

Community Characteristics

A. Area

The Garrett Allegany Health Workforce Development Network (GAHWDN) serves both Garrett and Allegany counties in rural, Western Maryland.

B. Community description

Garrett and Allegany counties comprise the western edge of Maryland. These Appalachian counties are rural, geographically isolated from the central, wealthy part of the state, and are underserved compared to the rest of the state. The counties are home to a high concentration of vulnerable residents. Based upon 2011 data, Cumberland, Maryland, was ranked one of America's 10

poorest cities. The distance and isolation from urban areas and the mountainous topography create a significant barrier in accessing health care, particularly in inclement weather.

C. Need

Western Maryland has the second-highest physician shortage in the state. Both Garrett and Allegany counties are federally designated "low income" Primary Care, Dental, and Mental Health Professions Shortage Areas (HPSA). A large part of Allegany County and all of Garrett County are designated as Medically Underserved Areas. The number of primary care providers is limited, and the lack of transportation further complicates accessing care. Allegany County has a population of 74,012 and a median household income of $39,408, and fifteen percent live below the poverty line. Garrett County has a population of 29,854, a median household income of $45,280. Thirteen percent live below the poverty line. The state of Maryland has a median household income of $72,419 and nine percent live below the poverty line. Thus income and poverty disparities in Garrett and Allegany counties are large compared to the state. Attendant to the poor economic conditions are the poor health outcomes in the counties, particularly Allegany County. Compared to all jurisdictions in the state, Alleghany County consistently ranks between last and third to last for health outcomes. Furthermore, Allegany County has the lowest or second lowest income consistently. Local Health Improvement Coalition priorities for these two counties include addressing tobacco use and obesity, increasing access to healthcare (including dental), as well as preventing and treating heart disease and diabetes.

Our region's recruitment and retention efforts are hindered by the four long-term barriers to emerging health professionals' choosing to practice in rural areas: 1) Economics, 2) Lifestyle, 3) Realities of Practice, and 4) Educational Environment. Rural Garrett and Allegany counties do not have large hospitals and practices, high pay or high insurance compensation, nor do they have as many lucrative specialty jobs as exist in urban areas. Maryland, along with a few other states, has the lowest Medicaid and Medicare reimbursement rates in the country. Fewer employment opportunities for spouses and fewer educational opportunities for children exist in Western Maryland than in urban and suburban areas. Garrett and Allegany counties do not have the number or, on the whole, the quality of cultural, entertainment, sports, dining, shopping, and other amenities available in urban centers. Finally, realities of a rural practice may not meet students' expectations for their future. Practice in a rural setting typically involves long hours because of a shortage of co-workers to share the load and the lack of financial resources necessary to hire additional staff. It is also a concern that many Primary Care physicians are looking to retire in the next 10 years. There is a need for physicians to choose to practice here to mitigate the negative impact on our communities, which is particularly alarming as Maryland moves quickly into full implementation of the Affordable Care Act. While dealing with the realities of these challenges, the main goal of the Network continues to be achieving an adequate health workforce in the region. We have realized in the three years of this grant that our accomplishments mean much to our service area. We are committed to keeping our network intact to continue what it started and to identify new areas for program implementation. However, we are also realistic. The challenges identified are ongoing and not solvable in a three-year period. Identifying the means to overcome these barriers continues to be the key component of the GAHDWN strategic planning process. With this grant, our Network has been identified by the State of Maryland's Office of Primary Care Access to be a statewide leader in rural Workforce planning and implementation.

Program Services	
Target Population	
Allied Health Professional Students – Bachelor's level	Physicians in Residency Training
Allied Health Professional Students – Doctorate level	Preceptors – Primary Care
Clinical Psychology Students	Preceptors - Specialists
Dentistry Students	Preceptors - Nurses
Medical Students – Primary Care	Pharm D students
Nursing Students - RN	Pre-Medicine
Nurse Practitioner Students	Occupational Therapy
Pharmacy Students	Veterinary Medicine
Physician Assistance Students	

A. Description

GAHWDN's mission is to design and implement solutions to address the health workforce needs of the region; we envision an adequate healthcare workforce in the region. In the past three years, our program has grown very quickly and taken on many activities because of its successes and value to its members. Initially we addressed the need for primary care physicians and mental health interns. As we continue to work on our mission, we celebrate a number of successful additions to our program accomplishments and activities.

An exciting development has been the implementation of a rural Community Medicine rotation required of all third-year medical residents in the University of Maryland, School of Medicine's Department of Family and Community Medicine. By August 31, 2013, 18 residents will have completed 2,880 community medicine training hours in our service area. Furthermore, it will be this Network's curriculum that is replicated in the rest of rural parts of the state once funding is attained.

Also, to address getting medical students involved in our communities earlier in their career, we have leveraged program funds through a Network member, the University of Maryland School of Medicine's Department of Family and Community Medicine Primary Care Track grant, which is a longitudinal mentorship program that brings rising 2nd, 3rd year primary care students to our region for shadowing experiences. By the end of August, 11 Primary Care Track medical students will have participated in shadowing and mentoring opportunities in our region.

As part of our outreach to both medical and other health professions students we conducted three Rural Health Workshops for 43 health professions students from Allied Health, Clinical Psychology, Dental, Nursing and Nurse Practitioner, Pre-Medicine, Primary Care Medical, Pre-Veterinarian, Occupational Therapy, Pharmacy, Physician Assistant, and Allopathic Medicine. In addition, 27 medical residents have attended three Community Engagement Workshops. These workshops, offered in the spring and summer months to accommodate student and resident schedules, were set up to highlight the region's assets and ongoing workforce needs as well as to provide opportunities for the residents to meet and network with local physicians. A physician assistant student who attended the Rural Health Workshop program is a student at the University of Maryland Eastern Shore; she has since moved to the area to complete her clerkships in Garrett and Allegany counties and is actively job searching in the community. Her son is enrolled in school in Garrett County.

This past fall, we connected an academic behavioral health counseling program at Frostburg State University with internship opportunities at the Garrett County Health Department. Nine Counseling Psychology program graduate students and the director attended a one-day workshop where they learned about internship opportunities. They also met and networked with health department counselors and a psychiatrist as part of the day's events.

One of the most exciting accomplishments for us at Western Maryland AHEC has been the establishment of sustainable student and medical resident housing in Garrett County via our partnership with the Garrett County Memorial Hospital. In Allegany County, Western Maryland AHEC will utilize its existing housing as an in-kind contribution to the Network. This past winter we moved to a new facility in downtown Cumberland. Located in the central part of the business and arts district, our student housing is adjacent to C&O Canal National Park and the Great Allegany Passage biking and hiking trail, which affords students and residents the opportunity to explore the cultural aspects and outdoor activities of Cumberland and the surrounding area's natural beauty.

As GAHWDN seeks to meet community need in its service area, we had 23 dental students participate in a two-day free dental clinic called Western Maryland Mission of Mercy. Services were provided to over 800 people in need of dental care. Students had a networking opportunity to meet with local dentists as well. Additionally, 2 dental students attended the 2013 Rural Health Workshop, both of whom also completed a rural clinical education rotation with Western Maryland AHEC in summer 2013.

B. Role of Network Partners

GAHWDN's Governing Body Members are Garrett County Health Department, Garrett County Memorial Hospital, Mountain Laurel Medical Center, Tri-State Community Health Center, Western Maryland Area Health Education Center, and Western Maryland Health System

Western Maryland AHEC: Governing Board Member responsibilities include project oversight, review all contractual arrangements, participate in hiring committees as needed, attend all meetings, serve as Network liaison to Western Maryland AHEC Board of Directors on all project matters, network throughout 200+ AHECs nationwide on project goal, objectives, activities, outputs, outcomes, and impact; coordinate regular meetings and communication among Network partners, work with strategic action committee, Implement the Strategic Action Plan, Serve as liaison to outside evaluator and participate in developing evaluation plan; prepare program reports, publicize Network activities, plan and publicize Network website, coordinate recruitment and retention activities according to Strategic Plan, lead all program reporting and facilitate communication with potential schools, programs, and partners; provide housing for medical residents.

Garrett County Memorial Hospital: Governing Board Member responsibilities include placement of residents and medical students with preceptors with hospital privileges, oversee GAHWDN business plan development, participate in Strategic Action Plan development, serve on sustainability committee, oversee integration of project into hospital activities, and assign personnel to functions such as identifying residency rotation supervisors and clinical education preceptors.

Garrett County Health Department: Governing Board Member responsibilities include identify health professions workforce needs in Garrett County, serve on Business Plan committee, participate in Strategic Action Plan development, serve on sustainability committee, oversee integration of project into Garrett County Health Department activities, serve on evaluation committee, interface with Network Director on finding solutions to recruiting mental health/counseling interns, and publicize activities in Garrett County.

Mountain Laurel Medical Center: Governing Board Member responsibilities include identify health professions workforce needs at Mountain Laurel, participate in Strategic Action Plan development, oversee integration of project into Mountain Laurel activities, identify preceptors and medical resident supervisors, and serve on sustainability committee.

Western Maryland Health System: Governing Board Member responsibilities include identify health professions workforce needs at Western Maryland Regional Health Center and service area, identify preceptors and medical resident supervisors, participate in Business Plan development, participate in Strategic Action Plan development, serve on sustainability committee, oversee integration of project into hospital activities, and integrate GAHWDN activities into center's strategic plan for sustainability.

Tri-State Community Health Center: Governing Board Member responsibilities include identify health professions workforce needs at Tri-County Community Health Center, identify preceptors and medical resident supervisors, participate in Business Plan development, participate in Strategic Action Plan development, and serve on sustainability committee.

University of Maryland School of Medicine responsibilities include serve as supervisor for medical residents, act as advocate for rural practice, encourage students to participate in Network initiatives, connect promising residents with Network Director, assist in developing sustainability plan, support Allegany and Garrett counties with commitment to increase the number of medical students who participate in rotations in the region, serve as preceptor for medical students, act as advocate for rural practice, encourage students to participate in Network initiatives, connect promising residents with Network Director, and assist in developing sustainability plan.

Outcomes

When we started the project, there was no residency training program in the region. With the Network's inclusion of the University of Maryland School of Medicine's Department of Family and Community Medicine, we established a curriculum for a rural community medicine rotation. This one-month rotation is now a mandatory part of training for 3rd year Family and Community Medicine residents. This is an achievement that we anticipate will be the cornerstone of future recruitment of Family Medicine doctors for our area.

While the Area Health Education Center routinely brings fourth year medical students to the region, getting them here earlier in their educational career has eluded us. However, our University partner worked with us and obtained funding for the Primary Care Track Program, a long-term shadowing and mentoring opportunity for rising second and third year students to connect with a preceptor in our region each year. These students can then complete their fourth year AHEC rotation with the same preceptor. We are in the first year of this collaboration.

The establishment of sustainable student and medical resident housing in Garrett County via our partnership with the Garrett County Memorial Hospital has been a major accomplishment. In Allegany County, Western Maryland AHEC's existing housing will continue to be an in-kind contribution to the Network.

Over the past three years, Network partners have walked the talk of providing training opportunities and experiences within culturally competent, community-focused rural settings. With the Workforce needs of our service area, the Network is committed to reinforcing and growing its ties among residents, students, and stakeholders within the rural communities served. Our video, "Quality of Life/Quality of Practice", is ready to go on the road. It is currently featured on the GAHWDN website and is accessible to our Network partners for their websites. Network partners have indicated that they plan to use this video in their recruitment of physician and other health professions staff. The video was filmed with the help of a local, professional filmmaker who understands what it means to be a rural practitioner as his father was a local dentist. Our filmmaker understands what it means to grow up as the son of a rural practitioner in Allegany County. The video demonstrates the benefits and rewards of living in Garrett and Allegany counties via the eyes of numerous practitioners living and practicing in the area: a medical resident, a health professions student, and staff and Network members representing our region's FQHCs, health departments, and hospitals.

Challenges & Innovative Solutions

Whenever numerous organizations work together toward a common goal, logistical challenges occur. Busy schedules and competing demands make finding mutually acceptable times to meet difficult. For this project, geographic distance is an additional barrier to meeting regularly. However, the GAHWDN partners continue to be enthusiastic about the Network's potential to address health professional shortages in these counties. They are committed to overseeing its planning and implementation and are, with our current sustainability planning, looking for ways that this mature Network can continue to focus on regional Workforce needs as well as being efficient in managing time and resources.

Although it is only a three-to-four hour drive from Washington, DC, Baltimore, and Pittsburgh, these mountainous counties experience extreme weather found at higher elevations which isolates them from urban centers. For example, this past winter, Garrett County in the aftermath of Hurricane Sandy had, at one time, 80% of its residents living without power. This was a reality for a family medicine resident who was completing her community medicine rotation in Garrett County at this time. In the past twelve years, Garrett County has averaged 155 inches of snow each winter. In addition to dealing with snow and ice, travelers are often hindered by heavy fog, which has caused multi-car accidents at the border between Garrett and Allegany counties. The Network continues to address this challenge by planning activities with careful attention to the weather and capitalizing on the advantages the area's weather affords, such as opportunities for outdoor sports like downhill and cross-country skiing, snowboarding, and others.

With the end of resident and student stipends, the Western Maryland AHEC has made it a priority to establish and maintain sustainable housing in both counties that includes accommodations for family visiting the family medicine residents and medical and health professions students. Since there are a limited number of family medicine residents and they have responsibilities to their patients in their "home" hospital, rural community medicine residency rotations present even greater challenges due to distance. We have had residents complete their rural community medicine rotation while keeping on track with their responsibilities to patients at "home". By utilizing today's instant communication technologies, that barrier is less onerous than in the past. Cell phones have become, after email, the technology of choice and are the key to keeping in touch with program participants. The Network director gives out her cell phone number to all program participants in case they have questions, need directions and/or a ride, or have a request before, during and after completing a rotation and/or program activity.

Tracking of students and medical residents presents a challenge as well; a challenge that is not unique to our program. Partners are dedicated to working with the Universities to implement tracking options identified by program participants as most likely to be successful. Partners have identified school alumni associations, the National Student Clearing House, and the National Center for the Analysis of Healthcare Data as resources for tracking. The University and Area Health Education Center partners have agreed to work these avenues.

We have had difficulty identifying students at a large academic institution like the University of Maryland School of Medicine, so we entered into discussions with several faculty and the Maryland Area Health Education Center Program Office. This resulted in the establishment of a Rural Interest Group within primary care disciplines. The Rural Interest Group is student led. We worked with our University partners to develop a relationship with the Rural Interest Group, and a number of medical students from this group have now completed shadowing and other activities in our region.

Sustainability

A. Network Structure

The Network has been engaging in sustainability planning since June 2013, and 100% of the membership voted to continue our activities and grow membership. Network partners include: Allegany County Health Department, Garrett County Health Department, Garrett County Health Planning Council, Garrett County Memorial Hospital, Maryland AHEC Program Office, Mountain Laurel Medical Center, Workgroup on Access to Care, Tri-State Community Health Center, Western Maryland AHEC, Western Maryland Health System, and the University of Maryland School of Medicine – Department of Family and Community Medicine.

The Network's activities will continue to be integrated into the individual Network members' organizational activities, since all of the GAHWDN partners have a vested interest in recruiting and retaining health professionals. Network partners located in Garrett and Allegany counties are health facilities and programs whose primary missions involve providing and improving access to quality health care. All the partners are well aware of the underserved nature of these counties and have been working together for years to address many challenges. GAHWDN funding has been a needed infusion to implement fresh approaches to an old problem.

Governing body members will continue to regularly attend Network meetings to plan and implement solutions to the workforce shortages. Partners will disseminate information on Network activities to their colleagues. Teleconferencing will be utilized by partners when needed to facilitate attendance. Network partners now have a history of integrating the evolving goals of GAHWDN within their day-to-day activities; the on-going focus for the Network remains working to create opportunities with vision and dedication, efficiently using member resources, time and personnel commitment, and through growing the program with grants and other funding as identified.

Publicizing the Network's goals, objectives, activities, outputs, outcomes, and eventual impact will continue after funding ends as the impact becomes clearer.

In September 2013, the Network will outline a strategy for moving forward. At the summer sustainability meetings of GAHWDN and the Mountain Health Alliance Network, these two mature Networks voted 100% to align to meet future goals, with GAHWDN becoming the Workforce component of the Mountain Health Alliance Network. There is currently work being done to explore how to make this alignment work efficiently. We are in the process of setting up meetings and soliciting in-kind support from membership.

B. On-going Services and Activities

The Network voted to continue the following activities from the grant as part of our sustainability planning:

- Work with Primary Care Residents, focusing on the model we have with the University of Maryland School of Medicine, Department of Family and Community Medicine; 8 family medicine residents are scheduled to complete rotations this fall and in spring 2014.

- The Network's partnership with the University of Maryland School of Medicine Primary Care Track program will continue with medical students shadowing in our area.

- Outreach to health professions and medical students and residents will continue. Network partners will continue to work together to conduct marketing and public relations as identified.

Visioning for the future includes establishing new approaches for recruitment for Mental Health Interns. We are exploring redefining engagement activities (such as the Community Engagement and Rural Health Workshops) so they can continue to be incorporated in rural rotations, specific to students and residents, recruitment of specialists and mid-level practitioners, and dental students. Network partners would like more Continuing Medical Education for mid-level practitioners.

C. Sustained Impact

The sustained impacts of our Workforce Development grant are as follows:

1. We have an improved service model which fills gaps in our health professions education pipeline. This Pipeline is the educational track that students begin in middle school and high school, continues into college, then health professions schools, onto medical residency training, and finally into practice as a health professional. The pipeline obviously varies depending on what type of health professional one becomes. We need to have contact and activities for all stages of the pipeline to increase our chances of recruiting practitioners to our region. Prior to GAHWDN, we had no contact with post first and second year medical students. Now we have the Primary Care Track Program described earlier.

2. Through our workshops and retreats, students and medical residents have gained knowledge and cultural competence of our rural region as evidenced by attitude changes on how medical residents viewed their understanding of rural practice, facilities, and services. Prior to coming to Western Maryland, they thought that primary care practice might be limited and facilities might not offer a variety of services. They also had little understanding of the role of a public health department in a rural setting. In fact, the family medicine residents have been impressed with the wide scope of rural practice, the medical facilities, and the well-established, far-reaching public health programs.

3. The policy that University of Maryland, School of Medicine, Department of Family and Community Medicine implemented that mandated that all 3rd year family medicine residents must complete a rural Community Medicine rotation will be replicated in other rural parts of the state.

4. The on-going impacts of collaboration include a stronger and more collaborative relationship between the University of Maryland School of Medicine Department of Family and Community Medicine and its partners Western Maryland AHEC, FQHCs, local health departments, hospitals, and local primary care practices.

5. Two additional universities entered our collaboration: Frostburg State University via its Masters in Counseling Psychology program and the University of Maryland Eastern Shore via its Physician Assistant program.

Implications for Other Communities

The project, through its intent and design, has strengthened existing ties among Network members and created new partnerships; it has become a mature Network dedicated to growing an adequate healthcare workforce in the region. Specifically, this Network was created to address the shortage of primary care physicians in the service area by increasing exposure to the region and providing training opportunities for health professions students and medical residents. We also had a secondary goal which was to create a mental health internship site at the Garrett County Health Department. Our Network was poised to meet these objectives because our Network composition had the right organizations, institutions and individuals who represented them.

