Rural Public Health

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National Rural Health Association

NRHA Policy Brief

Introduction

Rural citizens in the United States have less access to the full range of essential public health services than their urban counterparts. Many rural and frontier areas have no local county or city public health agency, and those public health departments that do serve rural areas have few (if any) staff with formal public health training. Although the rural population has many indicators of poor health status that beg for public health prevention programs, the low incomes and small tax bases in rural areas provide insufficient funds to local public health departments to address these needs.

Although it is important to assure access to traditional health care providers in rural areas, the most important determinants of rural health status now and for the foreseeable future are related to health behaviors, especially those related to tobacco use, diet, and exercise. Traditional primary care providers are seldom equipped to provide population-based programs to discourage unhealthy behaviors and promote healthy ones involving community organizing and health education in a wide range of rural settings. Although many rural health departments have initiated highly successful programs to improve population health behaviors, many more rural areas lack the public health agencies, personnel and financial resources for this type of population health intervention.

Rural areas also face increased environmental health threats related to hazardous waste dumps, agricultural runoff, unsafe mining and logging practices, just to name a few. This creates additional challenges for communities with insufficient public health capacity.

Essential Public Health Services

- Monitor health status to identify community health problems
- Diagnose and investigate health problems and health hazards in the community
- Inform, educate, and empower people about health issues
- Mobilize community partnerships to identify and solve health problems
- Develop policies and plans that support individual and community health efforts
- Enforce laws and regulations that protect health and ensure safety
- Link people to needed personal health services and assure the provision of health care when otherwise unavailable
- Assure a competent public health and personal health care workforce
- Evaluate effectiveness, accessibility, and quality of personal and population-based health services
- Research for new insights and innovative solutions to health problems.

Source: Public Health in America, Public Health Functions Steering Committee, Public Health Service, 1994

Data and/or Background

In August 2001, the National Center for Health Statistics at the Centers for Disease Control and Prevention released the 25th annual statistical report on the Nation's health. The release of this report was a watershed event in efforts to address issues of rural public health in that it presented the first look at the nation's health status relative to community urbanization level. Specific findings, listed below, demonstrated a number of disparities in health status between rural and non-rural citizens.

- Teenagers and adults in rural counties were more likely to smoke
- Residents of rural communities had the fewest dental care visits
- Death rates for working-age adults were highest in the most rural and most urban areas
- Rural areas had a high percentage of residents without health insurance
- Residents of rural areas had the highest death rates for unintentional injuries in general and for motor-vehicle injuries specifically[1]

While it is clear that rural citizens experience significant health disparities, the vast majority of health-related research and practice efforts in rural communities focus on assuring access to health care services. While access to care is an issue critical to improving health status throughout rural America, of equal importance are issues such as health behavior, environmental health, and infectious disease surveillance. A necessary ingredient for addressing these issues is a strong rural public health infrastructure staffed by a well-trained public health workforce.

Infrastructure Issues[2]

Surprisingly, little is known on a systematic basis about the current status of the rural public health infrastructure. There is a dearth of information about the types of personnel and organizations providing public health services and the governance structure dictating how those services are delivered. Much of the information focuses exclusively on local public health agencies (LPHAs). Without a doubt, LPHAs play a critical role in providing a variety of services and programs in communities across the country. It is also widely recognized that the health of a community is dependent upon a range of organizations and activities, not all of which are directed by public health agencies. Many "public health" functions are conducted, at least in part, by hospitals, private practice physicians, and community groups, as well as an array of entities that are not focused strictly on health. The division of responsibilities in a community may be the result of state regulation, historical practice, local political dynamics, or other factors. As a result, an exclusive focus on LPHAs leaves out many communities entirely and gives short shrift to the full complement of public health services in other localities. Because of this lack of broad and complete knowledge about the status of rural public health infrastructure, the following discussion is largely limited, by necessity, to what we know about LPHAs. While the data clearly demonstrate that rural public health agencies struggle to assure comprehensive access to the full array of public health services, it must be recognized that areas without local public health infrastructure are likely to have even less capacity.

