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# Rural Communities and Emergency Preparedness

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# Executive Summary

The need for well-prepared emergency response agencies was never more evident than on September 11<sup>th</sup>. While much of the aftermath of those events has resulted in an increased focus on these agencies in urban areas, it has also become clear that such a focus is also necessary in rural areas. Rural areas are not only home to 65 million Americans, but are also the sites of most of the country's farms, numerous power facilities and weapons of mass destruction. A lack of emergency-related resources in rural areas may compromise rural readiness for future emergencies.

U.S. Health and Human Services Secretary Tommy Thompson recently acknowledged the importance of rural considerations in emergency preparedness. In his January 31, 2002, letter to each Governor regarding the new Bioterrorism Hospital Preparedness Program<sup>1</sup>, Secretary Thompson named the State Offices of Rural Health as essential partners in the development of State bioterrorism preparedness plans.

This paper will address rural emergency preparedness by describing:

- ❑ Rural public health infrastructure and an overview of rural emergency preparedness; and
- ❑ Perspectives and experiences of State Offices of Rural Health in responding to emergencies and in enhancing responsiveness in their States' rural communities.

## **Rural Emergency Preparedness**

Adequate emergency preparedness in rural communities depends on public health departments, hospitals and emergency medical services (EMS) providers. However, rural public health departments tend to have less capacity and resources than their urban counterparts. For example, mental health providers are much more common in metropolitan public health agencies. In addition, hospitals are often the nucleus of health planning, activity and resources in rural communities. However, national policy changes have encouraged hospitals to downsize bed capacity in an effort to contain costs and, as a result, rural hospitals lack surge capacity for personnel and beds. Furthermore, rural EMS often relies on volunteers and may lack funding and adequate equipment.

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<sup>1</sup> HRSA's Maternal and Child Health Bureau will administer the Bioterrorism Hospital Preparedness Program. Funds for the program are intended to supplement, not supplant other Federal, State, and local public health funds available for emergency activities to combat threats to public health.

## **State Offices of Rural Health**

The involvement of the State Offices of Rural Health in the Bioterrorism Hospital Preparedness Program and these offices' unique expertise will enhance States' efforts to improve preparedness in health care agencies and related entities. This expertise was clearly demonstrated in November 2001, when the State Offices of Rural Health provided answers to seven key questions related to their involvement and knowledge of their State preparedness response. The answers to these questions also provide important information about the status of rural emergency preparedness and provide a roadmap for future planning efforts.

- ❑ Is your State developing or revising its emergency preparedness plan in response to the terrorist events?
- ❑ Has your State Office of Rural Health been included in this process? Who are the players in your State? What is the process?
- ❑ Do you think that the rural public health departments have adequate surveillance capacity?
- ❑ Most rural providers and rural hospitals have said they have limited capacity to respond to mass casualties, need for decontamination, etc. How would you describe this situation in your State?
- ❑ Do your public health officials and providers have Internet connectivity?
- ❑ What are the training needs to respond to a bioterrorism event?
- ❑ Are there other things we should know about the capacity of providers in the rural areas of your State to respond to a bioterrorism or terrorist event?

Thirty-two State Offices of Rural Health responded to these questions. Their answers included several key themes around which rural preparedness planning efforts could focus.

- ❑ Several preparedness planning challenges are unique to rural areas, i.e., coordination between State bioterrorism staff and Tribal Nations.
- ❑ Rural public health departments lack adequate surveillance capacity.
- ❑ Rural providers and hospitals lack the training, resources and capacity to respond to a bioterrorism or mass casualty event.
- ❑ Rural areas are affected by weather, tourism, a fragile financial and economic base and are geographically isolated, making it difficult to support medical systems.
- ❑ Health care professionals are sparse in many rural areas and lack equipment to deal with large-scale catastrophic events.
- ❑ Public health officials have some form of Internet connectivity although many States do not meet the Centers for Disease Control and Prevention's recommendations.
- ❑ The main barrier to preparedness is lack of funding.
- ❑ The Federal Government and States must be financial partners in this endeavor, but implementation must occur at a local level to ensure rural preparedness.
- ❑ After lack of funding, lack of communication and coordination is the greatest barrier to preparedness planning.