What can be shared with other programs includes but is not limited to:

- Partnerships to create a Rural Community Medicine rotation for family medicine residents
- Primary Care Track-type pipeline programs: a longitudinal mentorship program that brings rising 2nd, 3rd year primary care students to our region for shadowing experiences, all in the hopes that they establish professional and community ties
- The value of creating and sharing the "Quality of Life/Quality of Practice" outreach and marketing video
- The value of offering health professions students, medical students and residents opportunities to learn about our rural communities, allowing them to interact with rural health professionals, engage in community activities, and tour healthcare facilities
- Network partner contributions include in-kind housing, in-kind preceptors, in-kind scheduling, and the collective thinking and planning that lead to creativity and action
- Having the right people and organizations as Network members: local health departments, hospitals, FQHCs, universities, business community cooperation and input, other non-profits, and an AHEC. All members send people with the authority to make high level decisions to the meetings
- The unique role of an AHEC in relation to all partner organizations has been critical to the success of this Network. Western Maryland AHEC is a neutral entity and does not compete with partners. We also have the ability to provide housing. Our expertise in facilitating clinical education rotations and working with institutions of higher education has been invaluable. For communities looking to develop a program similar to ours, we recommend that they locate their closest AHEC and discuss if and how the role of that AHEC may complement their vision and goals

Minnesota

Northeast Minnesota Area Health Education Center

Organizational Information	
Grant Number	G98RH19709
Grantee Organization	Northeast Minnesota Area Health Education Center
Organization Type	AHEC
Address	750 E 34th St., Hibbing, MN 55746
Grantee organization website	N/A
Name of Workforce Development Network	MN Health Net - PALCI
Your Project Director	Name: Heather Kim Mead
	Title: Project Director
	Phone number: 612-624-4032
	Fax number: 612-624-0493
	Email address: hmead@umn.edu
Project Period	2010 - 2013
Funding level for each budget period	September 2010 to August 2011: $200,000
	September 2011 to August 2012: $200,000
	September 2012 to August 2013: $200,000

Network Partners		
Partner Organization	Location	Organizational Type
Northeast Minnesota Area Health Education Center	Hibbing/St. Louis/Minnesota	AHEC
Mercy Hospital and Health Care Center	Moose Lake/Carlton/Minnesota	Hospital
First Light Health System	Mora/Kanabec/Minnesota	Hospital
Lakewood Health System	Staples/Todd/Minnesota	Hospital
University of Minnesota Academic Health Center Office of Education	Minneapolis/Hennepin/Minnesota	University
Cloquet Memorial Hospital	Cloquet/Carlton/Minnesota	Hospital

Community Characteristics

A. Area

Carlton County, Cloquet, Moose Lake
Kanabec, Pine, Mille Lacs, Aitkin
Todd, Wadena, Crow Wing, Morrison, Cass

B. Community description

This workforce grant is serving multiple rural communities in Minnesota through a variety of factors that will have an impact on these rural underserved communities. One of the greatest factors is the fact that Minnesota is facing an aging population. As noted in our grant application, between now and 2035, the population of Minnesotans over the age of 65 will more than double. By contrast, the population under the age of 65 will grow only by 10%. Health care costs will continue to be a major issue as "Baby Boomers" develop cancer, diabetes, heart disease, and other chronic diseases. According to experts in the provision of geriatric care, palliative care has emerged as a significant and primary recommendation for the management of chronic and end-of-life care. Rural areas of Minnesota have among the most critical health care access needs and health disparities in the state. Keeping the aging segment of the rural population healthy is a growing concern for rural counties. In comparison with urban counties, residents of rural Minnesota counties face higher poverty rates and tend to be in poorer health, with high rates of both alcoholism and smoking. Rural Minnesotans also have access to fewer health professionals and other health resources, and they face more difficulty traveling to health services. Primary industries in these communities include education (public schools, Central Lakes College), healthcare, farming, and tourism.

C. Need

The program goal was to train, support, recruit and retain primary care and allied health care professionals who have a commitment to providing palliative care. There were three over-arching program objectives that support attainment of the stated goal. They include:

- Strengthening the ability to share knowledge and build educational training capacity for palliative care, as well as support the recruitment and retention of health professionals in medically underserved areas.
- Create opportunities for community-based faculty and other health professionals in medically underserved areas through education and other services that enhance their continued professional growth, particularly focused on new models of care and inter-professional practice in palliative care.
- Support disciplinary, inter-professional, community-based education in palliative care for health professions students in exemplary educational settings in medically underserved areas.

Program Services	
Target Population	
Allied Health Professional Students – Bachelor's level	Nurse Practitioner Students
Allied Health Professional Students – Master's level	Pharmacy Students
Clinical Psychology Students	Physician Assistance Students
Medical Students – Primary Care	Physicians in Residency Training
Medical Students - Specialists	Public Health Students
Nursing Students - RN	Social Work Students
Nursing Students - LPN	

A. Description

- Development of a website dedicated to palliative care, which is regularly updated with palliative care learning opportunities and resources.
- Development of an online learning curriculum and training program for students and preceptors, based on identified national best-practice competencies in palliative care.
- Train palliative care preceptors to prepare sites for students and residents.
- Create a design and structure for inter-professional rotations and identifying target markets for further distribution and utilization of the online learning curriculum.
- Work with the University of Minnesota, in addition to other educational facilities, to recruit students for palliative care sites.
- Adjust curriculum and training based upon learner feedback and preceptor experiences.
- Develop sustainability strategy plan.
- Lakewood Health System's (LHS) Palliative Care program provides an example of an advanced interdisciplinary support program to patients with life-limiting illnesses.
    - The team is comprised of two RNs, 1 LPN, 1 social worker, 1 chaplain, 1 pharmacist, 1 MD, 1 mental health NP. They meet bi-weekly to discuss goals of care and develop new care plans as the patient's illness changes.
    - The team also serves as a resource to the healthcare staff in regards to palliative care. They hold educational courses and meet privately with providers and families to increase knowledge about palliative care.
    - The team serves as educators to the variety of students coming through LHS. Classes and one-on-one teaching is offered to students as listed above.

B. Role of Network Partners

- Development of strategic, business, and implementation plans
- Work with individuals to navigate the process of accessing the online learning curriculum and training program. Encourage and support their efforts to complete the program
- Identifying target market groups for distribution and utilization of the online learning curriculum
- Development of sustainability strategy plan
- Development and refinement of the online learning curriculum
- Introduction of the online learning curriculum to students on rotations
- Participation in quarterly meetings
- Quarterly reporting of student participation and learner feedback
- Participation in monthly communication meetings for the purposes of understanding program developments, contributing to shared learning and offering program feedback

- Lead preceptor, Julie Benson of Lakewood Health System, and subject matter expert, Susan O'Conner-Von also contributed greatly to the content development for the online learning module specific to end-of-life care.
- Participation in a year 3 workshop focused on Inter-professional Facilitation with a focus on palliative care.

Outcomes

We have strengthened the ability to share knowledge and build upon the program's educational training capacity for palliative care through the development of an online learning curriculum based on national best-practice competencies in palliative care. This e-learning program has also successfully created opportunities for community-based faculty and other health professionals in medically underserved areas through education and other services that enhance their continued professional growth, particularly focused on new models of care and inter-professional practice in palliative care. Lakewood Health System, in particular, has successfully implemented an interdisciplinary team approach to palliative care.

Challenges & Innovative Solutions

- Little or no reimbursement for services from Medicare/Medicaid
- One challenge to implementing an online learning curriculum is ease of access to the modules and obtaining credits for students who want to go through the full curriculum.
- Both issues are being addressed during year 3 of the grant, which was designed to collect feedback from learners and make adjustments to the program.

Sustainability

A. Network Structure

- As the community becomes more aware of the need for palliative care, the demand will go up and financial support will be secured.
- We will continue to support any education of students in regards to end-of-life/palliative care.
- We hope to partner with payers in the future to provide such care as it is part of the health care reform to come.
- We are engaging academic healthcare leaders, encouraging them to integrate the palliative care online learning curriculum into their healthcare rotation curriculums and identifying a fee to charge for doing so.
- We are exploring the opportunity of revenue generation through Continuing Education offerings.
- We are committed to maintaining and further developing the online learning curriculum, and will identify the cost to doing so on an ongoing basis.
- Minnesota AHEC will continue to provide support to the site preceptors who will continue to enroll staff and students into the web-based program.

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B. On-going Services and Activities

We are engaging academic healthcare leaders, encouraging them to integrate the palliative care online learning curriculum into their healthcare rotation curriculums and identifying a fee to charge for doing so. We are exploring the opportunity of revenue generation through Continuing Education offerings. We are committed to maintaining and further developing the online learning curriculum, and will identify the cost to doing so.

Minnesota AHEC will continue to provide support to the site preceptors who will continue to enroll staff and students into the web-based program

We continue to seek long-term funding at the source – through negotiated payer contracts that will cover the palliative care services we are providing to our patients. We believe that the data we are collecting proves that this type of case management will save money and resources in the future, while at the same time setting a new standard for collaborative care. Certainly new grants and charitable contributions are important but will not be relied upon for sustainable support.

C. Sustained Impact

Our ongoing efforts to educate targeted healthcare workers and students in palliative care and in the importance of an inter-professional approach will create a more cohesive healthcare workforce. We will utilize the online learning curriculum to accomplish this and will continuously strive to train more preceptors and involve more students in the years to come. The sustained impact is the change of practice to an interdisciplinary approach to healthcare, likely spreading beyond palliative care alone. We will continue to have discussions and collaborate with third party payers to prove the benefit of inter-professional teams in palliative care.

Implications for Other Communities

The metro area has been working to promote advanced directives and provider orders for life sustaining treatment (POLST) with hospitals and ambulance services with good success. I think our palliative care programs have been important to the communities we serve in terms of increasing awareness and understanding of palliative care, and we have developed communication tools so all providers can be better informed.

It would be our greatest hope that this palliative care online learning curriculum will continue to engage preceptors and can be utilized by a variety of students in any rural community to provide not just palliative care to patients, but also promote inter-professional practice amongst healthcare professionals to better meet the needs of the community.

Montana

Montana State University

Organizational Information	
Grant Number	G98RH19703
Grantee Organization	Montana State University
Organization Type	AHEC, University
Address	Room 302, Culbertson Hall, Bozeman, MT 59717
Grantee organization website	http://healthinfo.montana.edu
Name of Workforce Development Network	Montana Graduate Medical Education Council
Project Director	Name: Kristin Juliar
	Title: Director
	Phone number: 406-994-6003
	Fax number: 406-994-5653
	Email address: Kjuliar@montana.edu
Project Period	2010 - 2013
Funding level for each budget period	September 2010 to August 2011: $200,000
	September 2011 to August 2012: $200,000
	September 2012 to August 2013: $200,000

Network Partners		
Partner Organization	Location	Organizational Type
MT AHEC/Office of Rural Health	Bozeman, Gallatin, MT	AHEC/State Office of Rural Health
Montana Family Medicine Residency	Billings, Billings, MT	Medical Residency
Family Medicine Residency of Western Montana	Missoula, Missoula, MT	Medical Residency
WWAMI Clinical Dean	Whitefish, Flathead, MT	Medical School
Montana Medical Association	Helena, Lewis and Clark, MT	Professional Association (physicians)
MHA—an Association of Montana Health Care Providers	Helena, Lewis and Clark, MT	Professional Association (hospitals)
Office of the Commissioner of Higher Education	Helena, Lewis and Clark, MT	Higher Education, state of MT
Billings Clinic	Billings, Billings, MT	Teaching Hospital
Western MT AHEC—regional office	Missoula, Missoula, MT	AHEC
MT Primary Care Association	Helena, Lewis and Clark, MT	Professional Association (community health centers)
Primary Care Office, Department of Health and Human Services, State of Montana	Helena, Lewis and Clark, MT	State Health Department, Primary Care Office
MT WWAMI	Bozeman, Gallatin, MT	University, Medical School
University of WA, School of Medicine	Seattle, King, WA	Medical School, University (ex-officio)
Montana State University	Bozeman, Gallatin, MT	University (ex-officio)
University of Montana	Missoula, Missoula, MT	University (ex-officio)

Community Characteristics

A. Area

The Rural Health Workforce Development project served the entire state of Montana (56 counties).

B. Community description

Montana is the fourth largest state in total square miles, but is considered to be the third most frontier state (behind Alaska and Texas). Only one Montana county is considered "urban", while 10 counties are "rural" and 45 counties are "frontier." Additionally, Montana has the third highest percentage of Medicare beneficiaries living in rural areas and has one of the most rapidly aging populations in the nation. Only five counties in the state are not designated Health Professions Shortage Areas. There are seven counties that do not have a hospital, and eleven counties have no physician practicing within the county. Although Montana does not have an in-state medical school, 20 Montana students participate in the WWAMI program at the University of Washington School of Medicine. In the 2013 Legislative session, Montana's WWAMI slots were increased to 30. Montana WWAMI students attend their first year of classes at Montana State University in Bozeman, the second year in Seattle, and third and fourth year rotations back in Montana. The size of Montana, the aging population, professional workforce shortages and a limited number of medical school positions, combined with low population density and a majority of residents living in rural and frontier areas, illustrates the challenge of providing accessible quality healthcare for all citizens.

C. Need

Currently, at 2.0 per 100,000, Montana has the lowest ratio of graduate medical education (GME) training positions per capita of any state in the U.S. The national median is 25 per 100,000 population. At least 51 of the 56 counties in Montana are federally designated, in part or total, as primary care physician shortage areas. At least 22% of active Montana physicians are age 60 or older and are likely to retire within five years.

The Montana Rural Health Workforce Development Network focused on the selection and training of medical students and residents to meet the current and future needs of the Montana rural healthcare delivery system. A major focus of the network was providing community based training opportunities in rural communities throughout the state. This "continuity of training model" begins with selection of a special cohort of medical students, focuses on rural training through medical school, encourages application for primary care residencies with a rural emphasis, provides information on rural practice opportunities, and provides access to loan repayment programs.

Program Services	
Target Population	
Medical Students – Primary Care	Preceptors – Primary Care
Physicians in Residency Training	

A. Description

Network Development: In 2010, several healthcare stakeholders across the state were becoming increasingly aware that there would be value in coordinating efforts to increase the number of physicians in Montana. To begin to address this need, in January of 2011, a concept paper proposing the creation of a Montana Graduate Medical Education Council (MGMEC) was developed and presented to the Montana Office of Rural Health/Area Health Education Center (MORH/AHEC). At the same time, MORH/AHEC received funds (Network Grant) to develop a healthcare workforce network. The workforce project required a governing Board. Thus, the creation of a MGMEC became a priority. The stated purpose of the Council is: To increase the physician workforce in Montana by developing an infrastructure to support Graduate Medical Education (GME) within Montana.

Services provided and activities conducted through the Rural Health Workforce Development grant program include:

- *TRUST (Targeted Rural Underserved Track) PROGRAM* – The TRUST program seeks to increase the number of Montana WWAMI students choosing a primary care specialty and returning to practice in the rural/urban underserved areas of Montana. This program creates a full-circle pipeline by guiding qualified students through a special curriculum that keeps them connected to underserved communities in Montana. The cohort of TRUST students are selected with a targeted admissions process, choosing students likely to practice in rural/urban underserved practices. Students are then matched with a rural/urban underserved physician mentor. TRUST provides a continuous connection between underserved communities, medical education, and health professionals in Montana through several continuity experiences: a two-week pre-matriculation experience in the community, weekend mentoring experiences in the first year, a month long mentoring experience between first and second years, a five-month rural continuity experience during the third year, and several other continuity activities. The first Montana TRUST class of five students entered in 2009 and five students have been admitted yearly since them. With the 2013 class, seven TRUST students were admitted and it is anticipated that ten

students will be admitted in the 2014 class.

- *R/UOP (Rural and Underserved Opportunities Program) CLINICAL ROTATIONS* – R/UOP is a four-week immersion experience for WWAMI students between their first and second years. It gives students an opportunity to see how patients are cared for outside of the academic medical center (in Seattle). Interested students are matched with clinical preceptors in rural areas who donate their time to provide a very unique and individualized learning experience. Typically, 30 medical students participate in R/UOP per year.
- *THIRD and FOURTH YEAR CLINICAL ROTATIONS* – All third and fourth year clinical rotations can be completed in Montana. Currently, about 120 students have participated in clerkships in Montana communities, with average participation of 110 to 120 students per year. Approximately 310 physician faculty serve as preceptors for these medical students, including the medical specialties of Family Medicine, Internal Medicine, Obstetrics and Gynecology, Pediatrics, General Surgery and Psychiatry.
- *WRITE (WWAMI Rural Integrated Training Experience) CLINICAL ROTATIONS* – WRITE provides third year students with a five-month extended education experience in rural community practice with physicians and other health care professionals. Goals of WRITE include: knowing the day-to-day workings of a rural community practice, effectively participating as a member of the team, providing continuity of care for a panel of patients, and demonstrating social integration into the rural community. Interest in the intensive rotations continues to be high in Montana where there are currently seven WRITE communities throughout the state.
- *WWAMI CLINICAL FACULTY CONFERENCE* - Physician faculty (preceptors) teaching medical students doing clinical rotations throughout Montana have participated in a conference (Montana WWAMI Faculty Development Conference) in early spring for the past three years. Conference goals are to offer faculty development topics pertinent to the role of teaching physicians. The conference is held as an annual event.

B. Role of Network Partners

Montana is a small state—stakeholders in the primary care arena are well-known to each other and have worked together successfully in many other venues. In this particular network, the members each represent a unique facet of healthcare within the state: the educational institutions, teaching hospitals, professional organizations, the healthcare professional pipeline, and medical residency programs.

Outcomes

The most important outcomes from the Rural Health Workforce Development Program have been increased funding for two important programs: Graduate Medical Education and Montana WWAMI Medical School.

The number of Graduate Medical Education (residency) positions (in Primary Care) has quadrupled within the state since the beginning of the project. For many years, the Montana Family Medicine Residency (Billings) accepted just six new residents per year—that number has been increased to eight, with an additional two residents slated to begin a geriatric fellowship in 2014 for a total of 10 residents. The Family Medicine Residency of Western Montana (Missoula) was successful in completing the accreditation process in 2012 and has accepted 10 residents who began the program in July 2013. A second residency program in Billings (the Internal Medicine Residency) has also successfully completed the accreditation process and will accept six residents beginning July 2014. When all programs are fully operational, the total number of residents will be 78—compared to 18 at the beginning of the grant period. To help support this increased number of residents, the Montana Legislature approved an additional $200,000 in the Office of the Commissioner of Higher Education budget. With the additional $200,000, the state has appropriated $500,000 to the Montana University System. Through an intergovernmental transfer of these funds to the state Medicaid program in the Department of Health and Human Services, these monies are matched by the federal government at approximately 3 to 1. The result is approximately $1,500,000 in payments to Montana teaching (residency) hospitals.

The Montana WWAMI program has accepted 20 students since the program began 40 years ago. While the population of MT has increased and the shortage of physicians has become more apparent, the same number of MT students was admitted to the program. The 2013 Montana legislature appropriated funding (through the Office of the Commissioner of Higher Education) to expand MT WWAMI by 50%, totaling 30 medical students per year. Additionally, 10 of these students will be participants in the TRUST program (previously just 5 students). WWAMI expansion has been a tremendous breakthrough for primary care provision in the state of Montana.

Through the diligent and focused efforts of the Montana Graduate Medical Education Council, both of the expansion efforts came to fruition.

Challenges & Innovative Solutions

Although nearly everyone involved in healthcare in Montana acknowledged the shortage of primary care practitioners in the state, the programs that could ultimately lead to more doctors were stuck in place, due in large part to funding challenges. With the collaborative leadership of the Graduate Medical Education Council, a consistent and compelling message was delivered to legislators and other high level state officials (including the Governor and Commissioner of High Education), leading to increased funding for medical school and for medical residency programs. These opportunities could not have been achieved without a solid and united front. Additionally, creative mechanisms were already in place to leverage federal funding, thereby getting the most "bang for the buck."

Sustainability

A. Network Structure

During the grant period, the Montana Graduate Medical Education Council developed a Charter that defines the membership, roles, and responsibilities of the Council and its members. The Council will continue the work that was established by the Charter. Network partners listed in the Charter will continue their membership in the network. Staffing will continue through the MT AHEC/Office of Rural Health. The newly elected officers of the GME council (President, Vice-President and Secretary) will determine how to proceed on management issues.

B. On-going Services and Activities

The Montana GME Council has identified several services/programs that will continue after the grant period has ended.

1. Host a GME Summit: the Summit will serve to highlight successes, offer a forum for discussion of current issues in Graduate Medical Education, and a forum to discuss new developments pertinent to Montana.
2. Support development of the healthcare workforce pipeline: For healthcare positions in Montana, the student pipeline must be maintained and expanded. Through strategic planning in association with the Montana Healthcare Workforce Advisory Committee, the Montana GME Council can support and offer input on how best to increase the pipeline of potential healthcare professionals through existing K-12, secondary, and post-secondary programs.
3. Advocacy/Outreach/Education: After the strong support for graduate medical education shown in the last legislative session, we must continue our united front to continue and build upon our efforts. Grass-roots advocacy efforts will be extremely important as we continue to develop the Graduate Medical Education programs in the state.
4. Data collection: in order to document our efforts and demonstrate best practices in the pipeline, we must show data-driven results and outcomes.

Areas of support include: legislative allocations through the Office of the Commissioner of Higher Education (which was designated in 2013), in-kind support from the MT AHEC/Office of Rural Health and grant support. The Big Sky WWAMI Faculty Retreat has been supported with grant funding that has now ended. However, donations have been received from prominent stakeholders; we anticipate funding the conference in this fashion. We anticipate that the proposed GME Summit will be grant funded. The GME Council will continue to seek diversified funding sources as they move forward.

C. Sustained Impact

Our Network has had significant impact on Graduate Medical Education in the State of Montana—due to the Network's concerted efforts, funding was appropriated through the legislative process. Funding will be leveraged (through previously designated processes) and will serve to support existing residency programs and expansion for potential new programs. At the start of the grant period, Montana had just 18 medical residents in the entire state. At the close of the grant, two additional programs will be hosting students and the original program will have expanded. Those efforts will increase the number of medical residents to 40 in 2014 (and to 78 by 2017).