A study of local public health agencies conducted by the National Association of County and City Health Officials (NACCHO) identifies some of the distinctive features of agencies serving smaller or more isolated communities and how they differ from their urban counterparts (Hajat, Brown, and Fraser, 2001). Overall, 69 percent of LPHAs serve jurisdictions with populations less than 50,000 and 50 percent of all agencies serve jurisdictions with populations less than 25,000. In contrast, only 4 percent of all LPHAs serve large metropolitan areas with populations over 500,000. These categorizations are based on county population size, which can be problematic

given that LPHAs serve a variety of jurisdictional levels. In a more recent effort where rural was defined using Rural Urban Commuting Area Codes (RUCAs), 48 percent of LPHAs were classified as rural.[3]

LPHAs also vary with respect to the jurisdiction served and to the required reporting relationships. A recent survey found that 60 percent are county based, 10 percent serve a city or municipality, 7 percent serve a city/county, 15 percent a township, and 8 percent are multi county.[4] Different reporting relationships might include a local board of health, a city or county council, or direct reporting to a regional or state health director.

The scale of resources available to LPHAs varies greatly. Mean annual expenditures were $8.9 million for metropolitan agencies compared to $1.2 million for non-metropolitan agencies (median expenditures were $1.2m and $0.5m, respectively). For the smallest jurisdictions (less than 25,000 population), LPHA expenditures averaged $438,000 annually compared to the largest jurisdictions (500,000+ population) where expenditures were, on average, $66 million. Differences in the source of funding are also found, with non-metropolitan LPHAs deriving a smaller proportion of their overall resources from local government and a larger proportion from reimbursement for services. Limited local resources, paired with restrictions imposed by traditional Federal and State categorical funding, limit rural health department resources available to address serious threats to local health that fall outside of categorical grant guidelines.

As reported by the National Advisory Committee on Rural Health,[5] fewer than half of public health agencies have adequate communications and infrastructure systems. In Hawaii, for example, less than one-third of rural health workers had modems or access to on-line health resources. Unpublished data from a 1999 NACCHO survey showed that half of LPHA directors did not have continuous, high-speed access to the Internet at work. Further, almost 20 percent of LPHAs had no staff members who could search for and access public information on the Internet.[6] During the anthrax scare, when good communication was critical, the Internet connections of one of the local facilities in a particular state were insufficient to receive files from the CDC and the only way to ensure that the files were received was to deliver them by automobile.[7]

Some variation has been found across jurisdictions with respect to the priorities given to the provision of various services and the range of services provided. LPHAs in non-metropolitan areas were more likely to assign a higher priority to service delivery (home health, family planning, and behavioral/mental health) than were LPHAs in metropolitan areas. Despite the relative emphasis on service delivery, LPHAs in the smallest jurisdictions (< 25,000 population) were still less likely to provide specific adult and childhood immunizations, dental care, or prenatal care when compared to LPHAs serving larger areas.

Finally, recognition must also be given to the recent addition of resources aimed at shoring up the public health infrastructure in the event of terrorism. These resources present an unprecedented opportunity for rural public health to enhance overall capacities. Equal in importance to assuring a strong public health response system, however, is the issue of ensuring that our focus on terrorism response does not come at the expense of existing public health services and capacities. Recognizing that rural public health is already stretched thin, added responsibility for bioterrorism and emergency response has the potential to pull staffing from other critical public health functions. The National Association of County and City Health Officials recently conducted a survey of local health departments throughout the nation in which they asked the following question: "What has been the impact of smallpox and bioterrorism planning on other local public health services?" Fifty-three percent of the respondents said that it has taken away from their

other public health activities and 37 percent said that it strengthened them. As we strengthen our public health response, we must maintain our focus on those issues that we know have a positive impact on the health of our citizens. We must capitalize on the opportunity to utilize resources and capacities developed in the name of terrorism to strengthen other aspects of our public health system. This "dual use" of terrorism funding presents a significant opportunity to strengthen our rural public health infrastructure.