## Overview: Rural Preparedness

Since September 11, 2001, there has been considerable discussion about the preparedness of the Nation's health care system to respond to nuclear/biological/chemical (NBC) terrorism. Rural communities, which historically have had limited public health infrastructure, small numbers of providers and volunteer emergency medical systems (EMS), are considered most vulnerable and least able to respond. However, the effectiveness and capacity of State and local first responders, public health agencies and providers may most directly affect the outcome of such an event. Unfortunately, there is little data to quantify emergency preparedness in rural communities. To address this, efforts to gauge the ability of private and public rural resources to mitigate a terrorist event are underway.

## Why The Rural Response is Important

Our national response to nuclear/biological/chemical terrorism should include an examination of rural communities, their vulnerability and capacity to respond. The vulnerability of rural areas to nuclear terrorism is significant. Many nuclear power facilities, as well as uranium and plutonium storage facilities, are potential terrorist targets and are located in rural areas. Not to mention that all U.S. Air Force missile launch facilities are in rural areas and could be vulnerable to terrorist threats should a rogue group want to threaten national security. Bioterrorism, introduced by smallpox-infected individuals, could easily cross our Canadian or Mexican borders and first be identified by a rural provider. Our shared borders make the identification of a terrorist incident harder to control than in an urban area. With many agricultural chemical facilities and the interstate transit of hazardous materials, rural areas have a unique vulnerability to chemical threats as well.

An act of bioterrorism quickly identified and contained in a rural community would significantly reduce morbidity and mortality not only for those of rural areas, but would also provide advance warning for urban areas to prepare and respond as well.

Any terrorist event carried out in an urban area might result in a massive exodus out of targeted cities and into "safer" rural areas. As a result, rural providers would be overwhelmed as fleeing sick or contaminated individuals fill their clinics and hospitals. In addition, rural providers from unaffected communities may provide the critical workforce needed to assist larger cities coping with a disaster. The ability of rural areas to respond is affected by weather, tourism, geographic isolation and a fragile economic base. Many rural communities lack access to hazardous materials (HAZMAT) units, making them exceptionally vulnerable to chemical or nuclear events. Moreover, such communities lack sufficient HAZMAT recognition capability and decontamination training even if they were

fortunate enough to have a local HAZMAT unit. Without substantive investments, rural communities will continue to be vulnerable to these events.

Another area of concern is complacency. The feeling of relative safety brought on by the belief that rural areas are at a lower risk for terrorism may reduce rural communities' sense of urgency and limit preparation and responsiveness. If rural communities are not actively included in local, State and Federal efforts to strengthen emergency preparedness, they may remain bystanders to their own fate. Effective emergency preparedness and mitigation efforts demand consensus and involvement from all stakeholders, including rural providers.

## Rural Public Health Infrastructure

Rural public health departments tend to have less capacity and resources than their urban and suburban counterparts. This is demonstrated in a recent study of local public health agencies conducted by the National Association of City and County Health Officials. The study shows that approximately two-thirds of local public health agencies serve communities of less than 50,000 people (defined for this study as non-metropolitan or rural). Rural public health agencies also have smaller, less diverse workforces. For example, mental health providers are much more common in metropolitan public health agencies. In addition, rural health departments frequently cite that their greatest workforce needs are public health nurses and environmental scientists. Service provision also varies between rural and urban public health agencies. Only about 40 percent of large and small town public health agencies provide hazardous materials handling services, compared to about 60 percent of metropolitan public health agencies. Slightly more than half of local health departments in rural areas provide emergency response activities. About 60 percent of local public health departments in rural areas perform vector control services (spraying, etc.). Differences in access to technology further disadvantage rural public health agencies. Nearly 20 percent of local public health departments do not have Internet access and at least 10 percent do not have access to e-mail, both of which are important for instantaneous bioterrorism information from State and Federal agencies. These disparities between rural health departments and their urban counterparts put them at a serious disadvantage to respond to NBC threats.

Unique characteristics of rural public health agencies have affected the preparedness of rural communities for biological assault. At the time of this study, only 20 percent of the Nation's 3,000 local public health departments had developed a plan to deal with a bioterrorism event. The vast majority of rural public health agencies are closed on nights and weekends and are not equipped to respond to an emergency situation on a 24-hour basis. These findings suggest that rural public health departments are not fully prepared to identify and respond to bioterrorism threats.