The emphasis on the rural continuity of training model has been very successful in keeping Montana students involved in rural healthcare, and interested in rural family practice upon graduation. Through the components of the model (targeted rural and underserved track, rural and underserved opportunities program and WWAMI rural/underserved integrated training experiences),

medical students are developing long-term relationships with rural communities (and patients) with the goal of returning to those communities.

The Family Medicine Residency Program has shown a 72% retention of their graduating residents who currently practice in Montana, a significantly higher percentage than most other residency programs around the country.

Preceptors that have attended the Big Sky WWAMI preceptor retreat are better prepared and more willing to take students into their practices, thereby offering more rural rotation sites for students.

Implications for Other Communities

The continuity of training model used by the MT WWAMI program offers tremendous potential as a pipeline program to keep Montana students coming back to complete residency programs in Montana and ultimately practice Primary Care in rural/underserved Montana communities. From the defined admission process on through residency programs, continuity programs keep students tied into specific communities, developing a sense of ownership and commitment for the students. With the addition of numerous residency placements, these students will be more likely to stay in Montana to practice in the rural/urban underserved communities with greatest need.

Interestingly, the fact that Montana has a very small population in a very large state has been an advantage for our Network. The members have worked together on other healthcare issues and know each other well. Through the process of sharing ideas, developing consistent messaging, and collaborating on grant activities, they have developed trusted relationships.

Montana

St. Luke Community Hospital

Organizational Information	
Grant Number	G98RH19717
Grantee Organization	St. Luke Community Hospital awardee. Grant management by Monida Healthcare Network
Organization Type	Physician Hospital Organization
Address	3700 South Russell, Suite 108, Missoula, MT 59801
Grantee organization website	www.monida.com
Name of Workforce Development Network	Monida Healthcare Network
Your Project Director	Name: Amber Rogers
	Title: Director of Clinical Services
	Phone number: 406-829-2380
	Fax number: 406-829-2390
	Email address: arogers@monida.com
Project Period	2010 - 2013
Funding level for each budget period	September 2010 to August 2011: $199,902
	September 2011 to August 2012: $199,732
	September 2012 to August 2013: $199,732

Network Partners		
Partner Organization	Location	Organizational Type
St. Luke Community Hospital	Ronan, MT	Hospital
Clark Fork Valley Hospital	Plains, MT	Hospital
Mineral Regional Hospital	Superior, MT	Hospital
Community Medical Center	Missoula, MT	Hospital
Granite County Medical Center	Phillipsburg, MT	Hospital
Deer Lodge Medical Center	Deer Lodge, MT	Hospital
Barrett Hospital and Healthcare	Dillon, MT	Hospital
Ruby Valley Hospital	Sheridan, MT	Hospital
Physicians	Across all the above towns	Providers

Community Characteristics

A. Area

The Mondia Healthcare Network serves the following counties in western Montana: Beaverhead, Granite, Lake, Mineral, Powell, and Sanders. The area is approximately 300 square miles.

B. Community description

Western Montana is among the most intensely rural regions in the continental United States. Monida's rural service area is remote and sparsely populated, even by Montana standards, with 4.3 people per square mile in the service area, versus a population density of 6.6 statewide and 83.1 nationally. Monida's service area is characterized by small communities separated across great distances and rugged terrain, by large elderly and Native American populations, and by the comparatively low socio-economic status of the population. In short, rural residents are dependent upon the local hospital, as accessing health care outside of one's community in rural western Montana typically means driving a great distance, overnight stays, and leaving one's family, community support systems, and primary care provider.

C. Need

The rurality and population demographics that drive the need for quality local healthcare in the Monida service area is not likely to change anytime soon. These characteristics can be contributing factors to healthcare workforce shortages, meaning that shortages will have to continually be dealt with. However, this grant project was used to develop mechanisms and processes to deal with these shortages. With this additional infrastructure in place, Monida has the ability to help communities decrease shortages to a more manageable level and give communities the tools to affect shortages well into the future.

Program Services	
Target Population	
Elementary School Students	Preceptors – Primary Care
High School Students	Preceptors - Nurses
Middle School Students	Medical Office Staff
Nursing Students – RN	Health Information Management Staff

A. Description

To accomplish the main purpose of impacting rural healthcare workforce shortages, this grant project had three overarching goals including: (Goal 1) Permanently transform Monida Healthcare Network's workforce development structure and mechanisms, (Goal 2) Build rural workforce capacity, and (Goal 3) Establish support mechanisms for rural health care workers. A Workforce Development Committee comprised of representatives from the hospital members of the Monida Healthcare Network was formed to guide the work in achieving these goals and to develop a strategic plan for addressing workforce issues over the long term. The strategic plan helped to prioritize activities and open a line of communication between representatives of all member institutions. Through the establishment of the Workforce Development Committee, Network members are able to share future opportunities for workforce development across the network. The periodic meetings of the Workforce Development Committee has strengthen inter-network relationships and helped to prioritized the strategic goals of the Network. This greater communication means greater support and collaboration for the healthcare workforce within those institutions.

Specific initiatives undertaken through the Workforce Development grant include:

- Purchase of a patient simulator has enabled us to provide more realistic trainings in our rural area. The SIM patient training simulation modules have been used to deliver a wide variety of trainings to the healthcare providers in the Monida institutions. These trainings include ACLS and PALS. A trainer has been trained at each of the institutions to deliver future trainings. The SIM man has also expanded beyond these trainings and is being used at high schools in the region to engage students and provide them additional healthcare education. The ability to provide this new mechanism of training and education to both professionals and students allows those participates to gain exposure to lessons that they may not otherwise have experienced.

- A "Train the Preceptor" curriculum was developed to help current healthcare professionals understand the differing needs of training students versus training new hires. The training curriculum was provided to all member institutions to meet their specific needs. Better trained preceptors will encourage more retention and satisfaction among both the new hires and the current employees as they are able to communicate and work together.

- A shared medical records director/medical staffing consultant was hired and currently provides oversight for medical records staff at three member hospitals to standardize medical records policies and procedures. It is anticipated that this service will be expanded to at least one more member institution in the near future.

- By providing stipends for preceptors, the Workforce Development grant supported the Dedicated Nursing Unit (DEU) program at Salish Kootenai College which paired four students and four preceptors during the 2011-2012 school year. Through this program, students and preceptors work together for one year. This extended training helps students to develop strong relationships with their preceptors and provides greater exposure to prepare them to work in a small hospital in a rural environment.

- A High School Health Science Teacher Certification Program was also supported by the Workforce Development grant to train a total of seven high school teachers in our rural communities to become more familiar with teaching specific lessons about health sciences. Many of these teachers created new health science focused classes and helped start Health Occupation Students of America (HOSA) chapters at their schools. They are also making an increasing number of

connections with their communities' healthcare institutions and providers. In addition to the support provided for the initial training of the health science teachers, grant funds were made available for the schools to participate in a day-long Health Science Learning Lab with "Sim Man" in their school. With this increased training and connection to the healthcare community, students will gain more exposure to health care careers and the chance that they will return to their communities to work in a healthcare career may be increased.

- Workforce Development funds were used to host an Inter-professional Education and Training Summit for the development of a curriculum to better train health professions students to deliver care in a more collaborative manner. Clinical faculty and administrators from multiple Montana colleges and universities attended.

- Network institutions participated in customer service training and a "Just Culture" training which is a five-skill model designed to help change an organization's culture by placing less focus on events, errors and outcomes, and more focus on risk, system design and the management of behavioral choices. Both of these trainings were identified as needs by the Network member institutions as services that would be supportive of their health care workforce.

B. Role of Network Partners

The Monida Health Network's member partners were essential to the implementation of the Workforce Development grant program. Member hospitals assigned key nursing and/or human services personnel to serve on the Workforce Development Committee. This Committee had responsibility for developing the Workforce Development Strategic Plan and overseeing the activities to achieve the goals and objectives outlined in the plan. Individual hospitals participated in the Workforce Development activities that were appropriate and relevant to their institutions. The Monida Board of Directors also provided oversight and received progress reports throughout the project.

Outcomes

As a result of the Workforce Development grant, the Monida Health Network has developed a more comprehensive focus on workforce development among our member institutions. The Workforce Development Committee has strengthened inter-network relationships and helped to prioritize the goals for the Network. This enhanced communication means greater support and collaboration for the healthcare workforce within our institutions. Our members are benefitting in the following ways:

- Our rural hospitals now have greater opportunities for continuing education and broader professional support through linkages that have been established with Community Medical Center's education programs, PIN Network training programs, and the Friday Morning Medical Conference broadcast at Providence St. Patrick Hospital.
- Workforce training has been improved by the use of the simulation model and SIM patient training simulation modules.
- Efficiencies in three of our member hospital's medical records departments have been increased through the efforts of the Medical Records/Medical Staff Consultant.
- The "Train the Preceptor "curriculum enhances the training of preceptors which will result in more retention and satisfaction among both new hires and current employees.
- The "Just Culture" training module is available to help change our organizations' culture by placing less focus on events, errors and outcomes and more focus on risk, system design, and the management of behavioral change.

In addition, the Workforce Development grant supported external efforts to build the healthcare workforce in Western Montana. The outcomes of these efforts are:

- Four students and four preceptors were trained using the Dedicated Nursing Unit program at Salish Kootenai College, providing these students with a year-long exposure to practice in a rural hospital. One of these students was hired by a member of the Monida network at the conclusion of the program.
- Seven high school teachers in the Monida communities completed the High School Science Teacher Certification Program, and many of them have created new health science focused classes and lessons. New Health Occupation Students of America chapters are available to support students interested in health careers.
- Representatives from the higher education community have begun the development of a curriculum to train health professional students in a more collaborative way as a result of the Inter-professional Education and Training Summit supported through the Workforce Development grant.

Challenges & Innovative Solutions

An initial challenge was identifying the correct Network leaders to provide oversight and course correction. In year one, we engaged the CEO's and CFO's of each of our rural hospitals. By year two, we had established the direction for the Workforce Development Committee and replaced the busy hospital administrators with the nursing and human resource leaders within their institutions. We were much more successful at finding areas of common problems and could quickly identify how resources could be used to assist the rural hospitals.

The second most challenging situation was trying to develop a business model for the patient simulator. The initial plan was to centralize the resource so that the Monida staff would be able to use the patient simulator and charge the facilities for its use. The network believed that this was a key to the sustainability of this initiative. However, in reality, the charge structure created walls of resistance and decreased utilization. We have since allowed all members to use the patient simulator without charge and self-select their own trainers and how the simulator is used.

Sustainability

A. Network Structure

Formed in 1996, Monida Healthcare Network is a mature, not-for-profit Physician Hospital Organization comprised of six federally designated rural Critical Access Hospitals. The Network provides a variety of services for its member organizations and will continue to operate well into the future. The Workforce Development Committee established through this grant will continue as a working committee of the Network. Additionally, the University of Montana will continue to be a Network member, fostering new opportunities for future collaboration around workforce development.

B. On-going Services and Activities

The Medical Records/Medical Staff Consultant will continue due to fees that are charged to the hospitals utilizing her services. Currently, Monida has 3 facilities that are billed for these services with the possibility of one more. Consulting services have led to increased revenue for the Network and have enhanced the relationship between those institutions and the Monida staff.

The SIM man will continue to be used in some of our clinical education activities. These activities will not be billed as a service unless there is more agreement of that fee structure. We will continue to connect training resources and equipment across our network.

The training we provided to local staff to become instructors will be invaluable to each hospital as they can use that certification to "train the trainer" until there is turnover in the instructor role within each facility. When turnover does occur, we believe we will have enough resources identified across the Network to assist the hospitals that no longer have an instructor available.

C. Sustained Impact

During the grant period Network members have experienced both new ways of serving along with developing new capacity. The relationships built by the Workforce Development Committee meetings will continue into the future. Other sustained impacts of the Workforce Development grant program include:

- The customer service training and "Just Culture" trainings will impact how duties are accomplished and relationships are built at the institutions that participated.
- The institutions and students that participated in the DEU gained a whole new perspective on nursing education and how it can be changed to increase the benefit to the student, preceptor, and hospital. These shifts in thinking will lead to new ways of serving in some institutions that will continue to exist.
- Many training activities took place during the grant including customer service training, "Just Culture", train the preceptor, and SIM man training. All the knowledge gained by participants in those trainings is a sustained impact of the grant.
- SIM man equipment that was purchased will continue to be available to health professional training.
- The Medical Records/Medical Staff Consultant position was developed and became self-sustaining.
- Health Science education in our high schools has been enhanced and Health Occupation Students of America chapters will support young people in planning for a career in the health professions.

Implications for Other Communities

The purchase and consistent use of simulation training is extremely valuable to clinicians. While we believe that it is critical to have a business plan as early as possible, being too strict regarding this need was not helpful in the first two years. Now that the simulator is accessed more freely, there are continuing conversations about even stronger utilization. In addition, from the Inter-Professional Summit we are beginning community wide conversations regarding a mobile simulator lab for the rural areas. If a community wide vision of shared educational resources is a goal, our advice is to obtain frequent feedback from multiple sources prior to developing plans.

The shared Medical Records/Medical Staff Consultant service is also repeatable for other organizations. When we did our first workforce analysis, we noted key vacancy positions. In a critical access hospital, the medical records department is usually staffed by a clerk or assistant. While this works well for day to day operations, our small facilities did not have the Health Information Management (HIM) specialist to better direct and clarify medical record procedures. The addition of the Medical Records/Medical Staff Consultant has provided additional revenue for the Network and has alleviated the need of smaller facilities to hire a full time, appropriately credentialed HIM manager, a true win-win situation.

Nebraska

Rural Comprehensive Care Network of Nebraska

Organizational Information	
Grant Number	G98RH19702
Grantee Organization	Rural Comprehensive Care Network of Nebraska
Organization Type	Rural Network
Address	995 East Highway 33, Suite 2, Crete, NE 68333
Grantee organization website	www.rccn.info
Name of Workforce Development Network	Rural Comprehensive Care Network
Your Project Director	Name: Joleen Huneke
	Title: Executive Director
	Phone number: 402-826-3737
	Fax number: 402-826-3746
	Email address: jthserpa@rccn.info
Project Period	2010 - 2013
Funding level for each budget period	September 2010 to August 2011: $200,000
	September 2011 to August 2012: $200,000
	September 2012 to August 2013: $200,000

Network Partners		
Partner Organization	Location	Organizational Type
Blue River Valley Network	Crete, NE	18 Member rural Hospital Network
SouthEast Rural Physicians Network	Crete, NE	79 Rural Physician Member Network
Rural Comprehensive Care Network	Crete, NE	Hospital and Physician Network
University of Nebraska Medicine	Omaha, NE	Medical School and Residency Program
Lincoln Family Medicine Program	Lincoln, NE	Residency Program

Community Characteristics

A. Area

Nebraska Counties: Boone, Valley, Howard, Merrick, Polk, Butler, Hamilton, York, Seward, Adams, Filmore, Saline, Webster, Nuckolls, Thayer, Jefferson, Johnson, Otoe. Communities served were: David City, Geneva, Crete, York, Fairbury, Friend, Hastings, Tecumseh, Genoa, Seward, Superior, St. Paul, Hebron, Red Cloud, Syracuse, Osceola, Albion, Central City, Aurora, Clay Center, Ord, Milford

B. Community description

Hospitals are all CAH's located primarily in county seat communities, rural agricultural driven economies. Recruiting professionals to the area includes a "grow your own" component. We have a mix of Independent practice physicians and employed physicians along with patient care providers employed in health care environments.

C. Need

The workforce program has two priority goals. 1. To increase the number of patient care professionals that choose to be employed by network members. 2. Decrease the turnover rate at network facilities. Our partnering rural health care facilities are seeing increasing challenges in recruiting and retaining patient care providers. Similar to most Midwest rural areas, we are experiencing an aging population in healthcare positions. The retirement of these workers is leaving unfilled gaps in healthcare workforce. The migration of youth to metro areas and out of state leaves fewer replacement workers in rural communities. Our program addresses these challenges in several ways: through a grow your own program, by connecting students to rural communities earlier in their education process, by educating communities on how to recruit and connect students back to rural, and assisting in rural rotations for students so they are in rural areas more often through the education process. Retention

programs consist of community engagement, local continuing education opportunities, and mentoring and leadership skills enhancement.

Program Services	
Target Population	
High School Students	Pharmacy Students
Medical Students – Primary Care	Physicians in Residency Training
Nursing Students - RN	

A. Description

Activities conducted through our Workforce Development grant period include recruitment and retention of patient care providers. We worked with hospitals to provide education programs, assisted and provided workshops, worked with communities to provide better understanding of healthcare as an economic driver within the communities. We worked with schools and training institutions to strengthen the tie to rural programs and enhance those programs to keep students better connected with rural opportunities during the training/education process

B. Role of Network Partners

RCCN focused on retention and recruitment programs, including workshops and educational programs along with leadership training. AHEC focused on increasing the number of students and youth choosing health care careers and choosing rural, including direct contact with high school students and hosting science fairs and career academies. BRVN and SERPA collaborated with RCCN to host educational workshops for current rural providers and residents in training.

Outcomes

We worked with medical students, pharmacy students, and Family Medicine Residents at University of Nebraska Medical Center and Lincoln Family Medicine Residency Program. We hosted and participated in rural recruiting events, formal meetings and educational programs. We set up a mentoring program for both medicine and pharmacy students to connect them with rural providers.

Job seeker awareness of the Rural Comprehensive Care Network has increased. The Network has become known as a source for rural employment opportunities and placement. We have positioned the Network as a source for retention programs and find our members and regional health care facilities seeking our expertise. Summer retention workshops have been held with staff of local hospitals. Workshops have dealt with topics that will make the staff more engaged and part of their local facilities.

RCCN developed relationships with Southeast Nebraska Career Academy Partnership, providing juniors and seniors in high school the opportunity to become both career and college ready.

Rural Road Trips to several rural community hospitals and clinics connected Family Medicine Residents and medical students with rural community physicians with workshops in several medical procedures. RCCN held several dinners connecting Family Medicine Residents with rural community physicians and hospitals. Several recruitment efforts are underway because of these efforts.

Challenges & Innovative Solutions

Length of training in metro areas creates a difficult transition to rural environments; we have developed programs that allow students to have rural contact more frequently during the training period.

Our AHEC lost funding and closed, so we needed to establish mechanisms to work with the target population they had previously worked with. We established relationships with others who work with the high school populations in career options and career counseling.

Sustainability

A. Network Structure

We will work with the Southeast Rural Physicians Alliance and Blue River Valley Network to continue our programs. We will work with the University of Nebraska Medical Center and the Lincoln Family Practice Residency Program to continue connecting medical students, pharmacy students, nursing and Family Medicine Residents with the rural communities and opportunities. RCCN was started in 1997, and the staff is permanent and will continue to support the workforce initiatives with the partners listed.

B. On-going Services and Activities

Workforce Development Network will continue to hold the Rural Road Trips with the rural communities covering the cost of the program. This will keep the Medical Residents and Medical students in touch with the rural communities. We will continue to hold workshops and training programs in conjunction with SERPA and BRVN to connect Family Medicine Residents with rural communities

C. Sustained Impact

By establishing a closer connection between training facilities and communities we have increased the ability of communities to recruit patient care professionals. Strengthening the connection between rural areas and metro located institutions makes the transition easier for the professional. These connections allow for enhanced and more frequent training to be done in rural areas, thus strengthening the connection between future practitioners and rural. The relationships that RCCN has built with the UNMC and Lincoln programs will be critical in recruiting the students back to rural areas. We are starting to see the fruits of our labors as the students are looking more and more to rural areas for employment.

Implications for Other Communities

All of our programs can be easily replicated in other rural areas. We have identified that recruiting early and establishing a culture of connections with students increases the pipeline of providers available to work in rural environments. It creates a culture where rural practice is exemplified and sought after, thus providing more options for placements in rural. “Grow Your Own” allows communities to be supportive and connect with students more likely to come home to practice after training and keeps the student connected to community.

New Hampshire

North Country Health Consortium, Inc.