Workforce Issues[8]

Healthy People 2010[9],The Future of Public Health[10] and numerous other public health reports have identified the need for strengthening the public health workforce as a critical part of infrastructure development. Specific challenges that have been identified with regard to strengthening the public health workforce are[11]:

- Four out of five public health employees have no formal public health training
- Loss of disease surveillance capacity and sanitation oversight are behind recent national out breaks of preventable disease
- Rural health departments face a continuing problem attracting and retaining the proper mix of public health professionals
- Strategies are needed to attract a diverse team of skilled personnel to rural areas, including training programs

The public health workforce, defined as those making up the public health system, not just health departments, is made up of many diverse professions that include physicians, nurses, environmental health specialists, mental health professionals, administrators, health educators, and many others. Not all agencies define these positions in the same way. Enumeration efforts[12], however, have found the following to be true:

- The public health workforce is aging and retiring, especially within public health nursing
- The largest professions within public health are nursing and environmental health
- Metropolitan health departments have larger and more diverse workforces than non-metropolitan health departments
- Public health nurses, environmental health specialists, health educators, epidemiologist and administrators are in greatest demand
- In many rural areas, public health nurses provide the majority of care

The challenge of the public health workforce shortage is greater in rural areas as location, local educational opportunities, and a shortage of financial resources make recruitment and retention very difficult. While this is especially true for public health nurses, who play an essential role in providing rural public health services, rural areas also suffer from a shortage of dental, mental health and other critical service providers. The shortage of mental health professionals is especially critical as rural areas continue to grapple with the loss of factory and agricultural jobs and the subsequent stress this places on families.

In October 2001, NACCHO published a report entitled *Local Public Health Agency Infrastructure: a Chartbook*,[13] which looked at workforce differentials between metropolitan and non-metropolitan (rural) jurisdictions. Overall metropolitan LPHAs have an average of 108 FTEs vs. 31 FTEs in non-metropolitan LPHAs. While one could argue that metropolitan areas serve 75% of the overall population (NACCHO), local health departments in rural areas are often the only source of public health services in those communities.

Rural public health employees must wear many hats. As rural local health departments are likely to be the only source of public health services they are more likely to be delivering primary care services, such as child health care, in addition to essential public health services. In essence, rural public health employees must do more with less—less training, less staff, less technology and less training opportunities.

A 2000 report by the National Advisory Committee on Rural Health, "Stabilizing the Rural Public Health Infrastructure14," clearly outlined the workforce challenges in rural areas. The movement away from delivering personal healthcare services reduces Medicaid resources needed to support essential public health services. In addition, the loss of personal healthcare services erodes the already crumbling safety net. The report further notes, "The loss of community disease surveillance capacity, lack of oversight over local sanitation, and inadequate assurance of safe food and water supplies are behind many recent, nationally publicized outbreaks of preventable disease, such as hepatitis A and E-coli induced food poisoning and new outbreaks of tuberculosis. The growing prevalence of hepatitis C has put further burden on public health agencies as the number of people affected continues to multiply and practitioners struggle with diagnosing and treating the disease." This report preceded the events of September 11, 2001. Now there are even greater demands for a strong and prepared public health workforce.

Implications for rural public health workforce training and development are significant. While rural public health workers prefer local, in-person instruction to further their degrees, many are taking advantage of distance education and Internet-based learning opportunities that allow them to gain additional training in their rural home communities. Despite this progress, there remains a great need for increased investment in public health educational programs directed toward the current rural public health workforce.

Policy Recommendations

- The NRHA believes that all citizens and all communities should have comparable access to agencies and individuals that assure the provision of the essential public health services. Whether provided locally or on a regional basis, by governmental agencies or the private sector, every citizen has the right to expect access to the full complement of essential public health services in their community.