The reasons for the capacity gaps in rural areas are multi-faceted. Non-competitive pay levels are a common reason for the inability of rural public health departments to attract and retain necessary workforce. Additionally, the National Advisory Committee on Rural Health's 1999 report indicated that inadequate budgets resulting from a small tax base force rural public health departments to be more dependent on State funds and service reimbursement than urban public health departments, which rely on local government funds. Dependence upon State funding adds to rural health departments' vulnerability as State budgetary climates decline. In addition, dependence upon service reimbursement changes the role of a public health department and diverts attention and limited professional services from public health monitoring and surveillance to financial solvency.

## Rural Emergency Preparedness

Rural hospitals, providers and emergency medical services (EMS) will be critical first responders in the event of terrorist activity. Simply responding to normal fluctuations in patient volumes, i.e., during flu season, often creates problems for rural providers. The recent increase in persons seeking treatment because of concern about anthrax exposure provided a "case study" for potential problems with high volumes of patients. The sudden influx of large numbers of sick or contaminated patients from chemical attack could completely overwhelm rural health care systems.

The recent occurrence of such circumstances in an urban area predicts the under-preparedness of rural health care systems. During the recent terrorist attacks, a number of burn victims were transported to two nationally known burn centers in metropolitan areas, Cornell Burn Center and Washington Burn Center. By the end of the first week of care, each Center had exhausted its burn nurse resources and staffing had to be augmented by the Federal Emergency Management Agency through HHS and the Department of Veterans Affairs. Patient care for a burn patient is time intensive under any circumstance. Given that caustic injuries are likely in rural areas with agricultural chemicals, this could easily tax the response capability of any rural hospital until the patient is transferred to a higher level of care.

These examples underscore the importance of hospitals in disaster response. Hospitals are often the nucleus of health planning, activity and resources in rural communities. However, national policy changes have encouraged hospitals to downsize their bed capacity in an effort to contain costs and, as a result, rural hospitals lack surge capacity for personnel and beds. For example, in rural communities, nearly 500 hospitals have become Critical Access Hospitals. These hospitals have a 24/7 emergency room but are limited to 15 beds. Staff, supplies and drugs have all been incorporated into an as-needed system, leaving

hospitals and EMS providers vulnerable to a surge in the number of patients, as would be the case in the event of a terrorist attack.

Hospital preparedness is not only related to facility capacity, but also to adequate numbers of health care providers. For example, nursing shortages have compromised the capacity of many rural hospitals. At some point within the last year, 69 percent of hospitals diverted patients to other hospitals due to a shortage of nurses. The nursing shortage is expected to continue as the number of Registered Nurses decreases. Burn, surgical, ICU/CCU and emergency/trauma nurses will undoubtedly be needed following an NBC event.

Inadequate capacity related to staffing and facility shortfalls will disproportionately affect hospital emergency departments. Of all hospital departments, emergency rooms are most likely to bear the brunt of a surge in patients. Emergency departments' preparedness for potential disasters is limited. In November 2001, the Center for Rural Emergency Medicine at West Virginia University published the results of a survey of hospitals' emergency departments in the mid-Atlantic area. The survey included 22 rural hospitals and eight urban hospitals. None of the rural respondents believed that their hospitals were prepared at all for either biological or chemical weapons incidents. None of the rural sites and only half of the urban sites had decontamination stations that could accommodate 10-15 casualties at one time. Although 87 percent of the hospitals could handle 10-50 non-contaminated casualties, only 10 percent could manage 50-100 mass casualty patients. There was a universal need for training in handling casualties of weapons of mass destruction, but the lack of time, available courses, computer access and funding emerged as barriers to this type of training. Only 10 percent conducted chemical disaster drills and only three percent conducted biological disaster drills. This is alarming given the amount of agricultural chemicals in rural areas. Only four percent of the respondents were prepared, or even knew about the potential for secondary terrorist attacks on health care workers (e.g., attacks on EMS units and hospitals).