Organizational Information	
Grant Number	G98RH19706
Grantee Organization	North Country Health Consortium, Inc.
Organization Type	Rural Health Network
Address	262 Cottage Street, Littleton, NH 03561
Grantee organization website	www.nchcnh.org
Name of Workforce Development Network	North Country Health Consortium
Your Project Director	Name: Nancy Frank, MPH
	Title: Executive Director
	Phone number: 603-259-3700
	Fax number: 603-444-0945
	Email address: nfrank@nchcnh.org
Project Period	2010 – 2013
Funding level for each budget period	September 2010 to August 2011: $200,000
	September 2011 to August 2012: $200,000
	September 2012 to August 2013: $200,000

Network Partners		
Partner Organization	Location	Organizational Type
Ammonoosuc Community Health Services	Littleton, NH	Federally Qualified Health Center
Androscoggin Valley Hospital	Berlin, NH	Critical Access Hospital
Androscoggin Valley Home Care Services	Berlin, NH	Home health agency
Catholic Charities	Littleton, NH	Social Service Agency
Coos County Family Health	Berlin, NH	Federally Qualified Health Center
Cottage Hospital	Woodsville, NH	Critical Access Hospital
Grafton County	North Haverhill, NH	Local Government
Grafton County Service Link	Lebanon NH	Information and referral agency
Indian Stream Health Center	Colebrook NH	Federally Qualified Health Center
Littleton Regional Hospital	Littleton NH	Critical Access Hospital
Mid-State Health Center	Plymouth NH	Community Health Center
Morrison Nursing Home	Whitefield NH	Long-term care facility
North Country Home Health & Hospice	Littleton NH	Medicare certified home health agency
Northern Human Services	Colebrook NH	Community mental health centers
Tri-County Community Action Program	Berlin NH	Community Action Agency
Upper Connecticut Valley Hospital	Colebrook, NH	Critical Access Hospital
Weeks Medical Center	Lancaster NH	Critical Access Hospital serving
45th Parallel EMS	Colebrook NH	Emergency Services Agency

Community Characteristics

A. Area

Coos County: Colebrook, Berlin, Gorham, Lancaster, Whitefield, Littleton
Grafton County: Haverhill, Woodsville, Plymouth, Hanover, Lebanon
Carroll County: Wolfboro
Belknap County: Laconia

B. Community description

The entire region has been designated as a Medically Underserved Area (MUA) with a Medically Underserved Population (MUP) by the US Department of Health and Human Services (US DHHS). With few exceptions, those for whom New Hampshire Medicaid reimbursement is available include eligible children, those with disabilities, and those 65+ residing in long-term care facilities. Most New Hampshire adults between the ages of 19 and 64 have no means of payment for health care services except private health insurance and self pay. Less than 30 percent of adults under the age of 65 have private insurance, and a substantial majority of North Country adults must rely on their own resources to pay for health care. Most of these adults receive their primary health care – assuming they receive any health at all – at the area's four community health centers. North Country Community Health Centers currently have primary care vacancies, which reduces access to a large majority of the North Country adult population.

C. Need

Northern New Hampshire, like most rural areas, suffers from severe shortages of trained personnel in every facet of health care delivery. This program was designed to provide students with an interest in rural health care an enhanced rotation experience that would allow our partners to ultimately recruit and retain them in our local communities.

Program Services	
Target Population	
Allied Health Professional Students – Bachelor's level	Physician Assistance Students
Allied Health Professional Students – Master's level	Preceptors – Primary Care
Clinical Psychology Students	Preceptors - Specialists
Medical Students – Primary Care	Preceptors - Nurses
Medical Assistant Students	Public Health Students
Nursing Students - RN	Social Work Students
Nurse Practitioner Students	

A. Description

Live, Learn, Play in Northern NH was designed to be a community-based inter-professional health care workforce training program. The program was developed to provide students and preceptors with a value added rotation experience that would encourage students to seek employment in the North Country.

Our preceptors communicated that they preferred students in their practices who were enthusiastic about rural health care, and we wanted to reach students who were more likely to live and work in rural areas. We developed a thorough application process to meet these needs which began with the student's submission of an application and resume. Students selected from this process were given a phone interview. Once we ensured the "right" students were identified, we enrolled them in the program, communicated with the clinical sites, and scheduled the two-part orientation process.

The orientation was designed to help the students prepare for their rotations by educating them about the culture of the North Country and its communities. We demonstrated that rural health care is not a "one size fits all" and that even within rural Northern NH there are distinct differences from town to town. Students first completed an online class which provided them with the history of the North Country of NH, its industry and the socio-economic issues facing the region today. During the first week of their rotation they participated in the second part of the orientation; the cultures of poverty and its effect on the local population was addressed in a collaborative in-person session.

Students were asked to complete an interdisciplinary community service project that required them to work with a community service agency or a school. Upon completion of their rotation and project, they submitted a reflection paper on the cumulative experience. Armed with a deeper understanding of the population, students were able to form bonds within the community and, in the future, be more likely to seek employment in the area.

B. Role of Network Partners

Partner Organizations	Roles and responsibilities
Mid-State Health Center	Oversight, planning, implementation, preceptor site
Plymouth State University	Oversight, planning, implementation, orientation development
ServiceLink	Planning
Ammonoosuc Community Health Services	Oversight, planning, implementation, preceptor site
Grafton County Nursing Home	Oversight, planning, implementation
Franklin Pierce University	Oversight, planning, implementation, student participation
The Dartmouth Institute	Oversight, planning, implementation
Dartmouth Medical School	Oversight, planning, implementation, evaluation
White Mountains Community College	Oversight, planning, implementation, student participation
Upper Connecticut Valley Hospital	Oversight, planning, implementation, preceptor site
NH Catholic Charities	Oversight, planning, implementation, orientation development and delivery
Coos County Family Health Services	Oversight, planning, implementation, preceptor site
NH Office of Rural Health	Oversight, program development
Morrison Nursing Home	Oversight, planning, implementation
Northern Human Services	Oversight, planning, implementation, preceptor site
Weeks Medical Center	Oversight, planning, implementation, preceptor site
Androscoggin Valley Hospital	Preceptor site

Outcomes

The Rural Health Workforce Development program created Live Learn Play in Northern NH, a multifaceted, interdisciplinary student training program. Thirty-three students completed the Live, Learn and Play Program. The table below reflects the variety of disciplines represented within our program.

Total Students by Discipline

Nurse Practitioner	3
Mental Health Counselor	4
Masters of Social Work	1
Medical Doctor	1
Physician Assistant	18
Registered Nurse	1
Masters in Public Health	1
Medical Assistant	4
Total Students	33

Five of the students who completed the program were hired by three of our clinical sites as a result of the Live, Learn Play Program. Providing students with stipends allowed us to attract students such as these to our area for rural rotations that otherwise may not have been able to come. Students were able to pay for their housing and travel during the rotation which made it possible for them to come to Northern NH.

We were able to increase the capacity of preceptor sites to better accommodate students and increase the value of the experience. Students and preceptors had access to technology that contributed to the educational experience. Clinical sites also developed a heightened awareness and scrutiny of students placed at their sites who value rural practice.

Each student completed a community service project, some of which have had lasting impact. Our public health student revised the Community Health Worker training manual that will be used statewide in the training of Community Health Workers. A Physician Assistant student delivered a workshop to local middle and high school coaches on the prevention of ACL injuries in girls and educated them about available training programs that they could use that were proven to reduce risk. Other students worked with local charities to disseminate health information, presented to middle and high school students about health career opportunities, and became involved in local substance abuse prevention initiatives.

Partner relationships that have developed and strengthened throughout the grant period provide us with support as we continue to build and expand our workforce development activities. We are now in a unique position to facilitate collaborations between partner organizations and new clinical and academic sites, as together we address the workforce shortages in our region.

Together with our partners we developed a program unique to the North Country of New Hampshire by reflecting the needs expressed to us by our clinical sites. The orientation process is being sustained and will be revised to be available for partner organizations as a recruitment and orientation tool. We will continue to work to secure additional funding and build on the activities initiated by this grant.

Challenges & Innovative Solutions

We were challenged by the lack of preceptors in our area and by the difficulty in getting students placed. We designed the program so we could match students with preceptors in a meaningful way. We also wanted students from different disciplines to perform their rotations at the same practice simultaneously to encourage the interdisciplinary piece of the program. We learned during our implementation year that several academic institutions and clinical sites have strong relationships with financial arrangements; often, there is little room for outsiders to place students. We tackled this problem in several ways. First, when possible, we had students do their in-person orientations in a group so they could interact with students from other disciplines. Second, we leveraged our relationships with individual providers and contacted them directly, rather than going through the clinical coordinator. Then we used this as an opportunity to forge relationships with the clinical coordinators. Third, we developed stronger relationships with the academic institutions that were placing students in North Country sites. Through them, we were able to market the program to students who were already scheduled to do North Country rotations and identify students who were interested in rural practice. Fourth, our experiences allowed us to contribute important information to the NH Primary Care Workforce Commission as they explore ways to streamline the process for placing students with NH preceptors.

Many students who completed our program have not yet graduated. We are developing a tracking system to stay in touch with students to find out where they practice. Each year we will reach out to past students and see how many are practicing in rural communities.

Sustainability

A. Network Structure

The North Country Health Consortium (NCHC) is a Rural Health Network and workforce development activities will continue. This project has allowed us to develop relationships with new partners that will continue as we explore ways to address workforce needs in our region. We will work with our clinical partners on recruitment and our academic partners on pipeline programs that encourage students who prefer rural environments to consider practicing in Northern NH. NCHC is in a unique position to strengthen the bridge between academic and clinical institutions through the work we have done throughout the grant period.

B. On-going Services and Activities

The North Country Health Consortium will continue to be a resource for students and preceptors in the matching process by facilitating communication between clinical site coordinators within our network to streamline the student placement process.

We will be a resource for academic institutions and their students who are required to complete community service projects.

NCHC will contact students each year to receive an update on their education and employment status.

Materials developed during this program will be used to promote the region to future health care providers.

We will maintain the content of our online resources, in cooperation with our partners, to assist in matching students and preceptor sites.

Additional funding is being sought to add to the content of the online resources to make it more valuable for our partners.

C. Sustained Impact

This project contributed to ongoing regional and statewide collaborations regarding the shortage of clinical sites, the training of preceptors and the challenges that arise with having students in clinical sites. There continues to be conversations about these processes and how they can be better managed.

As we move toward the medical home model, it is imperative that our next generation of health care providers embrace the concept of interdisciplinary care. The barriers encountered in creating an interdisciplinary experience for our students at the clinical sites illustrated that this is currently not a priority in student training. We see an opportunity to further enhance the student experience by exploring ways of facilitating interdisciplinary collaboration among students.

A stronger relationship was developed with Franklin Pierce University PA program that will ultimately impact the growth of our health career pipeline programs.

Preceptor sites have increased capacity to accommodate students who are completing their rotations.

We have leveraged local foundation funds to work with new partners in various sectors to recruit young professionals to the North Country.

We have leveraged dollars from state funds to work with the New Hampshire AHEC program to develop student/preceptor placement models in our state to better coordinate placements.

We are creating a collaboration between a Federally Qualified Health Center, our local medical school, and the NH AHEC to explore opportunities to create a rural Family Practice residency program.

Implications for Other Communities

The success of the application process, the orientation component and our website was an unexpected outcome of our program. Together these components helped us to accomplish our goal of identifying students who wanted to live, learn and play in rural areas. The application procedure provided students with a self –reflection process as they prepared to enter into their rotation and ensured our preceptors would be matched with the “right” students. Students were educated about the history and culture of the North Country and given valuable information about how poverty affects the health attitudes of our region. The community service projects gave students an opportunity to interact with members of the community outside of the healthcare system, providing them with real life experiences in the towns they were serving. The cumulative effect of these experiences was an enhanced rotation experience, ultimately making the North Country a place they could someday call home.

This information was very specific to Northern NH, though could easily be replicated in any rural community with a deep history and large industry changes that have greatly affected the region. Our materials were obtained through local community agencies, educational institutions, chambers of commerce and simple research. Leveraging partner relationships such as local academic institutions and community agencies to develop and deliver this material should be considered as well.

New Mexico

Hidalgo Medical Services

Organizational Information	
Grant Number	G98RH19708
Grantee Organization	Hidalgo Medical Services
Organization Type	Community Health Center
Address	902 Santa Rita Street, Silver City, NM 88061
Grantee organization website	www.hmsnm.org
Name of Workforce Development Network	FORWARD NM – Pathways to Health Careers
Your Project Director	Name: Tamera Ahner
	Title: Workforce Manager
	Phone number: 575-534-0101
	Fax number: 575-313-8236
	Email address: tahner@hmsnm.org
Project Period	2010 - 2013
Funding level for each budget period	September 2010 to August 2011: $200,000
	September 2011 to August 2012: $200,000
	September 2012 to August 2013: $200,000

Network Partners		
Partner Organization	Location	Organizational Type
Gila Regional Medical Center	Silver City, New Mexico	Community hospital
University of New Mexico	Albuquerque, New Mexico	State University
Arizona School of Dentistry & Oral Health at A.T. Still University	Mesa, Arizona	Dental School
Memorial Medical Center's Southern New Mexico Family Medicine Residency Program	Las Cruces, New Mexico	Family Medicine Residency Program

Community Characteristics

A. Area

The FORWARD NM program originally focused its program reach throughout Grant, Hidalgo, Catron and Luna counties of New Mexico but has expanded statewide through a contract with the New Mexico Department of Health, Office of Primary Care and Rural Health to disseminate this successful workforce model into other rural communities in New Mexico.

B. Community description

Southwest New Mexico is a rural, isolated region that has historically lacked primary health care services. Each southwest NM County has been designated by HRSA as Health Professional Shortage Areas. Residents are relatively isolated in that less than 35,000 people live in a geographic area of 7,410 square miles, slightly smaller than the entire state of Massachusetts. The poverty rates for these communities exceed both statewide and national rates and are expected to rise as high unemployment persists. One quarter of the population is uninsured and rural, low-income, and Hispanic populations are all known to experience health disparities, making the need for continuous primary care and prevention services even more essential to the wellbeing of southwest New Mexico residents. Dental services, in particular, are scarce in the region.

C. Need

The counties in Southwest New Mexico are designated by HRSA as Health Professional Shortage Areas for medical, dental and mental health primary care services. The entire southwest region of New Mexico has historically lacked sufficient primary care services. The population also shows higher rates of Medicaid enrollment. Although private medical practices do exist, most uninsured individuals cannot afford the high cost burden of paying out of pocket at market rates, thereby leaving them without

medical care. Additionally, many private practices do not accept, or limit the number of Medicaid and Medicare patients due to reimbursement rates. Thus, a majority of the population flees to the one of the HMS community health centers for care. Traditionally, Hidalgo Medical Services (HMS), much in line with national averages, has suffered a 13% primary care provider vacancy rate, necessitating the need for innovative workforce development practices.

In addition, dental services are scarce in the region. Historically, the wait time to schedule an appointment with a Community Health Center dentist is approximately three months, and it takes four to five months to get an appointment with the dental hygienist for a routine cleaning. Dental appointment wait times at private practices in the area are not significantly shorter. This has resulted in both a need to recruit more dentists and hygienists as well as a greater availability of preceptors to train dental students and residents.

Program Services	
Target Population	
Allied Health Professional Students – Bachelor's level	Medical Students - Specialists
Allied Health Professional Students – Master's level	Middle School Students
Certified Nurse Midwives	Nurse Practitioner Students
Clinical Psychology Students	Nursing Students - RN
Dental Health Community Coordinator	Pharmacy Students
Dentistry Students	Physician Assistance Students
Elementary School Students	Physicians in Residency Training
Family Nurse Practitioners	Preceptors - Nurses
High School Students	Preceptors – Primary Care
Licensed Clinical Social Workers	Preceptors - Specialists
Medical Assistants	Public Health Students
Medical Students – Primary Care	Social Work Students

A. Description

The FORWARD NM™ model described below outlines the five key stages leading to a successful workforce program. This model is "dissemination friendly" in that it is adaptable to fit the unique healthcare workforce needs, goals and objectives of other communities.

STAGE 1: Encourage Frontier and Rural Students to Enter Health Careers

This introductory phase of the pathways program consists of multi-faceted methods of identifying interested students and putting infrastructure in place to stay connected to these interested students. Consistent and ongoing methods include curricular programs and outreaches for local, middle and high school students. These methods yield an increased awareness and interest in health professions. By planting the seed in the mind of a budding young learner, each student is given a point of interest from which to build their educational focus. Venues for outreach include career fairs, classroom presentations, as well as clubs and camps. Once a student has been reached and an interest has been identified, staying connected to the student is a key element to success.

STAGE 2: Follow Rural and Other Interested Students through Undergraduate Education

The FORWARD NM™ model hosts programs that reach Stage 2 participants: (1) Provide Community Site for UNM Combined BA/MD Program in which college students complete Summer Practicums; (2) FORWARD NM™ hosts a Summer Internship Program for undergraduate students raised in the target community. The internship program provides students with exposure to all operations of a Community Health Center. During the eight-week internship, students complete four modules focusing on medical, dental, family support services, and administrative departments. Students are given responsibilities appropriate to the department and their abilities. All students participating in the program reported increased knowledge of rural community-based practice and increased interest in primary care fields; (3) FORWARD NM™ also encourages college students to engage in volunteer and mentor opportunities in the clinic environment and during various outreaches. Once these students have cleared institutional guidelines and are approved to shadow/mentor or volunteer, we link these students to providers for shadowing experiences, offer them opportunities to volunteer in the clinic environment, and often engage these students as leaders in

FORWARD NM™ program curriculum with younger peer groups. (4) The FORWARD NM™ staff also co-hosts WNMU's pre-med club focusing on goals such as MCAT prep classes, lining up clinical hours qualifying them for post-graduate degree programs, community outreach, one-on-one consultations, mock interviews, shadowing experiences inside the clinic, scholarships and medical school applications. WNMU students help facilitate health career club activities as well as SMASH and HCA, mentioned above. These activities further connect WNMU students to primary care and the Community Health Center and hospital settings, while also providing opportunities for local community service activities that will strengthen their medical school and other health career training program applications.

STAGE 3: Provide Rural Training for Students and Residents

FORWARD NM™ hosts a diversified training hub model wherein learners include undergraduate students, medical students, family medicine and pediatric residents, dental students and residents, physician assistant students, family nurse practitioners, certified nurse midwives, nursing students, as well as behavior health learners. FORWARD NM™ engages multiple universities and multiple degree programs in affiliation agreements. These rotations provide students and residents with exposure to rural community-based practice settings and enable the community to identify individuals interested in returning to the community to practice in the future. The FORWARD NM™ model has yielded successful recruitment of providers who have completed rural rotations at HMS. Inter-disciplinary training, preceptor development and community immersion experiences are integral to the success of the training hub. FORWARD NM™ has hosted 204 learners from January 1, 2010 through May 1, 2013:

STAGE 4: Host A Residency Program to Recruitment to support the supply of primary care in Rural Communities

Under the FORWARD NM™ model, HMS has developed a 1+2 Family Medicine Residency Program. Residents complete their intern year of residency at UNM (in an urban center) and their second and third residency years at HMS in rural practice. HMS received program accreditation by ACGME, the national accrediting body, as well as HRSA's Teaching Health Center designation in May of 2013.

In addition, the FORWARD NM™ model has focused on provider retention through collaboration with a local hospital by offering CME accredited training, a UNM-affiliation for providers to access UNM health library resources, and Project ECHO is a telehealth program in which rural providers and UNM sub-specialists co-manage complex patients in the primary care setting, while expanding rural providers' knowledge and experience in specific sub-specialty fields such as diabetes, hepatitis C, rheumatology, and chronic pain management. This is one example of utilizing existing resources to reach community providers in a positive light.

STAGE 5: Help support state and federal policies that support the demand for primary care.

Healthcare Workforce Summit

In an effort to address the health professional primary care shortage in New Mexico and beyond, the FORWARD NM™ model brought together 75 individuals from a broad range of local providers, non-profit organizations, local and state agencies as well as national attendees, for a two-day summit concerning health professional workforce training and development in rural New Mexico communities. Participants broadly endorsed further promotion of state and federal policies that support rural primary care training opportunities for students from frontier and rural areas. The Summit also provided a venue to link potential partners in addresses primary care shortage solutions.

New Mexico Primary Care Training Consortium

To help support the expansion of primary care training and increased quality of primary care training, the FORWARD NM™ program objectives include the coordination of a network of all family medicine residency programs in New Mexico to advocate, recruit and develop resources for all primary care residency programs in New Mexico. This will help all residency programs identify residents best suited for each of the residency program locations and connect graduates to high need practice locations in rural New Mexico. This method serves as an example of innovations that other disciplines could consider in supporting supply and demand of primary care providers.