- The NRHA supports greater flexibility in the use of public health resources to respond to local public health priorities. The current public health system is limited by categorical funding which often forces it to address state and federal priorities rather than local needs. Public health works best when it is responsive to locally identified priorities. Funding streams need to support rather than inhibit this responsiveness.

- The NRHA recognizes that public health is a common good and that there is a governmental responsibility to assure access to essential public health services in every community. Regardless of who actually provides the service, there is a governmental responsibility to provide oversight and the governmental public health infrastructure must be strengthened to support this role.

- The NRHA supports efforts to utilize bioterrorism and emergency preparedness resources to build public health capacity in rural areas. It is recognized that rural areas have the potential to be affected by both direct targeting (e.g., agro terrorism) and indirectly as citizens evacuate targeted urban areas. A strong public health infrastructure will be needed to effectively

respond to both of these scenarios. Furthermore, a strong public health infrastructure will also serve rural communities in the event of other emergencies such as natural disasters and infectious disease outbreaks, while enhancing the ability to improve community health status through everyday provision of essential public health services.

- The NRHA supports enhanced training and continuing education of the rural public health workforce accessible to them in their rural communities, and appropriate for their current level of training and experience. A key ingredient to assuring adequate public health services is a competent public health workforce. Whether employed in the public or private sector, public health workers must be well versed in their field.

- The NRHA supports strengthening communication systems and technological capacities within the rural public health system. In order to effectively manage public health emergencies, conduct disease surveillance, or simply receive up-to-date public health information, rural public health must have access to advanced communications systems and technologies.

Conclusions

Advocacy for improved access to the complete range of public health services for rural residents is especially valuable in this era when health behaviors are the most important determinant of future health status and overall well being. In addition, local rural public health services are an important complement to the rural hospitals, emergency service providers, primary health care providers, and rural hospitals that NRHA has fought so hard to fund and preserve.

1) Health, United States, 2001 With Rural and Urban Health Chartbook. Hyattsville, Md: Centers for Disease Control and Prevention, National Center for Health Statistics; 2001.

2) Bridging the Health Divide: The Rural Public Health Research Agenda. Published by the University of Pittsburgh Center for Rural Health Practice, April, 2004. Rural Public Health Infrastructure section by Claudia L. Schur, PhD, NORC Walsh Center for Rural Health Analysis.

3) Hajat A, Stewart K, and Hayes K. The Local Public Health Workforce in Rural Communities. Presentation at the 2002 annual meetings of the American Public Health Association.

4) National Association of County & City Health Officials, Local Public Health Agency Infrastructure: A Chartbook, October 2001.

5) Rural Public Health: Issues and Considerations, A Report to the Secretary, US Department of Health and Human Services. The National Advisory Committee on Rural Health, February 2000.

6) Chapter 23 of Healthy People 2010.

7) US General Accounting Office. Bioterrorism: Preparedness Varied across State and Local Jurisdictions, GAO-03-373, April 2003, page 23.

8) Bridging the Health Divide: The Rural Public Health Research Agenda. Published by the University of Pittsburgh Center for Rural Health Practice, April, 2004. Workforce Development section by Janet L. Place, MPH, Southeast Public Health Training Center, UNC School of Public Health.

9) Centers for Disease Control and Prevention, Healthy People 2010, January 2000.

10) Institute of Medicine, "The Future of Public Health", The National Academy Press, Washington, DC, 1988.

11) Centers for Disease Control and Prevention, Public Health's Infrastructure: a Status Report, 2001.

12) Health Resources and Services Administration, National Center for Health Workforce Information and Analysis, Public Health Workforce Enumeration 2000, December 2000.

13) National Association of County and City Health Officials, Local Public Health Agency Infrastructure: A Chartbook, October 2001.

14) National Advisory Committee on Rural Health, Stabilizing the Rural Public Health Infrastructure

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