In addition to adequately prepared emergency departments, the strength and speed of a widespread medical response to an NBC event is dependent upon emergency medical services. Second to early access to the 911 system and CPR, the quality of care a patient receives in an EMS system plays a major role in outcome later in the trauma continuum of care. The Nation's EMS system already experiences major challenges in day-to-day provision of emergency medical care by increasingly becoming a public health safety net for primary care. This often results in overextended and under funded EMS systems even without a disaster taking place. Rural areas are particularly susceptible to such conditions. A large scale disaster would likely stretch limited rural EMS resources and infrastructure far beyond their capacity, necessitating mutual aid and effective coordination with Federal, regional and State assets for an effective response. Though there are some pockets of excellence in EMS, rural EMS providers are generally not as trained, nor as adequately prepared, as their urban

counterparts. Rural EMS relies on a largely volunteer work force to respond to emergencies. Taking time from one's family and job for training and duty time puts the average rural provider in dire straits. Such training and duty time is often unpaid. It is essential that rural EMS infrastructure is strengthened to increase its response capacity to not only more effectively handle daily operational demands, but to have the elasticity to cope with surge demands during, and after, NBC events.

Another critical component of emergency response will be the ability to respond to the mental health needs of residents. Under normal circumstances, the incidence and prevalence rates of mental illness, substance abuse, emotional disturbance and developmental disability for rural Americans is on par with their urban counterparts. Crisis situations exacerbate these illnesses and make the provision of adequate mental health care even more important. However, access barriers to mental health care for rural and frontier populations remain formidable. Like most Americans, individuals living in rural and frontier areas lack insurance that covers mental health care. These individuals also encounter additional barriers, especially the lack of mental health specialists. Most rural counties have no practicing psychiatrists, psychologists or social workers, and providers with formal mental health training prescribe only 20 percent of psychotropic medications. This places an enormous burden and stress on those few professionals attempting to provide care under normal circumstances, and especially so during disaster response situations. Cultural values unique to rural areas, including individualism and stigma associated with mental illness, also complicate provision of mental health services.

There are few strategies in place to address the mental health needs of rural Americans in crisis situations. The Disaster Crisis Counseling Program, supported for 25 years by the Federal Government, addresses the difficulties of rural mental health care provision by providing for short-term interventions with individuals and groups experiencing psychological impacts from nationally declared disasters. While the Disaster Crisis Counseling Program provides short-term solutions to crisis, most important for rural area response is statewide disaster planning that integrates State and local planning and provides appropriate venues and funding for local agencies and stakeholders. These efforts should include faith-based organizations, places of worship and service agencies, important for effective and coordinated provision of mental health services in rural areas. The HHS Office of Faith-Based Initiatives would be a valuable partner in this effort.



## Perspectives on Emergency Preparedness from State Offices of Rural Health

The need for effective emergency preparedness efforts in rural areas and related barriers led to Secretary Thompson's inclusion of the State Offices of Rural Health (SORH) in the HHS Bioterrorism Hospital Preparedness Program. This funding, provided to States, will improve the capacity of the Nation's hospitals, their emergency departments and associated health care entities, to respond to bioterrorist attacks as well as other outbreaks of infectious disease and public health emergencies. The State Offices' unique expertise will enhance States' efforts to improve preparedness in health care agencies and related entities. This expertise was clearly demonstrated in November 2001, when the State Offices of Rural Health provided comprehensive answers to seven key questions related to their involvement and knowledge of their State preparedness response. The answers to these questions also provide important information about the status of rural emergency preparedness and provide a roadmap for future planning efforts.

The seven questions:

- Is your State developing or revising its emergency preparedness plan, in response to the terrorist events?
- Has your State Office of Rural Health been included in this process? Who are the players in your State? What is the process?
- Do you think that the rural public health departments have adequate surveillance capacity?
- Most rural providers and rural hospitals have said they have limited capacity to respond to mass casualties, need for decontamination, etc. How would you describe this situation in your State?
- Do your public health officials and providers have Internet connectivity?
- What are the training needs to respond to a bioterrorism event?
- Are there other things we should know about the capacity of providers in the rural areas of your State to respond to a bioterrorism or terrorist event?

Thirty-two State Offices of Rural Health responded to this request and provided the following information.

### Is your State developing or revising its emergency preparedness plan in response to terrorist events?

Thirty-two State Offices of Rural Health responded and all are currently developing or revising their emergency preparedness plan in response to the terrorist attack. Governors' offices are providing leadership for preparing or

revising emergency preparedness plans, although most States involve a wide range of participants.