B. Role of Network Partners

Partner Organization	Location	Role
Gila Regional Medical Center	Silver City, New Mexico	Provides student and resident training location; partners with the network to recruit providers; co-sponsors continuing education opportunities; subsidizes club costs; serves advisory role to leading the network

University of New Mexico	Albuquerque, New Mexico	Provides students and residents for rural rotations through affiliation agreements; co-facilitates clubs and camps; partners with network partners on resource development opportunities; founding partner in the development of the NM Primary Care Training Consortium; serves advisory role to leading the network participants in health policy improvement efforts
Arizona School of Dentistry & Oral Health at A.T. Still University	Mesa, Arizona	Provides dental students for rural rotations in New Mexico through an affiliation agreement; participates in health policy improvement efforts
Memorial Medical Center's Southern New Mexico Family Medicine Residency Program	Las Cruces, New Mexico	Student and resident training site; provides students and residents for rural rotations through an affiliation agreement; founding partner in the development of the NM Primary Care Training Consortium; serves advisory role to leading the network participants in health policy improvement efforts

Outcomes

While some aspects of the FORWARD NM™ model represent a longer-term investment in the rural health care workforce before the impact can be realized and evaluated, many components of the model have the potential for impact within three to five years. Rural rotation experiences have already helped network partners recruit physicians and mid-level disciplines in the communities we serve once they finish their training: 1 Family Medicine physician; 2 Family Nurse Practitioners, 3 Physician Assistants, 1 Dental Assistant and 1 Licensed Clinical Social Worker. Better retention rates can be observed for providers who are recruited based on their interest and training experiences in rural communities. These providers can also be trained as preceptors and retained because they find fulfilling opportunities for career development through preceptorships and other community projects. Rates at which rural students enter premedical tracks at their universities and subsequently enter health professional training programs can also be observed within three to five years.

FORWARD NM ™ utilizes eight evaluation tools to measure the success of each learner experience in a 360° fashion by targeting various cross sections of those who interact with program participants. Through this evaluation process, inadequacies, barriers and challenges are revealed, thereby providing an opportunity to measure the success of our program on a regular basis.

In our rural rotation exit survey, 91.1% of learners stated that the rotation gave them a better understanding of practice in public health. Additionally, while only 58.1% of learners grew up in a community of 20,000 or less, 84% expressed their intent to enter rural practice. Anecdotal data has indicated overwhelmingly positive experiences, from middle school students completing their first dissection, to undergraduate students observing the birth of a baby for the first time, to students and residents engaging not only in clinical procedures, but also in community health improvement projects. The network is currently engaged in the final, comprehensive evaluation report on the various learning, preceptor, and community partner experiences including a pre-and-post test design, to demonstrate the viability of the model. In the meantime, middle school parents are reporting that the Dream Makers Club has changed the lives of their children, and children graduating from the club are staying on as volunteers to maintain their engagement in the club activities.

Challenges & Innovative Solutions

While the FORWARD NM program has realized many successes, the most significant challenge has been to engage our target populations from remote communities in our region. This region represents a land mass of over 150 square miles. For instance, one of our school districts has an extended hour, four-day school week, which limits the open time to bring extracurricular activities to that school system, even though we have connected with students who are interested in pursuing health careers. Therefore, we have connected with an educator in that system that is willing to partner with FORWARD NM to build career readiness and health career

awareness curriculum into health classes. This plan will give students access to health career information they would not have received otherwise. In addition, some of our summer academy and camp participants must travel a minimum of 70 miles each way, each day in order to attend our daily lectures, labs and experiences. To address these types of barriers, we have enlisted the help of our community stakeholders to share rides and access public transport. Essentially, barriers that are addressed as they occur are innovatively resolved whenever possible.

Sustainability

A. Network Structure

The FORWARD NM program will continue beyond the grant period. Because the network engaged in sustainability strategies throughout the grant period, the network has been successful in securing $310,000 in ongoing annual funding, most of which is contracted through 2016. Each network partner will continue to be engaged in the capacities listed in the previous section and new partners will join the network to participate in and build from the foundation of programs and offerings established under the grant. For instance, the University Of Arizona School Of Medicine will join the network and send medical students to Hidalgo Medical Services for rural rotations. The network envisions this affiliation as a "feeder" opportunity for their newly accredited THCGME family medicine residency program. The ongoing recruitment needs of the network partners will be identified and addressed through rural rotation expansions. In addition, the NM Department of Health, Office of Primary Care and Rural Health recently awarded the program a contract to disseminate this model into one new rural community annually for each of the next four years. The program has also become the newest Area Health Education Center (AHEC) in New Mexico under a subaward agreement from the University Of New Mexico (UNM). UNM recognized that the FORWARD NM mission and vision is very closely aligned with the national AHEC mission and a perfect fit for a shovel-ready new site in New Mexico. These contracts exemplify the types of activities the network has engaged in to support ongoing activity.

B. On-going Services and Activities

As mentioned above, the network will continue to educate students about the unique characteristics of medical practice in a frontier and rural area through after-school clubs, mentoring, discussion, and direct clinic experience. We will continue to foster relationships among practitioners and staff regarding the value of teaching. We will continue to foster positive and meaningful relationships with medical student to increase awareness of how wonderful frontier and rural practice is. We intend to proceed with further expansion of after-school clubs and summer camps to invite students from all middle schools in SWNM. This option may provide opportunities for students to develop relationships and comrades outside of their school systems while applying existing resources to meet the needs of more kids.

As mentioned in the previous section, the FORWARD NM ™ model will be disseminated into new areas of New Mexico during the next year under a state contract. The program will engage in the Request for Proposal process to locate a shovel-ready community that is ready to adapt the model to meet their community needs.

C. Sustained Impact

The long-term effect on the expanding FORWARD NM service area can only be forecasted. However, remarkable lasting impressions have been made in the minds of "learners" who visit SWNM for a training experience or who are growing up in frontier and rural communities. Over 5,000 encounters have been logged during the grant period. These encounters occur through one-on-one interactions, group activities or even major outreach events. The network receives regular and ongoing solicited and unsolicited feedback from learners and their families regarding the impression FORWARD NM activities have left on the minds of the student/residents we serve. Troubled teens have found a voice and direction to serve their community and their families. Single Moms have found hope. Inquisitive medical students have discovered that family medicine and rural practice is where they want to focus their careers. Community specialists and mid-level providers are discovering the rewards of sharing their expertise as teachers. Clinic and hospital support staff members are finding renewed energy as they too discover that they can positively impact the minds of a young learner. Network partners are feeling inspired to replicate these successes into other areas of New Mexico, and the NM Public Education System is slated to accredit the summer academy curriculum so that future participants can receive three education credits for attending summer sessions. One sole-community hospital has opened its doors to training opportunities for budding young learners who could be potential future hires. The list of community stakeholders continues to grow as they too realize the importance of investing in these kids.

Implications for Other Communities

Program outcomes reveal that the FORWARD NM model is easily adaptable to other communities. A work plan has been developed, which includes step-by-step plans for another network of partners to launch a successful workforce program. A long-term community benefit will be gained through the effective use of the model.

Oklahoma

Rural Health Projects, Inc.

Organizational Information	
Grant Number	G98RH19704
Grantee Organization	Rural Health Projects, Inc.
Organization Type	Community non-profit
Address	2929 East Randolph Ave, Room 130, Enid, OK 73701
Grantee organization website	http://rhp-nwahec.org/
Name of Workforce Development Network	Community Campus Coalition for Health Professions Training
Your Project Director	Name: Andy Fosmire
	Title: Executive Director
	Phone number: 580-213-3172
	Fax number: 580-213-3167
	Email address: ahecadmin@nwosu.edu
Project Period	2010 - 2013
Funding level for each budget period	September 2010 to August 2011: $192,557
	September 2011 to August 2012: $189,725
	September 2012 to August 2013: $193,649

Network Partners		
Tahlequah Coalition, Cherokee County		
Partner Organization	Location	Organizational Type
W. W. Hastings Hospital	Tahlequah/Cherokee/OK	Hospital
Tahlequah City Hospital	Tahlequah/Cherokee/OK	Hospital
NeoHealth	Tahlequah-Hulbert/Cherokee	FQHC
Northeastern State University	Tahlequah/Cherokee/OK	University
Oklahoma State University, Center for Health Sciences	Tahlequah/Cherokee/OK	University
Oral Roberts University	Tulsa/Tulsa/OK	University
Connors State College	Muskogee/Muskogee/OK	University
Baptist Collegiate Ministry	Tahlequah/Cherokee/OK	Religious
Indian Capital Technology Center	Tahlequah/Cherokee/OK	Vo Tech
Sequoyah High School	Tahlequah/Cherokee/OK	Tribal High School
Tahlequah High School	Tahlequah/Cherokee/OK	High School
Cherokee Nation	Tahlequah/Cherokee/OK	Tribal Government
City of Tahlequah	Tahlequah/Cherokee/OK	Municipal Government
Young Professionals Club	Tahlequah/Cherokee/OK	Business/Civic
Chamber of Commerce	Tahlequah/Cherokee/OK	Business
Main Street Association	Tahlequah/Cherokee/OK	Business
Farmer's Market	Tahlequah/Cherokee/OK	Community/Civic
Vivid Salon	Tahlequah/Cherokee/OK	Local business
The Drip Beverage Lab	Tahlequah/Cherokee/OK	Local business
OK Health Care Workforce Center	Oklahoma City/Oklahoma/OK	Clinical Education
NEAHEC	Tulsa/Tulsa/OK	AHEC
Eastern Oklahoma Health Care Coalition	Muskogee/Muskogee/OK	Coalition
Cherokee County Community Health Coalition	Tahlequah/Cherokee/OK	Coalition
Cherokee County Health Dept.	Tahlequah/Cherokee/OK	Public Health

Network Partners		
Enid Coalition, Garfield County		
Partner Organization	Location	Organizational Type
St. Mary's Regional Medical Center	Enid, OK	Hospital
INTEGRIS– Bass	Enid, OK	Hospital
Enid Chamber of Commerce	Enid, OK	Business
Enid Regional Development Alliance	Enid, OK	Business Development
Northwest Oklahoma Osteopathic Foundation	Enid, OK	Medical
Northwest Family Medicine Program	Enid, OK	Family medicine DO residency program
Northwestern Oklahoma State University	Enid, OK	College
O.T. Autry	Enid, OK	Vo-Tech
Rural Health Projects, Inc./NwAHEC	Enid, OK	Area Health Education Center

Community Characteristics

A. Area

1. Cherokee County, primarily Tahlequah City.
2. Garfield County, primarily Enid

B. Community description

1. Tahlequah population was 15,753 in 2012 compared to 14,508 in 2000. The Tahlequah, OK population has increased by 8.6% from 2000 to 2012. In Tahlequah, 90% of the people speak English and 6% of people speak Spanish; also in Tahlequah, 44.6% of people are married. Tahlequah is the capitol of the Cherokee Nation. 27% of the Tahlequah population is Native American, as compared to 11% in Oklahoma and 1% nationally. 9% of the population of Tahlequah is mixed race and 7% of people are of Hispanic or Latino origin.

   The income per capita in Tahlequah is 22.1% less than the Oklahoma average and 42.2% less than the National average. The median household income in Tahlequah ($25,478) is 34.3% less than the Oklahoma average and 51.3% less than the national average. The median household income in Tahlequah for owner occupied housing is 154.8% greater than the median household income for renter occupied housing in Tahlequah. The poverty level in Tahlequah is 49% greater than the Oklahoma average and 114% greater than the national average. The median earnings for males in Tahlequah is 41% greater than the median earnings for females in Tahlequah. The Cost of Living Health Care Index (112) is higher than the national average (100) and even higher than the Oklahoma average (96).

   The two largest employers in Tahlequah are the Cherokee Nation and Northeastern State University. There are two hospitals in Tahlequah: WW Hastings Hospital for Native Americans and Tahlequah City Hospital.

2. Enid population was 49,379 in 2012 compared to 47,094 in 2000. The Enid, OK population has increased by 9.5% from 2000 to 2012. In Enid, 93% of the people speak English, 3% of people speak Spanish, and 4% speak another language. In Enid, 60% of people are married. Of the Enid population, 87% are Caucasian, 4% African-American, 1% Asian, 2% American Indian, 1% Native Hawaiian, 3% mixed race, and 2% are classified as "other." The income per capita in Enid is 15.4% greater than the Oklahoma average and 14.4% less than the national average. The median household income in Enid ($38,177) is 1.6% less than the Oklahoma average and 27% less than the national average. The median household income in Enid for owner occupied housing is 63.3% greater than the median household income for renter occupied housing in Enid. The poverty level in Enid is 16% less than the Oklahoma average and 20.7% greater than the national average. The median earnings for males in Enid are 73.8% greater than the median earnings for females in Enid. The Cost of Living Health Care Index (92) is lower than both the national average (100) and the Oklahoma average (96). The two largest employers in Enid are Vance Air Force Base and Advance-Pierre Foods. The two hospitals in Enid are St. Mary's Regional Medical Center and INTEGRIS Bass Baptist Health Center.

C. Need

Cherokee and Garfield Counties of rural Oklahoma provide clinical training sites for health profession students. These students come and go from the communities with virtually no one other than their preceptor knowing they have been there. The need is to

collect data on these students and intentionally bring community resources together to ensure the students have a positive experience outside of the clinical training. The result would be to expand and enhance health career training in the target counties, foster community involvement with clinical students, and facilitate coalition development and sustainability planning.

Education and community development theory and experience support the development of Community Campus Partnerships for Health Professional Training. The value of educational 'pipelines' has been demonstrated for a long time to help insure an adequate supply of professionals in various disciplines. "Growing your own" can make the difference in having or not having needed professional specialties in communities. It is also known that, in health professional training especially, the more training that can take place in the local or rural community, as opposed to the highly sophisticated, urban medical center, the more likely that a student will choose to practice in the local community. It has also been recognized that the more community members know about, and are involved in, the education, economics, and infrastructure of their community, the stronger each of these segments are, and the more ready the community is to grow and venture into new directions. Community development takes time and effort, however, and the process must be nurtured and monitored.

Program Services		
Population	Enid	Tahlequah
Allied Health Professional Students – Bachelor's level	X	
Allied Health Professional Students – Master's level	X	
Allied Health Professional Students–Associate level		X
Allied Health Professional Students–Doctorate level		X
Dental Assistant Students		X
Dentistry Students		X
Elementary School Students	X	
Health Care Administration		X
High School Students	X	X
Medical Students – Primary Care	X	X
Middle School Students	X	
Midwife		X
Nurse Practitioner Students		X
Nursing Students - LPN		X
Nursing Students - RN	X	X
Pharmacy Students	X	X
Physician Assistance Students	X	X
Physicians in Residency Training	X	
Preceptors - Nurses		X
Preceptors - Other	X	X
Preceptors – Primary Care	X	X
Preceptors - Specialists	X	X
Social Work Students	X	X
Special Forces Army Medic		X
SRNA- Registered Nurse Anesthetist		X

A. Description

The Community Campus Partnership for Health Professions Training project was implemented in two mirror programs, one in Cherokee County in eastern Oklahoma and the other in Garfield County in western Oklahoma to see how the concept would work in two very different communities. The basis for the concept was to create a community-wide, intentional effort to expand and enhance health career training in Cherokee and Garfield Counties and to collect data on those students participating in that training. These efforts include cataloging clinical training sites for health care professionals, providing interdisciplinary experiences for students, increasing efforts to integrate students into the community, empowering and continuing education for preceptors, and increasing the number and variety of clinical rotations/experiences.

Mission: Ensure a stable, adequate number of primary care health professionals in Cherokee and Garfield Counties.

Vision: To make Cherokee and Garfield counties the clinical rotation of choice through community engagement

Goal: To facilitate student clinical rotations in Cherokee and Garfield counties, hoping students will have a positive experience in the community and consider practicing there after graduation

Philosophy: The economy of rural communities is interdependent with the medical resources in the area. The workforce shortage is being felt first and is most acute in rural communities. Coalition partners have a vested interest in the workforce of the medical community.

Specific services provided are listed below:

Services Provided	Enid	Tahlequah
Awareness of community opportunities/activities available to students	X	X
Civic/ Business engagement of students		X
Community awareness of students on rotations	X	X
Community engagement/ Relationship building among coalition members/ Collaboration of partners		X
Community health fair	X	X
Develop preceptors/sites: variety, quantity, evenings/weekends		X
Health career camp	X	
Health career exploration with high school students	X	X
Health careers fair: public health, education and equipment assets	X	X
Increased capacity of nurse preceptors through Clinical Simulation Training Conference	X	X
Job Shadowing and Health Career Exploration with high school an undergraduate college students	X	X
Marketing via Facebook & email		X
Networking & interdisciplinary opportunities	X	X
Rural health rotations for clinical students	X	X
Service learning	X	X
Student Housing options	X	X
Student stipends /Clinical student travel funds	X	X
Tutoring and mentoring of HS students by College students		X
Welcome Packets & Town Tours	X	X

B. Role of Network Partners

Tahlequah Coalition, Cherokee County	
Network Partner	Role
Baptist Collegiate Ministry	Community engagement and housing options
Chamber of Commerce	Welcome packets, housing & apartment grid, events guide, community engagement, and conference room meeting space.
Cherokee County Community Health Coalition	Communication, letter of support and community engagement
Cherokee County Health Department	Community health fair event
Cherokee Nation and WW Hastings Hospital	Clinical student training & shadowing opportunities, student educational luncheon, community health fair event, conference room meeting space, students scholarships, and College Resource Center.
City of Tahlequah	Conference room meeting space, community health fair event, and housing options for students
Connors State College	Professional development, CE, preceptor training, and meeting room space
Eastern Oklahoma Health Care Coalition	Community Campus meeting host, meeting room space, preceptor training, CC website, and CC sub-committee co-chair

Farmer's Market	Community engagement and community health fair event
Indian Capital Technology Center	Health Careers Clubs, clinical training, HOSA members with national participation, shadowing, health career exploration, Q&A with medical professionals, tours (medical school, VA Medical Center & universities), Community Campus meeting host, and conference room meeting space
Main Street Association	Community health fair event, and community engagement
NEAHEC	Assist in community engagement, health careers clubs, tours, shadowing, develop clinical sites, establish preceptors, establish Heal Career Clubs, Q&A with professionals, career development, support health career fairs, community health fair event, service learning, health career exploration, solicit business discounts, student educational luncheon, housing options, collaborate with Community Campus partners, and Community Campus meeting host.
NeoHealth	Host clinical student rotations
Northeastern State University	PPHC, health career fairs, community health fair event, service learning, and health career exploration, Community Campus meeting host, conference room meeting space, CC Chairman, and CC sub-committee chairs
OK Health Care Workforce Center	Community Campus meeting host, conference room meeting space, preceptor training, CC sub-committee co-chair, workforce development, and provide statistics & information.
Oklahoma State University, Center for Health Sciences	Sends medical students on rural rotations, hosts high school students for tours, community health fair event, Medical-Extravaganza for college students, Operation Orange Camp for high school students, Community Campus meeting host, conference room meeting space, and CC sub-committee co-chair
Oral Roberts University	Sends BSN Clinical students on rural rotations and hosts high school students for tours.
Sequoyah High School	Health Careers Clubs, service learning, shadowing, health career exploration, tours (medical school, hospital, VA Medical Center, PACE Eldercare, universities), Q&A with medical professionals, Medical Extravaganza, Community Campus meeting host, and meeting room space
Tahlequah City Hospital	Clinical student training & shadowing opportunities, student educational luncheon, community health fair event, Community Campus meeting host, conference room meeting space, and student scholarships
Tahlequah High School	Health Careers Clubs, service learning, health career exploration, tours (Medical Center, Medical School, PACE Eldercare, universities), Q&A with medical professionals, blood drive host, Community Campus meeting host, and conference room meeting space
The Drip Beverage Lab	Community health fair event & community engagement, business discounts
Vivid Salon	Town tours, business discounts & community health fair event
Young Professionals Club	Social networking and community engagement

Enid Coalition, Garfield County	
Network Partner	Role
Enid Chamber of Commerce	Welcome packets for rotating students
Enid Community Center	Allows opportunity for rotating students to volunteer at the local free clinic
Enid Medical Services	Provides housing to rotating students
Enid Regional Development Alliance	Economic development assistance for Enid.
Enid YMCA	Free passes for rotating students
INTEGRIS – Bass Baptist Hospital	Clinical student trainings/rotations, shadowing opportunities, community health fair
Northern Oklahoma College	Nursing students
Northwest Family Medicine Program	DO residency program, job shadowing opportunities
Northwest Oklahoma Osteopathic Foundation	Participates in "Enid Day" at OSU Medical School recruiting osteopathic students to Enid area, financial support of educational opportunities for Osteopathic medical residents and students, and other health professional students. Provides opportunity for rotating students to obtain free passes at the local YMCA.

Northwestern Oklahoma State University	Meeting space, nursing students,
NWOSU- Ketterman Lab	Interdisciplinary Clinical Simulation training
O.T. Autry Vo-Tech	Health career club, job shadowing opportunities,
Oklahoma State University, Center for Health Sciences.	Sends medical students on rural rotations, Operation Orange Camp for high school students. Host "Enid Day" on campus for DO students.
Rural Health Projects, Inc.	Assist in community engagement, health career exploration, health careers clubs, interdisciplinary training
St. Mary's Regional Medical Center	Clinical student trainings/rotations, shadowing opportunities, in process of renovating current building to accommodate students in need of housing during rotations in their facility.