Respondents described several planning problems unique to rural areas.

- ❑ Some States have general Statewide Preparedness Plans without any plans specifically targeted to the needs and vulnerabilities of rural health care providers or rural county health departments.
- ❑ There is concern about coordination between States and Tribal Nations. For example, in a south-central State, it appears that there is little coordination between the State's bioterrorism staff and Tribal Nations.

Some States are drawing upon other experiences and events to develop their preparedness plans.

- ❑ Georgia's plan began with preparations to respond to terrorism associated with the 1996 Olympics. Since September 11, they have identified areas of vulnerability and will reevaluate their preparations.
- ❑ Utah created a homeland security office and upgraded preparedness efforts in preparation for the 2002 Winter Olympics.
- ❑ New Mexico's Emergency Preparedness Teams are well experienced in managing events, including the recent fires in Los Alamos and the Hanta Virus several years ago.
- ❑ Oregon was working on an emergency preparedness plan prior to the September 11 attack, as part of a Federal bioterrorism Health Alert Network grant.

Other State Offices of Rural Health described their State's plans for sharing information.

- ❑ In December 2001, Alabama shared its preparedness plan through a statewide satellite conference. Hospitals were the primary audience in rural areas.
- ❑ California is encouraging private hospitals to use the Hospital Emergency Incident Command System and the Department of Health Services' bioterrorism guidance.
- ❑ Montana has created a special web page to address this issue.
- ❑ New Mexico has distributed information about bioterrorism broadcasts as widely as possible among health care providers and agencies. Department of Health employees have also been provided information about preparedness functions, units, contact persons and other information needed for managing an emergency.

**Has your State Office of Rural Health been included in this process? Who are the players in your State?**

Lead agencies and participants vary widely. Sixty-nine percent of the State Offices of Rural Health (22/32) who responded are participating in States' emergency preparedness. One State Office in New England is leading the State Department of Health initiative. Most SORH have been pulled into the process since the September 11 attack.

Some State Offices of Rural Health have begun to assist in their State's efforts to prepare for an NBC event.

- ❑ As part of the Department of Health, the Washington SORH is developing a 30-60-90-180 day plan that focuses on practical actions in case of emergency. In recognition of mental health needs during a crisis, the SORH is working with the Mental Health Division of the Department of Social and Health Services.
- ❑ In Arizona, the Centers for Disease Control and Prevention's special programs on bioterrorism and anthrax were the most highly attended ever by rural physicians at remote sites. The SORH staff members assisted in sharing this information.
- ❑ The Wisconsin Department of Health has the lead on bioterrorism and has invited the Wisconsin State Office of Rural Health, the State Hospital Association and others to participate in planning.

Other State Offices of Rural Health reported playing supportive roles in their State preparedness planning.

- ❑ Alabama's SORH participates in a committee that is working to establish a Statewide trauma system.
- ❑ In Minnesota, there is an agency-wide Bioterrorism Team that includes the SORH. The SORH has been involved as part of a team planning regional conferences.
- ❑ In Missouri, the SORH plays a supportive role. The main players are the DHSS Emergency/Terrorism Response Unit and the State Emergency Management Agency.
- ❑ In Ohio, the SORH recently began to attend teleconferences regarding their State's disaster preparedness program in order to keep rural clinics and community health clinics current on disaster preparedness issues.

A few State Offices of Rural Health have not been involved in their State's plans.

- ❑ Several States have received some information, but have not been invited to be part of the initial process. The main players in these States include the State Emergency Management Agency, with Health and Human Services playing a key role because of State lab, epidemiology and EMS connections.
- ❑ Oftentimes, information from the State preparedness panels is forwarded to the SORH through another State Division of Health Services.

## Do you think that the rural public health departments have adequate surveillance capacity?

Sixty-nine percent of State Offices of Rural Health (22/32) respondents believe that the rural public health department does not have adequate surveillance capacity. One State did not have adequate information to gauge their surveillance and two States did not answer this question.

Only five of thirty respondents (HI, MD, NM, SD and VT) answered that their State has adequate surveillance capacity. Examples of their responses include:

- ❑ In New Mexico, the Department of Health operates all public health field offices. Counties provide the facility but the staff are State employees. This facilitates better statewide communication. The Office of Epidemiology has increased its usual surveillance.