Outcomes

368 unduplicated health professional students were identified (at the time of this report) as having been served by the Enid and Tahlequah Community Campus programs – 63 in Enid and 305 in Tahlequah. Professional students came from twenty (20) different universities, 8 of them non-Oklahoma schools. A total of sixteen (16) different health professional disciplines participated. Sixty percent (60%) of the students indicated that they would consider coming back to the community if they were offered a position. Many of the students doing rotations in the rural communities already had an interest in rural medicine, so there were some whose interest did not change; more importantly, only 5% of the students indicated that their interest in practicing in a rural community had decreased due to their experiences.

Face-to-face interviews or surveys returned via email were conducted in June 2013 with fifteen coalition members representing both communities and 2 staff persons in each community. Important narrative observations from those interviews are: Coalition members were able to explain the goal of the Community Campus Partnership for Health Professions Training, however some only vaguely or in theory. Coalition members identified not being able to collect data on all the students as a problem but could not find a solution. They were convinced that if the student was identified, they were provided meaningful services. Students were provided a 'family' away from home and made to feel welcome. Coalition members did not understand the primary hospital's lack of commitment and participation in each county. The coalition members believed that the hospitals had the attitude of "whatever we have in place it works well enough; why exert effort to change or do more?" (It might be noted that while the coalition members of both communities recognized this and other related issues, they did not take responsibility for addressing the leadership of the primary hospitals themselves in an attempt to gain their increased participation). Coalition members wanted more information about the students and project, more opportunity to interact with the students, and more tasks to do with clearer responsibilities. Coalition members believe that Community Campus cannot be successful without a strong staff presence and leadership. This project cannot be done with all volunteers. (The dilemma: both communities became dependent of the external staff supplied by the grantee organizations.)

Challenges & Innovative Solutions

Twelve potential developmental issues were anticipated when the initial grant was written and awarded. Some were addressed more successfully than others. Wherever possible, responses will reflect the combined communities of Enid and Tahlequah.

1. Purpose and Goal of Community Campus: Does the community "buy into" the project? When the grant proposal was developed and potential partners signed memorandums of understanding, interest was high. When the grant was received, and partners were brought together, several expressed surprising reservation/reluctance to follow through with participation. Some additional partners were recruited, but they did not have a firm understanding of the concept. There was some change of staff during the project, and the new staff did not have a clear understanding as well. Engaged coalition partners met with those having doubts; after a few months of seeing their level of engagement, the others became committed to the project. Time was also a positive factor in developing buy-in. Understanding of the concept was not automatic for communities and staff not familiar with the issues and needs of health professional training. It took some time to bring everyone to the same level of understanding.
2. Community involvement: Are the right people at the table? In Enid, the answer is probably not enough of the right people are at the table. In Tahlequah, the answer is that the right people are at the table. In both communities, the largest hospital has not participated fully and with commitment. In Enid, the belief is that there is not enough higher education representation on the coalition, while in Tahlequah the belief was that in the beginning, there were too many education programs represented.

In Tahlequah, the business representatives brought a great deal of enthusiasm to the project that was not present early on. In neither community, has the medical community participated as fully as it could have.

3. Economics: How important is the health care sector to the community? In both communities, the health care sector is central to the economy and the future of the area; this is widely appreciated by all. The business communities have been the strength of the coalitions.
4. Preceptors: New preceptors have been identified in both communities and new shadowing opportunities developed. In Tahlequah, a number of health care sites and preceptors that had not – would not – take students, began to do so as a result of encouragement by the Coalition. Still, the preceptors did not take an important role in the Coalitions themselves.
5. Housing availability; Is there existing/adequate housing for students? Housing was a major priority of both coalitions and both communities failed to address housing needs in a totally satisfactory manner. Many months were spent studying housing, and proposals to build dedicated transient student housing were investigated. Due to prohibitive costs, this issue still has not been solved. In Enid, a new "oil boom" with a corresponding very low unemployment rate caused all housing to be at a premium. In Enid, it is believed by some on the Coalition that so much time and effort was made to address this issue from the beginning of the CC project, and with so little to show for the work, that some initial coalition members got discouraged and disengaged
6. Interdisciplinary training: This never became a significant component of either coalition. Interdisciplinary training that is beneficial for students requires significant planning and coordination among a large number of parties – students, training programs, preceptors and community. The necessary resources could not be mustered in the time allowed by the project. Both communities did interdisciplinary activities of some kind towards the end of the project, and students in Tahlequah indicated that they would have like to have more; this goal needs its own dedicated focus.
7. Service-learning opportunities: Similar limitations for service-learning opportunities can be enumerated as for Interdisciplinary training – it takes a lot of resources. In Tahlequah, however, service learning opportunities did develop for students once the business members got involved. Community health fairs and school career fairs allowed the health professional students to interact with the community and with high school students on a fairly regular basis. A good example is in Tahlequah where Medics and Emergency Medical Technicians have trained at the Indian Hospital for years but had not ever interacted in the community. The Community Campus Coalition organized the community health fair where these professionals participated in the planning and implementation of the event. According to their faculty, this will be invaluable experience for them when they are required to organize and coordinate community disaster drills.
8. Social and civic opportunities: Without significant involvement of the medical communities, the opportunities for students to engage with social and civic groups were more limited that it should have been. There was some inclusion into community affairs, especially by the business representatives on the Coalitions, but more could have been done. The Welcome Packets prepared by both communities for incoming students included coupons provided by businesses, special opportunities like YMCA day passes, maps and community information. They were very well received by the students.
9. Health careers education: Are the local schools involved? Especially in Tahlequah, opportunities were created for health professional students to interact with the local university's health professions club (for undergraduates), with the area vocational education health career programs, and with the Cherokee Nation's Sequoyah High School science classes. Never before had these three levels of education interacted, and it appears that this will be one of the areas that will be sustained.
10. Recruitment to practice: Does the community do anything special to recruit students who come? Developing a database for providers to use at a later time to outreach to students who came to Enid and encourage their return to practice was an initial primary goal of the Coalitions. Enid and Tahlequah found that identifying all the students coming into the communities for training was a monumental task, one that neither community fully solved. Enid did develop a rudimentary database for the students they did identify, but its value will be limited due to its incompleteness. The communities appear willing to hang their success in recruiting on the quality of the rotation while the student is in the community and hope that the student will return on their own.
11. Catalyst of community health: Community Campus projects did not lead to innovative community health initiatives as originally envisioned. The actual and potential role of the business sectors in community-based training/education of health professional students may hold the best hope for new ideas in community health initiatives. Both coalitions have new business advocates with different perspectives on the world and a new appreciation for the health education role and responsibilities of their communities.
12. Sustainability: How will the Coalitions continue after the end of federal funding? The coalitions may continue at some level and for certain purposes. See Part VII below.
13. Area Health Education Center (AHEC) funding: An important challenge to the project arose during the course of the Community Campus grant in Oklahoma that no one foresaw. Prior to the start of the third year of the grant, the Oklahoma AHEC program was not funded by the state legislature, and the federal grant renewal application by the university was not submitted. This resulted in significant staff downsizing and readjustments at the two AHEC centers central to the Community Campus project, the closure of the State Program office, and the retirement of the state AHEC director who served as consultant and evaluator of the project. Staff at both grantee organizations underwent changes with moving and reassignment. The state AHEC director agreed to continue to work with the centers/coalitions as consultant and evaluator

under contract. While the AHEC upheaval significantly impacted the Community Campus projects in both communities, necessary adjustments were made and the project did not collapse.

Sustainability

A. Network Structure

The Tahlequah Community Campus voted to continue after the grant ends with the current coalition membership. During the interviews with the Coalition members at the end of the project, the overwhelming consensus was that the coalition would continue at some level. Discussions were continuing with Coalition members and other community organizations and coalitions about funding for at least a part time coordinator. Great confidence was expressed in the current Coalition chair.

The Enid Community Campus will continue to provide some services with some of the current coalition members, led by the recruiting department of one of the coalition hospitals. The business development sector on the Coalition, especially, sees the value and potential of the Coalition and expressed a willingness to continue its support. Some concern was expressed that the leadership will have to be voluntary at this point as there are no financial resources pledged.

B. On-going Services and Activities

The Tahlequah Community Campus would like to continue assisting students with housing options, town tours, welcome packages, job shadowing and student housing options. Partners would like to continue Health Careers Clubs at high schools, Indian Capital Technology Center and Northeastern State University. Partners will continue to collaborate on events such as the health careers fair, community health event, mentoring and tutoring, service learning, Medical Extravaganza, and camps. The coalition will continue community engagement of students, relationship building among coalition members, and collaboration of partners.

C. Sustained Impact

Two areas of sustained impact that seem to be clear include:

1. New personal and working relationships were developed among diverse segments of our communities. People who had never worked together before did so on common interests and through common relationships they didn't even know they had before Community Campus. One example of a serendipitous outcome was when a comment was made in a Coalition meeting by the Tahlequah City Hospital representative about a staffing need which led to a student pledging to return to the community after graduation.
2. A new understanding by business of the importance of health professional training going on in the community. The business communities are among the strongest supporters of the desire for the Community Campus Coalition to continue.

Implications for Other Communities

For community members-- including health professionals, the concept of Community Campus Partnerships (and Coalitions) for Health Professional Training is not necessarily an easy concept to understand. Take the time to explain, and then explain again.

The people who join you at the table in the beginning may not be the right ones as you begin implementation. Be willing to change and add, and do not forget the business sector. They can end up being a major supporter.

Do not try to do too much in the beginning, nor try to tackle the most difficult problem you have. Find the low hanging fruit with the most payback and accomplish those. You can't say too much for early success!

Expect the unexpected!

Identify, or begin to develop, leadership in the Community Coalition early in the process and empower the Coalition to address difficult issues with other members or sectors of their community. Do not foster dependence on grantee staff for every day operations or for dealing with community problems.

South Dakota

Yankton Rural AHEC

Organizational Information	
Grant Number	G98RH19719
Grantee Organization	Yankton Rural AHEC
Organization Type	AHEC
Address	1000 W 4th St., Suite 5, Yankton, SD 57078
Grantee organization website	www.rehps.org
Name of Workforce Development Network	Rural Experiences for Health Profession Students
Your Project Director	Name: Cheri Buffington
	Title: REHPS Program Manager
	Phone number: 605-655-1400
	Fax number: 605-668-8483
	Email address: cbuffington@avera.org
Project Period	2010 - 2013
Funding level for each budget period	September 2010 to August 2011: $199,691
	September 2011 to August 2012: $199,894
	September 2012 to August 2013: $199,994

Network Partners		
Partner Organization	Location	Organizational Type
University of South Dakota Sanford School of Medicine (USD SSOM)	Vermillion, SD	University
South Dakota State University (SDSU) School of Nursing & School of Pharmacy	Brookings, SD	University
Community Healthcare Association of the Dakotas (CHAD)	Sioux Falls, SD	Association
South Dakota Office of Rural Health	Pierre, SD	State Government
Planning & Development District III	Yankton, SD	Planning District

Community Characteristics

A. Area

Summer Experience program:
Parkston – Hutchinson County
Redfield – Spink County
Wessington Springs- Jerauld County
Wagner – Charles Mix County
Winner – Tripp County
Philip – Haakon County
Custer – Custer County
Miller – Hand County
Platte – Charles Mix County
Sisseton – Roberts County

For the Disaster Training Day and Preceptor Training Day we had attendees from all over the entire state.

B. Community description

With 85 percent of the state designated as a Primary Care Health Professional Shortage and/or Medically Underserved Area/Populations by the federal Office of Shortage Designations, SD faces current and emerging challenges related to both the supply and demand for health care professionals. Forty-seven of the 66 counties are designated medically underserved, and 11 of the other 19 counties have designated medically underserved communities. Fifty-six of the counties are designated completely or partially as shortage areas for primary medical health care.

C. Need

Our program focused on getting healthcare students out into a rural or frontier community early on in their education. Various factors influence students' beliefs about rural/frontier communities including healthcare availability, need for quality healthcare, small staff resulting in lots of call time, feeling alone, non-active community, no opportunities to be successful, high elderly population, and lower pay. By providing a positive and rewarding experience, we hope that they will be willing to go back numerous times to that community for future rotations.

Program Services	
Target Population	
Allied Health Professional Students – Bachelor's level	Nursing Students - RN
Allied Health Professional Students – Master's level	Other: Medical Lab Science
Clinical Psychology Students	Pharmacy Students
Dental Hygiene	Physician Assistance Students
Master in Social Work	Preceptors - Nurses
Medical Students – Primary Care	Preceptors - Other
Medical Students - Specialists	Preceptors – Primary Care
Nurse Practitioner Students	Preceptors - Specialists
Nursing Students - LPN	Social Work Students

A. Description

Summer Experience Program: helps place university students who are enrolled in medical, physician assistant, pharmacy and advanced practice nursing programs in a four week experience with preceptors established in rural or frontier areas of South Dakota. The students are paired together, promoting interprofessional studies, and are required to complete a community project during their experience. Students are exposed to all aspects of a rural healthcare community. The program encourages rural communities to welcome students and form strong bonds; laying the groundwork for the likelihood those students may return to work/practice in their rural community.

Disaster Training Day: One day disaster preparedness training including 11 disciplines of healthcare students from USD's School of Health Sciences and Sanford School of Medicine as well as South Dakota State University. Training includes the Core Disaster Life Support® Version 3.0 course – one of the National Disaster Life Support (NDLS) program courses provided by the American Medical Association and the National Disaster Life Support Foundation, Inc. Additional instruction includes breakout sessions in Triage, Immunizations, Anaphylaxis, Psychology First Aid, and Point of Dispensing (POD) assignments.

Preceptor Training: One day training inviting healthcare professionals (physician, physician assistant, nurse practitioners, and pharmacists) to learn and/or expand their knowledge on the challenges and rewards of being a preceptor for students in rural settings. Not only will professionals foster student development, but the connections made could aid medically underserved areas in South Dakota.

B. Role of Network Partners

Each partner was expected to attend quarterly meetings and participate in grant funded required reports. Additionally, each partner encouraged their organization/program/institution to support and/or provide knowledge and expertise to REHPS programs. Each member played a role in our programs and was able to offer wonderful insight; making our programs truly successful.

Outcomes

Summer Experience Program:
Students enrolled in the Summer Experience Program were given a pre-and-post survey to gauge their likeliness, comfort, and interest in rural healthcare. For 2012 we found the following:

- 92% of students either strongly agreed or agreed that after their 4-week rural experience they were more likely to consider rural healthcare for their future profession. Prior to their experience students, 50% of students agreed and 50% were neutral about considering rural healthcare.
- 100% of the students felt they had a better understanding of rural healthcare and felt more comfortable in the rural healthcare setting because of the program.
- 75% said they either strongly agreed or agreed that the facility they were placed in would be a place they would consider for future employment.

We have also had a 283% application increase from our first year for students wanting to be a part of the program. To put this into perspective, over 1/3 of the students in the pharmacy program applied, 1/5 of medical students, and half of doctor of nursing practice students. In just 3 short years, all three of our midlevel (Physician Assistant) students have chosen to go back to a rural community in some capacity. Out of 3 pharmacy students eligible for job placements, 1 of them has chosen rural with the other two still waiting to be placed. Additionally, we have had students go back to the REHPS communities five times since their initial REHPS experience.

Disaster Training Day:
We have trained over 1,000 healthcare students from 11 different disciplines in disaster preparedness. We have certified over 200 students in Core Disaster Life Support. Furthermore, we have nine National Disaster Life Support certified trainers.

Preceptor Training: We have trained around 40 healthcare providers in the three years of our program. The impactful part is that many of the providers are from rural areas and have gained educational information/training on having students. Furthermore, many providers are from communities that would like to join our REHPS program. By training providers and preceptors first, the Summer Experience Program will be a smooth transition when they are selected to be a REHPS Summer Experience Community.

Challenges & Innovative Solutions

One of the challenges of starting a new program is just getting our name out. The questions of: “Who are you?” “What do you do?” or “Where are you from?” were very common in the beginning. We still get them from time to time, but we have definitely made a positive and lasting name for ourselves. People now know who we are: REHPS; what we do: provide students with a positive experience in a rural or frontier setting and promote inter-professional education and training; where we are from: Yankton; we serve the entire state of SD!

Another challenge that has turned into a positive is getting communities on board. The first three communities that we worked with during our first year were wonderful. The second year was a bit tougher to get the communities to fully understand the idea of interprofessional education/training. Student blog became a major factor that contributed to better understanding of interprofessional training. Once facility or department heads read and understood our reasoning behind the idea, it has become a much easier sell to communities. Now we have communities contacting us, asking how they can be a part of our program. This does relate to the first challenge listed as simply getting our name out; once individuals hear such positive comments about our program from all parties involved, it has made our program one that is held in high regard.

Sustainability

A. Network Structure

Our network will continue. Our REHPS Advisory Panel will stay in place and all members as listed above will continue to serve. The program will be run and staffed by the REHPS Program Manager.

B. On-going Services and Activities

The Preceptor Training Day will continue to be offered but will be absorbed by holding training in conjunction with the South Dakota Academy of Family Physicians conference. Two of our previous preceptors have taken over duties and will continue to train future preceptors throughout SD.

The Disaster Training Day will continue with the help of funding through the South Dakota Department of Health. Because of our partnership/relationship through our advisory panel, they have written in our Disaster Training Day as a grant for us each year. We will continue to run and organize the event, with the funding coming from SD DOH.

The Summer Experience Program will be sustained through various avenues. Outside funding from diverse grants, including community specific grants, will be utilized along with sponsorship of students from major health systems and local service groups. Our organization will also look to add disciplines and more communities, allowing avenues for diverse funding.

C. Sustained Impact

One long term effect on our communities is the interprofessional relationships that have evolved. By having two students from different disciplines shadowing/observing all areas of healthcare, it has increased awareness and understanding of the importance of interprofessional relationships.

Also, communities now understand the importance of bringing healthcare students to their facility early on in their schooling, promoting the opportunity for these students to return for another clinical/rotation. Facilities are able to build relationships and form connections with these students during their four weeks, resulting in an opportunity for students to come back to the facility/community.

Another long term effect is the way in which the facility works with the community to welcome new students. Students are given a tour of the facility and as well as a tour of the town, local establishments, points of interest. They are also provided with a community packet – many times including gift cards to local restaurants and businesses.

Implications for Other Communities

By laying the ground work and finding out what does and doesn't work, our programs are at a point where they can easily be duplicated or altered to fit a specific community/area. With a push for healthcare providers nationwide, our Summer Experience Program can easily be integrated with the disciplines we used, or a combination of others. Inter-professional training in education is also at the forefront of universities, so the Summer Experience Program offers an easy to manage concept that gives hands-on training and education to healthcare students. It also breaks down initial barriers early on in schooling, promoting collaboration for the future. Through experience with various communities and surveying the students, we have used their feedback to tailor the program to be manageable, yet unique to each community.

The DTD is a program that requires a lot of prep work, but is straight forward with the schedules, planning, and completion. We have a system in place that includes organizing conference calls and work assignments that need to be completed prior to the day. With numerous years of experience, the day is completed effortlessly and is readily available to be implanted.

Tennessee

Hickman Community Healthcare Services Inc./Saint Thomas Health

Organizational Information	
Grant Number	G98RH19711
Grantee Organization	Hickman Community Healthcare Services Inc./Saint Thomas Health
Organization Type	Hospital
Address	Saint Thomas Health, 4220 Harding Road, Nashville, TN 37205
Grantee organization website	www.sths.com/networkservices
Name of Workforce Development Network	Regional Network Services
Your Project Director	Name: Amy Howard
	Title: Director
	Phone number: 615-222-4840
	Fax number: 615-222-4897
	Email address: amy.howard@sth.org
Project Period	2010 – 2013
Funding level for each budget period	September 2010 to August 2011: $200,000
	September 2011 to August 2012: $200,000
	September 2012 to August 2013: $200,000

Network Partners		
Partner Organization	Location	Organizational Type
(TRP) Tennessee Rural Partnership	Nashville, Davidson, TN 37205	AHEC
(CoSCC) Columbia State Community College	Columbia, Maury, TN 38401	College
(HOSA) Health Occupation Students of America	Nashville, Davidson, TN 37205	School

Community Characteristics

A. Area

Decatur	Lewis
Hardin	Maury
Hickman	Perry
Lawrence	Wayne

B. Community description

The counties we serviced were both highly populated and labeled as low socio-economic counties with health conditions of high cardiovascular and stroke disease. The lack of health care services provided to people in these communities creates a disparity in health care services required to provide the basic healthcare needs of the people of these communities as they relate to cardiac and stroke health.

C. Need

Rural areas, especially the eight counties targeted through this grant, have found it very challenging to staff healthcare positions such as nurses and emergency medical services. The grant was developed to increase awareness of opportunities for employment in these rural communities.