- ❑ In South Dakota, all health care facilities, including public health departments, are operating in active surveillance mode.
- ❑ Surveillance in Vermont is centralized and all providers report cases directly to the State Health Department.

Other respondents identified the following needs for better surveillance in rural areas.

- ❑ Nebraska reports that there are very few health departments in the State, especially in rural areas. Of the existing health departments, very few of them have surveillance capacity at this time. The plan the State is developing will likely address this issue.
- ❑ Wisconsin's rural public health departments were overwhelmed with anthrax concerns that have come into their offices this fall. Many do not have adequate staff or resources to address anti-terrorism effectively or efficiently.
- ❑ Most rural counties in Texas have no local health department. The State Department of Health's Regional Offices cover rural counties.
- ❑ The 94 local health departments in Indiana include large offices of over 100 people to small offices staffed by as few as two people. The median number of staff is approximately 11. Capacity to respond relates directly to available staff and monetary resources. A few are very well prepared; most are not.
- ❑ The California SORH believes that its rural public health departments do not have adequate surveillance capacity. The County Council of Local Health Officers conducted a study in June 2001, to assess local capability to determine the extent of disease activity and control. The study revealed that local county health departments would need a one-time investment of \$30 million and an ongoing investment of \$70 million to develop adequate surveillance capability.
- ❑ Washington is working to enhance surveillance capacity, but reports that it will be more difficult to have adequate capacity because of the lack of trained epidemiologists.

**Most rural providers and rural hospitals have said they have limited capacity to respond to mass casualties, need for decontamination, etc. How would you describe this situation in your State?**

State Offices of Rural Health responded that rural providers and hospitals lack the training, resources and capacity to respond to a bioterrorism or mass casualty event. They report that they are poorly equipped, not only in supply capacity and equipment, but also in personnel and expertise.

Additionally, rural areas are affected by weather, tourism, a fragile financial and economic base and are geographically isolated, making it difficult to support medical systems. Health care professionals are sparse in many rural areas and lack equipment to deal with large-scale catastrophic events. These statements are based on anecdotal evidence, as many States have not assessed their rural providers and hospitals. Others (AR, ID and WA) report that they are working with the State Hospital Association to conduct a statewide capacity survey.

Current infrastructure to deal with either a terrorist or bioterrorism event is either very limited or nonexistent in rural areas. This includes:

- ❑ Emergency first responders in terms of education, training and equipment;
- ❑ Hazardous materials responders and the equipment to deal with bioterrorism situations;
- ❑ Ability to decontaminate, isolate and quarantine;
- ❑ Hospital capacity to deal with large numbers of victims;
- ❑ Limited resources of local primary care providers; and
- ❑ Shortage of personnel with expertise.

State Offices of Rural Health provided several examples describing the limitations of rural providers in their States.

- ❑ In Oregon, preparedness depends on locality. Personnel in Northeast Oregon are more prepared because of 78,000 tons of nerve gas stored at the Umatilla Army Depot, while the rest of the State has varying capacity. The average response time to an emergency call in Oregon's 11 frontier counties is 4.5 hours.
- ❑ In Alaska, nearly all of the rural hospitals lack specific training and resources to deal with decontaminating patients exposed to chemical or biological agents or large numbers of patients from other NBC scenarios.
- ❑ The Georgia Office of Rural Health cited this as a serious concern. Like most rural providers and hospitals across the United States, their capacity to respond to mass casualties and the need for decontamination is limited. Most local governments in rural Georgia provide financial support to rural hospitals. However, most of this support pays for basic operating expenses. Additional funds and resources are needed to support special activities. Rural Georgia's financial condition is such that local governments are at the limit of services that they provide. In addition, support services are generally low priority based on limited revenue collection. Georgia's current economic slowdown will likely further impede the government's provision of services.
- ❑ Many hospitals in Kansas' rural areas can only provide immediate emergency response and limited inpatient care, with few hospitals, EMS and HAZMAT staff available in a several mile radius who would be available immediately in the face of some unforeseen disaster.
- ❑ Some of Nebraska's hospitals have decontamination areas, particularly those along the major highways. However, the SORH is concerned about the rural facilities located near their two urban areas.
- ❑ The Oklahoma SORH reports that there has been little or no coordinated effort to assist small rural hospitals or health care providers gain education, training or skills needed.
- ❑ Ohio has six cities that have a Metropolitan Medical Response System; however, this system leaves gaps of coverage in rural counties. A task force is forming to address this issue and the Ohio SORH has been invited to participate.

## Do your public health officials and providers have Internet connectivity?

All of the State Offices of Rural Health responding to this question noted that the public health officials have some form of Internet connectivity although many States do not meet the CDC's recommendations. Three States do not have information on rural providers' Internet connectivity (GA, ID and VT). Seven States (AL, CO, CT, OK, SC, TX and WA) report that some rural providers, public health nurses and/or hospital staff lack Internet connectivity.

Responses to Internet connectivity varied widely.

- ❑ In Oklahoma, most county health departments have at least one computer available with Internet service, but not all providers have Internet capabilities. Some rural areas of Oklahoma experience problems with unreliable Internet connectivity that may involve a long distance surcharge.
- ❑ In Colorado, the rural counties that have organized departments of public health have Internet access. However, there are more than 30 counties with only a public health nurse, who is often part time.
- ❑ In Connecticut, where one would expect a higher rate of connectivity, the local public health officials do have Internet access, but some of the emergency room physicians and their staffs do not, nor do many of the rural providers.

## What are the training needs to respond to a bioterrorism event?

None of the respondents reported that their State was fully trained and prepared to handle a bioterrorism event. The State Offices of Rural Health's answers to this question varied, with a majority of Offices describing a need for some training and many characterizing the need as significant and extensive. Most Offices that commented on training called for an integrated approach for assessing and addressing training preparedness at multiple levels: pre-hospital, individual hospital, between hospitals at the community level, among communities at the State/regional level and at the State level. Several of the respondents (AK, KS and NM) stated that they have seen a satellite broadcast presenting clinical guidelines to health care providers and institutions on bioterrorism. However, no one commented on availability of on-site teaching and practice drills or if limited access to the Internet and computers limits the use of satellite broadcast training participation for rural providers. Thirty-eight percent of the State Offices (12/32) did not know the extent of their States' training needs for bioterrorism preparedness. Several States are currently assessing their training needs.

The training needs are extensive, from health care providers to public health officials and from the first responders to the general public. Adequate funds, equipment and time for training remain critical needs.

Primary training needs include education and training for:

- ❑ First responders regarding the use of the “Hospital Emergency Incident Command System” or other system;
- ❑ First responders in terms of recognition of bioterrorism events, e.g., the recognition and diagnosis of anthrax;
- ❑ Development of local health department protocols dealing with collection of specimens, decontamination, quarantine, disaster preparedness;
- ❑ Local health departments to acquire and develop the capability to use information technology (e.g., use of software to map events); and
- ❑ Rural hospital and clinics regarding notification protocol and their role in countywide response.

Some State Offices of Rural Health identified new or existing strategies to address training needs.

- ❑ The Kansas Hospital Association compiled and distributed a nuclear, biological, and chemical emergency preparedness resource notebook to all hospitals in the State and is scheduling a workshop to focus on planning and implementation of emergency preparedness plans.
- ❑ Washington has completed a tabletop exercise for local public health in 7 of 39 counties. Deploying this training to all counties is the next step. The State is creating a “Public Health 101” course for non-traditional public health partners and an “Emergency Preparedness 101” course for public health providers.

State Offices of Rural Health identified needs specific to their State.

- ❑ All communities in Georgia need basic bioterrorism training programs such as the identification of chemical agents, use of chemical detection devices and provider use of chemical protection. All providers need update training on chemical poisoning recognition and treatment protocols. Exercises should include the private medical community. Each health district should have a dedicated, well-trained emergency planning coordinator.
- ❑ Training needs in Washington include emergency response plans and practice, agents of concern, risk communications, logistical planning and public health law and practice.
- ❑ Kansas has training needs in all counties. Local health departments, hospitals, law enforcement, fire departments, clinicians, pharmacists, morticians, veterinarians, emergency management and emergency medical services are among those that need and request training. Since September 11, requests for training have been overwhelming. Various agencies in many rural areas are now meeting together to discuss and create a plan for these events.