Program Services	
Target Population	
Allied Health Professional Students – Bachelor's level	Nursing Students - LPN
High School Students	Paramedics/EMTs
Middle School Students	Preceptors - Nurses
Nursing Students - RN	

A. Description

As part of the project's implementation, students in Health Science programs at Columbia State Community College and student members of HOSA were offered unique clinical learning experiences closer to home, eliminating the time and cost of travel to an urban facility. Current rural healthcare professionals also benefited from educational offerings in their home communities, increasing retention in rural healthcare facilities. The following are areas of focus as a result of the Workforce Development Grant.

Clinical Simulation

The program has implemented innovative learning strategies through the purchase of clinical simulation equipment for students to practice and perfect procedures and emergent scenarios. Grant funding was used to activate Tennessee's only Mobile Simulation Lab that acts as an emergency medicine simulation lab on wheels. The lab, which features realistic emergency room and ambulance settings, takes a realistic emergency medicine approach to nurses, paramedics, and other allied health specialists and students across the mid-state to Tennessee's rural EMS and hospital systems. The Mobile Simulator includes Sim-Man®, a 3G patient simulator and is set up in an environment similar to an emergency room stocked with all of the proper equipment needed for emergent patient care, allowing students and healthcare professionals to practice realistic emergency medical situations in a safely simulated environment.

Distance Learning

The project has also funded the expansion of distance learning services initiated by Columbia State to offer health education to students closer to home. Columbia State was equipped with broadband capabilities in each of their satellite campuses and in several high schools throughout the region that provide a "virtual classroom" for students. In September 2011, a high-definition mobile videoconferencing system that serves as a virtual classroom was purchased and later installed at Perry County High School. The interactive virtual classroom sessions allowed physicians and other health professionals to broadcast lectures from a main location and facilitate a live question and answer forum without ever leaving the hospital.

These capabilities also allowed Saint Thomas Health's healthcare professionals to reach a larger base of students and the larger community with life-saving educational programs about chest pain, stroke, heart failure and other medical issues. Expansion of this initiative included installation of a virtual classroom at Perry County High School in Year Two and East Hickman High School in Year 3 as well as the plan to incorporate community education sessions through use of this technology.

Current Healthcare Provider Advanced/Continuing Education

The project assists with coordination of resources that contribute to advanced and continuing education of rural health care providers. These educational programs aid in fostering the development of a highly skilled rural workforce.

Critical Care Paramedic Course - provided annually by Saint Thomas Health. This course focuses on the concepts, theories and strategies for the Paramedic in the management of the critically ill patient. Critical thinking, problem solving along with legal and ethical principles are incorporated into the care management of the patient and interaction. Clinical experience, independent and group work are utilized to demonstrate application of knowledge, critical and analytic thinking. The course included didactic presentation, skill lab simulation and clinical setting observations/participation. At the completion of the course, the Paramedics had formed a knowledge base and clinical exposure that enables them to transport the patient requiring advanced, critical care therapies. The Saint Thomas Health Critical Care Paramedic Course was the first of its kind in the state and continually maintains the highest pass rate.

Ventilator Course (for Paramedics) - This course is designed to provide instruction for the use of a Transport Mechanical Ventilator to licensed Paramedics as approved by the EMS Board of the State of Tennessee. Paramedics were unable to transport a patient on a ventilator until they completed the required education, which included either this course or the Critical Care Paramedic Course. Without the education, an already short-staffed Emergency Department had to send a nurse or respiratory therapist with the transported patient. The course was designed to guide the Paramedic toward applying critical concepts during patient care and ventilator management during transport. Upon completion of the course, Paramedics were able to manage a mechanical ventilator

for transport, troubleshoot an automated transport ventilator, access and manage patient complications during transport, and relay ventilator terminology as pertinent for the transport device.

Competencies – EMS and Nursing - These events provided for the practice of nursing and emergency medical services skills in a controlled setting in order to gain proficiency for delivery of patient care in the clinical setting. In a controlled setting, the student practiced and developed advanced psychomotor skills relating theoretical knowledge to the appropriate clinical skills. The focus was on critical thinking for appropriate intervention in clinical scenarios.

Student Engagement
Allied health students at Columbia State Community College have incorporated into their curriculum, the Mobile Simulation Lab into on-site learning. The lab visited the campus on several occasions for skill checks and emergency drills with the students. Students also participated in health-related community events. HOSA students from six rural counties participated in the 1st and 2nd and 3rd Annual HOSA Symposium held by the Network in November 2011-2013. The Symposium gave students a first-hand look at many different health career options including nursing, medical imaging, emergency medical services, and flight nursing/Para-medicine, among others...

Advisory Board
As proposed in the original application, the Advisory Board for the program has been formed and consists of representatives from Hickman Community Health Services Leadership, Education and Community Program Directors, Columbia State Community College leadership and faculty, Saint Thomas Health Clinical Education Director, the Project and Network Director and Clinical Workforce Development Coordinator. Aside from regular meetings between each partner site and project staff, the Board meets quarterly to monitor grant-related activities.

Tennessee Rural Partnership (TRP)
TRP is another HRSA Workforce Grant Recipient that we have partnered with to meet our network goals. TRP works with recruiting physicians in the rural communities. We have worked with Allied Health, Nursing, and EMS professionals. We collaborated with TN HOSA (Health Occupation Students of America) for conferences, workshops, competitions and the TRP STAR AWARD. The STAR Award was given to the top two students wishing to become future physicians.

B. Role of Network Partners

Network partners included Hickman Community Healthcare Services, Inc. (a member of Saint Thomas Health), Columbia State Community College, the Tennessee Association of Health Occupation Students of America (Tennessee HOSA) Tennessee Rural Partnership, Air Evac (air transportation services) Health Regional Network Services is a Network resource providing clinical and administrative expertise on an in-kind basis for the project.

The Hickman Community Healthcare Services- This was the grant originating hospital facility

Columbia State Community College- Responsible for placement of nursing and allied health care clinical rotations in rural facilities.

Health Occupation Students of America- This national club in secondary and post-secondary schools provided opportunities through their educators. We utilized the clinical and the competitive events programs to reach out to over 7000 students state wide including the 8 counties we prioritized.

Saint Thomas Regional Network Services- This entity hired a clinical workforce development coordinator to oversee the WF Grant. The WF Coordinator carries out the requirements of the grant.

Air Evac- The Air Evac partner provided additional certified educators needed to complete the instruction of the Ventilator Transport Class. They also provided avenues of education at a higher level to both EMS and students in our rural areas.

TRP- This HRSA Grant recipient provided us with a partner to reach out in rural communities with students and physicians to provide clinical internship, community education in rural facilities for placement during their residency and training.

Outcomes

We have been both very productive and very fortunate to have the partnerships that we have had throughout the grant period. In our efforts to service these rural communities, we were able to reach out to educate the communities through fairs, presentations and delivery of educational materials. We also were able to reach out to over 7000 HOSA students to provide educational resources for study and to utilize in their HOSA community programs of service to the public regarding stroke and cardiac education. The HOSA students were able to provide "hands-on" health assessments by doing vital signs and distributing materials for the public to increase their overall awareness of cardiac and stroke events. We provided avenues of education through distance learning activities, E-portal education that included Blood Borne Pathogens, Occupational Safety and Health Association, Health Information Patient Privacy Act, as well as stroke and cardiac education.

Through the grant efforts, we have been successful in educating over 200 EMS Paramedics and providing Ventilator Transport Certification across middle Tennessee. College educators were able to utilize our materials, distance learning education and our E Portal for additional materials and training activities that promote rural health education.

The full benefits and long-term impact of the grant on the counties serviced will not be known for many years or until the student's placement in careers have been met. Through conducting many surveys, we have been able to conclude that we have increased the awareness and promoted rural placement of health professionals. In a survey given, 89% of the students gave us very positive feedback regarding their desire to work in their hometown health care facilities.

Challenges & Innovative Solutions

Challenge:
Although the grant was adequate in providing resources, we would occasionally find challenges in not having enough manpower to implement the community outreach/educational demand for our services. We were unable to attend to the number of request we had for the Sim-man clinical education and had to limit it to the areas of our main focus. We also found we were in need of a van or ambulance and a stretcher to place our Sim-man on to prevent injury to him and to be able to easily commute to and from areas we visited.

Solution:
Although we respond to every request for our services, we were able to mail out helpful resources to those organizations requesting our services. We were able to get a stretcher for our Sim-Man and we are now in the process of obtaining an ambulance that we can utilize for our travels. This will help raise awareness about our program and more effectively market our activities within the community.

We had a very large number of requests from Tennessee Educators for their HOSA clubs to provide educational resources for public education of stroke and cardiac issues. We were able to attend and provide assistance to many of those requests. We found that the programs were so large that we had to limit our resources to those 8 counties we dedicated the grant funds toward. After we met the demands of the 8 counties, we then shared resources on a first come first serve basis to other rural communities.

Sustainability

A. Network Structure

The network will continue to provide services in the following areas utilizing the partnerships that we have created.

HOSA Partnership- Through this partnership, continuing education for the teachers will be provided. Through the use of the E-Portal System, both the students and the teachers will benefit from utilizing our health stream videos and testing procedures. The E-Portal system maintains a transcript of student testing for them to retrieve for their passports at completion of the program.

TRP- We will continue to be the avenue that Tennessee Rural Partnership utilizes for their Saint Thomas Award Recipient scholarship. We will provide them with assistance in the selection process of the scholarship.

CoSCC- We will continue to be the liaison between CoSCC, high schools and our CME department in providing distance learning services.

EMS Education- We retained a position for an EMS liaison for our rural communities. This liaison will partner with Air Evac Services to provide future education.

AIR EVAC- Air Evac provides us with educational materials pertaining/relevant to aeromedical evacuation of patients, and assistance as needed.

B. On-going Services and Activities

EMS Education

- Ventilator Transport Class – Grant materials previously purchased will be continue to be utilized.
- EMS-Clinical Sim Man-Training Scenarios – these will continue as a result of the purchase of the Sim Man.

APP- Development of an application (App) for IOS and android systems

- We purchased an App that will be utilized by all EMS services for reference on their protocols and procedures as well as tables for calculation of drug dosages as needed

HOSA

- Education to continue primarily to educators through HOSA conferences, educational seminars and competitive events.

D/L Distance Learning Education

- Saint Thomas Health CME Department

E-Portal Training

- Opportunities managed through our department

COSCC

- Stroke and Heart Education
- Sim Man Competency procedures and emergency scenarios surrounding trauma, medical and other emergencies will be done in the rural EMS and hospital facilities as needed.

C. Sustained Impact

We are hopeful that the long term effect on these communities as a result of our Rural Health Workforce Development Grant Program will be everlasting and very beneficial.

The EMS app provides emergency personnel with the quick access they need for medication delivery, protocols and procedures as well as other valuable resources they need to stay current in their skills.

HOSA, TRP and Saint Thomas Health have created a union that opens doors for all students across the rural curriculum to be able to participate with tertiary hospitals in clinical education. Through the grant, we have opened doors for the students to rotate with physicians in rural hospitals. Students have an increased awareness of the needs of rural health professionals in their areas and, as a result, plan to complete their education needed to retain employment in these areas.

The Workforce Grant funds allowed us to create a Ventilator Transport class for EMS. In implementing the course for medics, we found a need for nurses to be trained as well; we presented and were awarded the permission we needed to have ER nurses attend the class for CEU's. We then applied and received permission for these CEU's through the Tennessee Board of Nursing. This builds the class and makes it more marketable. As a result, it is very likely that the numbers of enrollment will increase.

The E-portal purchase has proven to provide a great resource for EMS and high school educators. In a poll, 98% of the EMS directors surveyed felt this would be utilized on a regular basis. Through the E-portal we can provide additional educational resources and adapt them to the specific needs for each facility. For a basic fee, this will maintain sustainability of the E-portal.

Implications for Other Communities

We have been very successful in creating a model program. However, we did not do it alone. If we had stood alone, we may have not been as successful. Instead, we chose to utilize the resources around us; we found that partnering with others like ourselves gave us strength to reach our efforts more effective. For example, by utilizing HOSA's contacts, teachers, students, EMS outreach, Air-Evac

transportation, TRP and the hospital facilities around us, our ability to reach larger populations as a team was trifold to that of a single entity. Through these collaborative efforts, we have seen an increase in the awareness of cardiac and stroke disorders and have developed an awareness of the need to have health professionals practicing in their own rural communities.

A very important part of achieving this success is educating oneself to the community needs. For example, we attended monthly state board meetings, conferences and events in order to meet and greet the leaders we needed to create critical relationships to open future doors in our target areas.

We found that establishing professional relationships with others, treating them with respect, listening to their needs and then addressing them, creates a strong bond and developed a strong voice behind our strategy. This same principal was carried out with HOSA, EMS and in community relations. If these basic procedures are followed, there would be little reason why they would not work in other communities in order to replicate a process similar to ours.

We utilized our funds to provide materials such as Distance Learning Carts, Mobile Apps, E-portal education and resource materials that provided links from the rural facilities to the tertiary facilities, physicians and high level education to which they would not otherwise have access.

Tennessee

Tennessee Rural Recruitment and Retention Center, Inc.

Organizational Information	
Grant Number	G98RH19713
Grantee Organization	Tennessee Rural Recruitment Retention Center
Organization Type	Non Profit Private Organization
Address	80 North Church Street, Camden, TN 38320-2019
Grantee organization website	www.tnrp.org
Name of Workforce Development Network	The Tennessee Rural Partnership
Your Project Director	Name: Mary Ann Watson
	Title: Network Director
	Phone number: 731-548-4454 or 901-569-0172
	Fax number: 731-548-4233
	Email: maryann.watson@tnrp.org
Project Period	2010 - 2013
Funding level for each budget period	September 2010 to August 2011: $200,000
	September 2011 to August 2012: $200,000
	September 2012 to August 2013: $200,000

Network Partners		
Partner Organization	Location	Organizational Type
Quillen College of Medicine, ETSU	Johnson City/Washington/TN	University
Meharry Medical College	Nashville/Davidson/TN	University
Univ. of TN Health Science Center, College of Medicine	Memphis/Shelby/TN	University
Vanderbilt University College of Medicine	Nashville/Davidson/TN	University
Tennessee Department of Health	Nashville/Davidson/TN	State Government Dept.
Tennessee Primary Care Association	Brentwood/Williamson/TN	Non-Profit Organization supporting federally subsidized
Tennessee Hospital Association	Brentwood/Williamson/TN	State Hospital Association
The Rural Health Association of TN	Murfressboro/Rutherford/TN	Non-Profit advocacy association for rural health activities in TN

Community Characteristics

A. Area

This Rural Health Workforce Development project served these communities/counties: Covington/Tipton, Harriman/Roane, Lafayette/Macon County, Union City/Obion, Paris/Henry, Savannah/Hardin, Trezevant/Carroll, Greenfield/Weakley, Camden/Benton, Tullahoma/Coffee, Lexington/Henderson, Rogersville/Hawkins and Summertown/Lawrence.

B. Community description

The communities where the rotations/community activities for medical residents and physician assistant students take place are rural communities with limited access to primary care due to population make-up, lack of available providers, and economic and social conditions that limit the ability of the people living in these communities to get needed care. The majority of the communities are also attempting to recruit primary care providers.

C. Need

This network was developed to provide opportunities for health care professional students and medical residents to rotate with community preceptors, introducing them to opportunities available within the rural and other underserved areas within the state. In addition, the network has worked with the medical schools and other health professional schools to educate their students/trainees about rural and underserved opportunities, assisted communities to match primary care providers to available opportunities, and provided incentive programs to encourage clinicians to live and practice in shortage areas.

Program Services	
Target Population	
Allied Health Professional Students – Bachelor's level	Physician Assistance Students
Allied Health Professional Students – Master's level	Physicians in Residency Training
High School Students	Preceptors – Primary Care
Medical Students-Primary Care	Preceptors – Other
Nurse Practitioner Students	

A. Description

The Tennessee Rural Partnership facilitated rotation opportunities for health professions students and medical residents to complete rotations in rural areas and to introduce them to rural opportunities. Utilizing the "pipeline" approach, the network introduced high school and college students to educational opportunities in health care professions and incentive programs that would assist with the costs of obtaining an education in a health care field. These pipe programs included the Community Health Educational Experiences for Residents and Students (CHEERS) and the TRP STAR program (a joint program with another Tennessee Workforce Grantee (St. Thomas Hospital System) to encourage high school participants in HOSA chapters across the state to participate in shadowing experiences.

B. Role of Network Partners

All of the partners were represented on the Board of Directors and provided guidance for the organization. Other roles included:

- The four medical schools provided access to the medical residents which enable TRP to introduce the residents to rural rotation opportunities and to help place them in rural practice opportunities within the state.
- TRP's partnership with the Tennessee Primary Care Association (TPCA) was valuable as it provided access to the members of TPCA (community health centers whose clinicians increase the pool of preceptors for rotations for advanced practice nursing and physician assistant students and medical residents). This partnership provided the newly formed CHEERS program which increased interaction with the advanced nurse practitioner and physician assistant programs within the state.
- The Tennessee Department of Health served as a resource for placement activities and had rotation opportunities in their 54 full-scale primary care clinics across the state. Additionally, they partnered with TRP for joint activities such as a weekend community activity that took place at an FQHC/Health Department/VA CBOC Clinic during early September 2013.
- The Rural Health Association of Tennessee (RHAT) was a primary advocate for the need to establish an entity such as TRP within Tennessee and was a major leader in getting CMS approval to utilize funding previously allocated to the medical schools for the stipend program currently administered by TRP. TRP participates and shares network program information in their regional meetings (in each division of the state) which provided access to other communities recruiting clinicians and to providers serving as potential preceptors. The network participated in and supported their annual yearly conference where medical students and residents had the opportunity to interact with rural communities. RHAT will continue to serve as an advocate for utilization of TRP's services within the communities where they have a presence.

Outcomes

Opinions expressed by the students and residents who rotated to the rural communities validated that rural experiences increased their awareness of opportunities offered by rural practice and living. Even though the majority of the medical residents and students who

completed rotations have not completed training, three of the residents completing rotations accepted employment in rural communities through the efforts of TRP. Two of the three indicated that they had not considered a rural practice prior to completing a rural rotation.

Interactions with the students and trainees and communities within the state have resulted in 303 practice opportunities and 235 candidates who are registered in the network database for possible matches for future placements. Since 2007, TRP has placed 70 clinicians in rural or urban underserved areas and awarded 63 stipends which provided funding during school or training in exchange for a year-for-year service payback. In the past few months, the level of participation by communities and candidates indicates that the relationships built through the network has increased participation and made the logistics of the rotations and community communications less complicated.

Challenges & Innovative Solutions

A major challenge involved navigating the "academic" system for obtaining volunteer faculty credentials for community preceptors that were acceptable to the accrediting bodies for the training programs and ensuring adequate liability coverage for offsite rotations.

It was challenging to educate the residents about the rotation opportunities. It required building trust with them and their program leadership to get them to reach a level of comfort outside their regular education environment (regular continuity clinics).

The new Duty Hour Policies implemented by ACGME made it more difficult for medical residents to schedule off-site rotations. The network continued to work with the schools to shorten the process for faculty appointments and identified a source of professional liability coverage for residents from outside of Tennessee who would like to do rotations within the state.

The network educated the Board and TennCare that financial incentives should be offered to residents training outside Tennessee who have ties to Tennessee and want to return to Tennessee to practice. Stipends are now available to residents training outside of Tennessee who will return to practice in the state.

Another major challenge for the TRP involved a total restructuring of the organization that began in the middle of the first year of this grant. Basic operating funding previously provided by the state's managed care program was eliminated; the funds were restored but the new funding mechanism resulted in a total reorganization with TRP becoming an operating subsidiary of the Tennessee Hospital Association. The negotiations for the reorganization took approximately nine months to complete. During this time, the network was unable to schedule rotations while the schools and training programs were in the scheduling process. During the last year, additional resources were available through THA to continue the network's original program goals and to add opportunities for advanced practice nursing and physician assistant students.

Sustainability

A. Network Structure

This Workforce Development Network will continue and all of the original partners will continue to participate. The operating structure will continue since TRP is an operating, non-profit entity. The Board of Directors (which includes representatives from the network partners) will continue to direct the organization, and the current staff will continue. There is also the possibility that additional staff may be added.

B. On-going Services and Activities

TRP plans to continue to facilitate rural educational opportunities for students and medical residents. The exact amount of funding available for support of the rotations (travel and preceptor payments) may not continue at the current level and the network is currently finalizing a Sustainability Plan in order to prioritize and fund future program activities. To date, 46 medical residents and physician candidates completed rotations since the beginning of this grant. Additionally, the network plans to continue the "pipeline" programs, CHEERS and STAR (shadowing experiences for high school students in conjunction with local HOSA chapters) although the size of the programs has not been finalized.

Strategically, the network will continue communication regarding the need for improved access to primary care in Tennessee. The relationship with the medical schools will continue which is anticipated to provide continued funding for rotations. TRP will continue to support the residents by educating the program leaders at the medical schools regarding the value of allowing residents to be granted time away from their core programs to participate in rotations. The oversight provided by the Tennessee

Hospital Association and access to support activities (accounting and IT) will provide stability for TRP. TRP is pursuing potential grant opportunities which will provide additional support for continued and new activities. The Board is currently discussing possible revenue sources including use of a data portal which has been developed to provide valuable information to communities regarding their future manpower needs and the economic impact of health care within their regions.

C. Sustained Impact

The major long-term effect on the communities served by the network has been the "formal" development of the Workforce Network itself which has joined organizations that had not previously worked together so effectively. All activities of TRP identified in the Business and Action Plans are now considered "network development activities." Through effective partnerships, much duplication has been eliminated and better communication enables all entities with similar missions of improving access to primary care to share resources and promote the activities of each partner. The network's placement activities have resulted in 11 providers who have already accepted employment since 1/1/13 in rural or underserved areas through the efforts of TRP and community visits including 235 practice opportunities identified and in the network database for matching with appropriate candidates. The network is growing and improving the opportunities for recruitment and retention of primary care providers to areas that previously had little hope of attracting clinicians because they could not afford the fees of proprietary recruiters. (TRP services are free to the clinicians and communities.) When communities are open to trainees in their health care facilities, it helps them to see that recruitment is a "village" activity and goes beyond the local hospital.

Implications for Other Communities

TRP's community outreach activities have resulted in the identification of practice opportunities for the graduates of educational programs and residency training programs who previously had no information to utilize in selecting a practice location. It is very apparent that personal visits to schools and training programs create interest in network programs and increase the number of candidates interested in rural rotations and underserved placements within the state. It is important to get the leadership at the medical schools to "buy in" to encouraging their graduates to consider rural opportunities. Currently, the network's stipend program has become so competitive that new, more comprehensive metrics are being developed to select the best qualified applicants that are the best matches for community openings.

TRP has definitely determined that a successful network will include the schools and training programs as they are vital to the success of programs and activities that introduce students/trainees to rural culture. With the turnover at the schools, there is a need for continued contact and education of the individuals that have direct contact with the students and residents. TRP is planning a retreat for the primary care residency program coordinators in the fall to educate them about the mission and services of TRP as well as to get their input into how to best interact with the residents.

Challenging focus areas have been the education/orientation of the preceptors and development of a unified "rural" curriculum. Future plans include web-based training for preceptors and helpful information on the network's newly updated website regarding rotation opportunities and other "pipeline" activities available for high school and college students.

Virginia

St. Charles Health Council, Inc.

Organizational Information	
Grant Number	G98RH19720
Grantee Organization	St. Charles Health Council, Inc., d/b/a Stone Mountain Health Services
Organization Type	FQHC
Address	185 Redwood Avenue, Suite 102, Pennington Gap, VA 24277
Grantee organization website	N/A
Name of Workforce Development Network	Behavioral Health Internship
Your Project Director	Name: Malcolm Perdue
	Title: President and CEO
	Phone number: 276-546-5310
	Fax number: 276-546-5469
	Email: mperdue@stonemtn.org
Project Period	2010 - 2013
Funding level for each budget period	September 2010 to August 2011: $200,000
	September 2011 to August 2012: $200,000
	September 2012 to August 2013: $200,000

Network Partners		
Partner Organization	Location	Organizational Type
Radford University	Radford, Montgomery, VA	University
East Tennessee State University	Johnson City, Washington, TN	University
St. Charles Health Council, Inc.	Pennington Gap, Lee, Virginia	FQHC

Community Characteristics

A. Area

This Rural Health Workforce Development project served these counties in Virginia: Lee, Wise, Buchanan, Dickenson, Russell, Washington.

B. Community description

The primary factors that influence life in the network's service area are an aging population, high prevalence of chronic diseases (diabetes, cardiovascular, cancer, etc.), high unemployment rates, high rates of uninsured, high incidences of depression and substance abuse, and the Appalachia culture of the residents. Behavioral health services have traditionally been extremely hard to access due to cost and a low number of behavioral health providers in the communities. Residents often must travel long distances to access behavioral health providers, adding yet another stressor to an already stressed economy. Behavioral Health Provider recruitment has been traditionally difficult due to the very rural region with limited facilities for shopping, entertainment and family activities.

C. Need

The need that this program was designed to address is three-fold. First, there is a great need for behavioral health services within the population of the area due to chronic disease rates, substance abuse rates, and the stressors of an economically depressed region which is rural and often isolated in nature. Second, there has been a shortage of behavioral health providers in the region, making access difficult from the aspects of travel time and cost, long wait times for appointments, and costs of accessing behavioral health care. Third, two universities in fairly close proximity to the rural Appalachian communities of southwest Virginia are focusing on the integrated behavioral health model in their psychology programs and have been faced with few choices for internships in rural areas for their students. Additionally, social work students graduating at a Master's degree level in the Commonwealth of Virginia must complete an additional 3,000 hours of practice time in order to become licensed clinical social

workers. Many of these students were unable to locate practice sites where they could obtain these hours while working to support families, educational costs, etc.

Program Services	
Target Population	
Clinical Psychology Students	Social Work Students

A. Description

This Rural Health Workforce Development grant program has resulted in four Clinical Psychology internships completed with an additional two internships to be completed in the upcoming year. Of the four internships completed, three of the interns have been retained to practice through Stone Mountain Health Services. Additionally, seven social work students have completed Master's level internships with two of these being retained and currently working on their hours for licensure.

An additional Clinical Psychologist was hired as a direct result of the grant program. One prospective intern who completed his internship at another site (APA site) returned at the end of his internship, seeking employment as he wanted to work within the network's internship program.

A Licensed Clinical Psychologist (previously working with this program as faculty) has been hired as the Director of Behavioral Health Services and a Psychiatric Nurse Practitioner has been hired to work with the program and assist with treatment and med management.

Each year, the psychology interns attended state, regional and national conferences. Several of them have presented the Stone Mountain Health Services internship program at these meetings. New programs within Behavioral Health have been explored as well as exploration of specific needs in the area by the interns and graduates. This has resulted in identifying the area of behavioral health testing as a huge need. A psychologist (completing internship elsewhere) who has studied testing intensively is currently being interviewed for possible employment with Stone Mountain Health Services to address this need.

B. Role of Network Partners

The St. Charles Health Council, Inc., d/b/a Stone Mountain Health Services (SMHS) initiated the planning of the Workforce Development grant program in response to a community need for services and difficulty locating providers to meet this community need. SMHS has furnished the sites for internship training and has accepted accountability for the grant funding and reporting.

Radford University has been responsible for the didactic supervision of students at a local site one day per week for the past three years. Additionally, the Radford faculty member created the policy and procedure manual for the psychology interns utilizing APPIC and APA guidelines. The program became APPIC listed in 2012 and went through the first APPIC matching for interns in late 2012 and early 2013.

East Tennessee University has been responsible for clinical supervision of psychology interns one day per week on site for three years. The faculty member working with SMHS has been instrumental in implementing the integrated behavioral health model and brought past rural experience to the SMHS program.

Both ETSU and Radford have worked with students to identify those who are eligible for internship and who were interested in the Workforce Development Grant Program as a placement site. Faculty from both universities worked to initiate internship applications, review them, and interview them as a team (a university faculty member from each university and a SMHS administrative member). Both universities talked with the MSW students in social work and/or counseling and worked with SMHS to set up interviews for those students interested in the internships.

Faculty from the two universities conducted the clinical psychology interns' clinical performance evaluations. Both worked with SMHS to evaluate other aspects of the interns' performance evaluations.

Outcomes

Stone Mountain Health Services now has four Licensed Clinical Psychologists on staff with a fifth expected to take the licensure exam in September 2013. Additionally, the organization is negotiating with a sixth clinical psychologist for a position doing predominantly

testing, who will take the licensure exam in fall 2013. The internship program generated 2,200 patient encounters during the first year of the program. SMHS also currently employs two Licensed Clinical Social Workers (LCSW) and one MSW intern in social work. The organization is strategically placed to continue the internship program utilizing SMHS staff to precept and supervise interns in the future. A Psychiatric Nurse Practitioner now works with the behavioral health staff to assist in treatment and med management. Two more Clinical Psychology interns are expected to complete their internships in 2014. Access to behavioral health services has greatly improved in the region as a result of the program, with services now available in all seven counties of the SMHS service area with minimal wait times for appointments. Behavioral health testing (psychological testing) will be available in the near future in a region where it has not been readily available in the past. All services are available on a sliding fee scale for the uninsured or underinsured residents of the area. There are internships available within the region for students focusing on integrated rural behavioral health.

Challenges & Innovative Solutions

The first challenge the program met was in year one when the network was one psychology intern short for the program. Faculty from Radford University spread the information about the internship among colleagues and three applicants from other universities were interviewed. One of our first interns to complete the program and accept employment by SMHS was this graduate of Georgia Southern University.

Radford University moved their Social Work program from a neighboring county back to the campus of Radford University in Radford, VA. This move significantly impacted the social work interns; however, East Tennessee State University picked up the additional internship spaces with their students.

APPIC listing and APA accreditation were minor barriers to filling the internship slots for psychology. The network met the challenge by working through the requirements for APPIC listing (met in 2012) and is the recipients of a grant to help fund APA certification, which is currently being pursued.

Sustainability

A. Network Structure

Stone Mountain Health Services (SMHS) expects to continue the internship program. East Tennessee State University and Radford University will continue to be an integral part of the program in the selection and placement of students in the internship. SMHS now has sufficient behavioral health providers to enable the organization to continue the internship program using staff providers to supervise and precept interns.

B. On-going Services and Activities

The integrated behavioral health model that has been implemented through the Rural Health Workforce Development grant period will be sustained with a significant number of behavioral health providers having been retained in the Stone Mountain Health Services system. Access to these services has been greatly improved for residents in the region through this grant program.

Access to training sites for psychology interns has been established through this program. The program can now be sustained through the utilization of SMHS staff who will be instrumental in moving the program to the future. The expectation is that the training program will become APA accredited in the near future and will continue to train psychologists in the integrated model in rural areas.

Funding sources for sustainability in the future will include possible grant funding, self-generated support through billing, and absorption of the training faculty costs by Stone Mountain Health Services. Training of interns for other organizations who would pay the annual stipend for an internship is currently being explored for future expansion.

C. Sustained Impact

The sustained impact of the Rural Health Workforce Development grant program will include behavioral changes in the residents of the community due to the work of the interns during and following the internships. Increased access to behavioral health services will continue in seven counties of rural, southwest Virginia as a direct result of the training program. Sites for training of social workers in Master's degree programs have been identified with the expectation that this portion of the program will continue. Internship opportunities for students of psychology, which focus on rural practice and integrated care, are now available to students in areas geographically close to the universities in which they study.

Implications for Other Communities

The Rural Health Workforce Development grant program has resulted in the planning and successful implementation of behavioral health internships in the rural area utilizing the integrated care model. This program could be replicated in other rural areas experiencing difficulties in (1) adequate numbers of internships available, (2) problems with access to behavioral health care, and (3) shortages of rural behavioral health care providers. The partnership between the FQHC and the two universities could be replicated in other areas. This program involved three different disciplines (psychology, social work, and counseling), two different states (Virginia and Tennessee), and two separate universities in two different states, all partnering with a community health center. The program has been highly successful and has met the community need on many levels, including the needs of community residents, students at the two universities, and the community health center. The model has the potential to change the way behavioral health services are provided in order to meet the increasing demand for these services in rural areas.

Washington

Columbia Basin Health Association

Organizational Information	
Grant Number	G98RH19718-02-00
Grantee Organization	Columbia Basin Health Association
Organization Type	Community/Migrant Health Center/FQHC
Address	140 E Main Street Othello, WA 99344
Grantee organization website	www.cbha.org
Name of Workforce Development Network	South Central Washington Academic-Practice Network for Rural Community Health Workforce Development
Your Project Director	Name: Sandra Villarreal
	Title: Recruitment Specialist
	Phone number: 509-488-5256
	Fax number: 509-488-9939
	Email address: sandrav@cbha.org
Project Period	2010 - 2013
Funding level for each budget period	September 2010 to August 2011: $200,000
	September 2011 to August 2012: $200,000
	September 2012 to August 2013: $200,000

Network Partners		
Partner Organization	Location	Organizational Type
Columbia Basin Health Association	Othello, WA Adams County	Community Health Center
Yakima Valley Farm Workers Clinic	Yakima, WA Yakima County	Community Health Center
Pacific Northwest University of Health Sciences	Yakima, WA Yakima County	Osteopathic Medical School

Community Characteristics

A. Area

The South Central Washington Academic-Practice Network targets low-income and other underserved residents in Yakima County, Benton County, Grant County and Adams County. The communities in which the Practice Network serve are Othello, Mattawa, Toppenish, Grandview, Prosser and Walla Walla, Washington.

B. Community description

The target population is estimated to be as high as 258,870, or 49% of total residents, in the 5-county service area. 40% of residents in the service area are below poverty, 30% are Hispanic, and 19% are uninsured. Additionally, the service area is home to an estimated 164,855 migrant/seasonal farmworkers and their family members.

C. Need

In 2000, nearly five times as many physicians per capita practiced in America's large cities as in its most rural counties, and the rural physician shortage has doubled in the past 60 years. This geographic misdistribution is highly related to the process of specialization in physician training. Nationwide between 1965 and 2000 the per capita supply of generalist physicians increased by a third, but the specialty supply more than doubled in that same period of time. Osteopathic physicians are much more likely to practice as generalist and primary care physicians and are significantly more likely to settle and remain in rural areas. While osteopathic and allopathic family practice physicians are equally likely to select rural practice, 46% of osteopathic physicians become family physicians compared to only 11% of allopathic physicians. Thus, workforce development partnerships between

rural community/migrant health centers and osteopathic physician training programs offer substantial opportunity to increase the supply of primary care physicians available to underserved populations in rural areas.

Program Services	
Target Population	
High School Students	Preceptors – Primary Care
Medical Students – Primary Care	

A. Description

Columbia Basin Health Association (CBHA) and its network partners sought to increase the availability of high quality, culturally competent primary care physicians providing care for underserved and vulnerable populations in the target service area.

The goals of the Workforce Development Network project are to:

1. Provide Pacific Northwest University (PNWU) of Health Science medical students training opportunities within culturally competent, community-focused rural community/migrant health centers
2. Provide meaningful service learning opportunities for PNWU medical students to build and reinforce ties to local communities
3. Enhance recruitment and retention of needed healthcare professionals by rural community/migrant health centers
4. Identify innovative approaches for using the network model to train PNWU medical students in rural community/migrant health centers

B. Role of Network Partners

Pacific Northwest University of Health Science's role in the network is that of accredited health care workforce training organization and provider of faculty development for mentor physician faculty at the Columbus Basin Health Association (CBHA) and Yakima Valley Farm Workers Clinic (YVFWC) sites who will work directly with medical students.

Yakima Valley Farm Workers Clinic and Columbia Basin Health Association's primary role in the network is that of physician trainee sites.

Outcomes

Through the Workforce Development Network, the partners were able to develop many activities and provide services for student rotations and faculty development.

Faculty Development: PNWU prepared modules for new preceptors. The modules can be completed as a self-directed learning course. The modules cover orienting students to the rotation, adult learning theory, providing feedback, and precepting in a busy office. PNWU also visited the sites to hold faculty development trainings.

Meaningful Service Learning (MSL): The students that complete rotations with CBHA and YVFWC are required to complete a meaningful service learning project. The objective is for the student to learn about the rural community they are serving and, hopefully, creating ties to the community. We have had students conduct children's nutritional classes for the community, develop brochures, handouts, as well as create valuable resources for patients. Examples of projects that have been completed by students are: a plan to screen and treat Vitamin D deficiency, protocol development and guidelines for Pediatric Dyslipidemia treatment, maximizing smoking cessation rates in a clinical setting. Currently, the partners are evaluating the value of the MSL projects and are working to develop a more sustainable program for the students.

Community Awareness: Because we are in a rural area we are working to create a "grow your own model". With PNWU being a new medical school in our area, we want to make sure our local community members and students are aware of the great medical education that is very close to home. CBHA hosted the first annual "Pathway to Medicine" day camp. The camp consisted of taking 25 high school juniors and seniors who were interested in healthcare to PNWU for a day. The students received a tour of the medical school, received information on the requirements of getting in to medical school, what an average day is as a medical student, spoke to PNWU medical students for a question and answer session, and learned to go into a cadaver lab to learn about the organs and different body parts. The tour was a success and CBHA hopes to make this an annual event for high school students.

To further increase community awareness, CBHA released a monthly teaching site newsletter titled, “Hands on Healthcare”. The newsletter features students that are currently in our community and is distributed electronically to community members, educational institutions, and fellow students. PNWU Pulse released a monthly newsletter titled, “PNWU Pulse”. PNWU Pulse is distributed monthly electronically to a large listserv. PNWU Pulse features students on rotations, projects students have completed, and information about PNWU activities.

YVFWC regularly runs a full page ad highlighting the students on rotation and service learning projects. The newspaper reaches an estimated 20,000 people.

More Efficient Technology: Because of the Workforce Development grant, CBHA & YVFWC have been able to purchase laptops for students rotating through the sites. The laptops improve the student rotations because they are able to access the EMR from home and have more mobility.

Student and Preceptor Stipends: Students that come on rotation are able to receive a food/gas/housing stipend. It has been great to be able to assist the students with housing, gas and food as students are all struggling financially. The grant has also provided stipends to our physicians that are teaching and mentoring PNWU students. This is something that we feel has great value. Physicians are working to save lives every day and being a preceptor it can be overwhelming for the physician. The preceptor stipends are a “thank-you” for teaching our future physicians.

Student Rotations: YVFWC and CBHA together have been able to provide PNWU medical students training opportunities in family medicine, obstetrics, pediatrics, behavioral health, and internal medicine.

Sustainability

A. Network Structure

The partnership between CBHA, PNWU, and YVFWC will definitely continue beyond the grant. All three partners have a similar mission to have physicians practice in rural areas. For example, CBHA’s CEO is on the PNWU Advisory Board. In addition, because of the grant, PNWU, CBHA and YVFWC have been able to develop good working relationships with open communication. As we move forward beyond the grant period our partnership will remain a priority.

B. On-going Services and Activities

Student Rotations: CBHA and YVFWC will be providing training sites for PNWU students. Because of the similar vision of providing physicians to rural areas the partnership with PNWU will remain vital.

Faculty Development: PNWU will be sustaining the faculty development component. Preceptors are still receiving training on preceptorship from PNWU. As the preceptors finish their current training plan, PNWU will hold refresher classes as well as begin the training plan with any new preceptors that come on board.

Meaningful Service Learning Projects: The partners are currently evaluating the value of the current MSL plan. An idea has been brought forth that the training sites would identify a point of contact for a MSL component. The point of contact will direct the student where their current MSL will take place, i.e. homeless shelter, support services/case management, etc. The students will then be able to begin the MSL component where the last student concluded. PNWU hopes to make the MSL a requirement for all sites that send students on rotations. Thus, this will be a sustainable element.

Preceptor Stipend: CBHA will be able to sustain the preceptor stipend for physician preceptorship. The stipend will become a line item in the fiscal budget.

Housing: Housing for PNWU students has also become a line item in the fiscal budget for PNWU students. Teaching sites will continue to provide housing for PNWU medical students.

C. Sustained Impact

The Rural Health Workforce Development grant program has definitely impacted the way we educate medical students in rural healthcare. Because of the grant, we developed a more robust orientation educating students on the culture, population and common diseases within our community. The MSL component also engaged students in the community and increased awareness of the illnesses that the small, rural communities encounter.

Improving, Improving, Improving! The grant has led us to continually look for ways to improve faculty training and the student learned experience. One example that the partners are currently working on is the restructuring of the meaningful service learning model for students, as described above.

Because of the network partnership there has been increased awareness of the shortage of physicians practicing in rural areas. We may not be able to see the return immediately; however, we believe that we have successfully educated student on rural healthcare, and they will return if they believe in the mission.

Implications for Other Communities

It is a struggle for rural health centers to recruit physicians to small, agriculture towns. It is so important to find physicians that are dedicated to the underserved population and have experience with the environment and culture. Partnering with an osteopathic medical school that believes in rural medicine and exposing their students to rural areas has been one of our most important collaborations. CBHA and YVFWC are very thankful for PNWU's existence. I would encourage rural health centers to collaborate with medical schools in their surrounding areas to promote rural healthcare.