**Are there other things we should know about the capacity of providers in the rural areas of your State to respond to a bioterrorism or terrorist event?**

Several State Offices reported that the main barrier to preparedness is lack of funding. They also noted that while the Federal Government and States should be financial partners in this endeavor, implementation must occur at a local level

to ensure rural preparedness. After lack of funding, the State Offices noted lack of communication and coordination as the greatest barrier to preparedness planning.

Rural communities need to assess and determine their own appropriate response to NBC threats. Rural terrain is varied, vast, and rural transportation, population and economy vary greatly. The rural health infrastructure is already strained through years of chronic under-funding and demands placed on the rural safety net. Rural residents are not always within 30 miles of a hospital and not all rural counties have health departments. For these reasons, flexible, dedicated rural community funding and rural infrastructure are needed. The mental health needs of populations that are directly or indirectly affected by terrorism must be also be addressed. Also essential in these planning efforts is the provision of adequate transportation in rural areas.

Some State Offices of Rural Health fear that complacency will leave their rural communities unprepared.

- In rural Idaho, there still appears to be the belief that rural residents are at a lower risk for a bioterrorism event. With this feeling of relative safety, rural residents, including health care providers, may not feel a sense of urgency to learn about early disease recognition. Rural health care providers are currently educated regarding surveillance and reporting mechanisms, but they may not truly appreciate a community-wide event because of their lack of connectivity, both to other providers in the area, or, more broadly, through Internet information. It is important for State and district health departments to continue to strive for inclusion of rural providers in all State or regional alerts for adequate emergency preparedness.
- The SORH in Nebraska believes their greatest challenges lie in their small size and distance from larger health centers. The distance and lack of large communication “pipes” will be liabilities in a disaster. Nebraska’s rurality and distance from many metropolitan areas may also give Nebraskans a false sense of security against terrorism. Small size also means fewer providers, both for medical and mental health.

Some State Offices of Rural Health expressed concern about communication systems and an overwhelming need for local resources.

- West Virginia reports an urgent need for training and protective equipment.
- Kansas’ SORH is concerned with the lack of regional or Statewide communication systems that would allow hospitals, law enforcement, fire departments, EMS and others to adequately communicate with one another. Different entities use different radio systems, cell phones and other means of communication and may not be able to communicate with other respondents to victims at the scene of an emergency.
- New Hampshire’s SORH is concerned that their rural infrastructure could be easily overwhelmed by those suddenly leaving large metropolitan areas (Boston, New York). Rural providers are operating at peak efficiency with limited staff and an influx of people, panic and real or imagined illness could be disastrous.

Some State Offices of Rural Health expressed concern about rural hospitals.

- In Arizona, it is critically important that Critical Access Hospitals (CAH) and their EMS providers be involved in bioterrorism or terrorist response planning, given the bed



- utilization limitations required by the Centers for Medicare & Medicaid Services for CAH designations and the EMS collaboration required by the designation.
- ❑ The SORH in Connecticut expressed concern that there is no payment readily available for pre-hospital care or for decontamination care. Because rural hospitals do not have central holding areas with equipment and supplies, level C suites would be advantageous.
  - ❑ North Carolina suggests that the Critical Access Hospital Program could be used as a vehicle to continue the operation of hospitals in areas of critical need in the case of major emergencies.
  - ❑ Vermont hospitals in particular need additional resources to be able to rapidly expand capacity to increase pharmaceutical inventory, reopen closed patient rooms and expand triage capacity for the emergency department and purchase ventilators.

## Conclusion

Adequate emergency preparedness in rural areas is as essential as adequate urban preparedness. Rural jurisdictions and agencies, however, are confronted with unique challenges in addressing emergency preparedness. Consideration of rural needs in addressing emergency preparedness is necessary for the development and implementation of a comprehensive preparedness strategy that proposes to ensure safety for all Americans. The inclusion of the State Offices of Rural Health in current HHS-sponsored State preparedness planning efforts will be beneficial both for the State Offices and the agencies with which they work. As is evidenced by the information provided by the State Offices in response to the above questions, many of these Offices and their affiliated agencies have already participated in planning efforts or have given thoughtful consideration to this topic and how their Offices may play a role. A continuing collaboration with rural constituencies and consideration of rural circumstances in preparing for emergencies will ensure that emergency preparedness is adequately and effectively addressed in some of the most vulnerable communities in the country.

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