Rural Public Health Service Delivery: Promising New Directions

I describe variations in the structure and in the practice of rural public health and how rural communities meet the challenges of current public health practice, including primary methods of service delivery and partnership development.

I present examples of promising models for the creation of rural public health capacity—the ability of local health departments to carry out core public health responsibilities. (*Am J Public Health.* 2004;94:1678–1681)

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WHO PROTECTS THE PUBLIC'S health?

Ask 10 individuals and you may get 10 different answers. It is likely that local public health will be mentioned because of a recent series of public health challenges, including the anthrax events in October 2001 and concerns about severe acute respiratory syndrome and West Nile virus. Although the provision of public health services often takes a partnership approach (with the involvement of many nongovernmental organizations), the Institute of Medicine prompted a nationwide dialogue about government-based public health with its report on the future of American public health.[1] The institute's report stated that the government's role consists of 3 overarching functions: *assessment,* which is directed at the health status of our people; *policy development,* which guides how and what structures and practices will best serve the public's health; and *assurance,* which includes the systems, services, programs, and quality of public health. *Public Health in America*[2] provided a framework, "Essential Public Health Services," that has prompted a number of initiatives designed to concentrate attention on public health infrastructure, which consists of organizational capacity, workforce capacity and competency, and information and data systems.[3] A goal of *Healthy People 2010*[4] is to ensure that local health agencies have the necessary infrastructure for providing essential services effectively. If a healthy infrastructure contributes to healthy people, then *all* local health departments—rural and urban—need the basic elements of public health infrastructure.

VARIATION: THE SPICE OF LIFE

Local health departments date back to 1798, when Baltimore, Md, developed a local public health entity[5]; by 2002, there were approximately 3000 local health departments.[3] The variation among local health departments in terms of services, workforce, local politics, budget, and revenue sources is largely a function of size of the population served, state and local public health statutes, and local availability of entities that are able to assist with the provision of public health services.[6]

But, although health departments are often characterized by the size of the population they serve, a small population does not necessarily equate with rurality. The National Association of County and City Health Officials (NACCHO) has used the terms *metropolitan* (urban) and *nonmetropolitan* (rural). These terms encompass a complex continuum of functions and priorities. In general, health departments that serve fewer than 25 000 people (50% of all local health departments) report that environmental health, child health, and communicable disease control are their highest priority programs. Urban health departments provide 65% of adult and 64% of childhood immunizations, while rural health departments provide 81% of both adult and childhood immunizations. Differences are seen in certain environmental health services, such as preventing food borne outbreaks: 89% of urban and 70% of rural health departments provide food safety programs.[7] Keane et al.[8] found that local health departments privatized (23.5%) or contracted out (17.7%) at least 1 of their environmental health services. Privatization was less likely in rural public health jurisdictions, because rural health departments tend to provide more personal

health services (e.g., family planning, maternal health, prenatal care) than urban health departments. Also, urban health departments provide 30% and rural health departments provide 56% of laboratory services, community assessment is performed by 54% of urban and 66% of rural health departments, and 62% of urban and 75% of rural health departments provide community outreach and education.

When a health department does not directly provide an essential service or program, it should ensure provision of that service or program through other providers. Urban (54%) and rural (63%) health departments ensure services that they do not provide themselves, because only 15% of urban and 7% of rural health departments provide comprehensive primary care.

A health department's successful performance of the core functions of public health varies by size of the population served. Suen and Magruder[9] surveyed 2007 local public health jurisdictions about 20 key issues related to core function capacity. They found that local health jurisdictions that served populations of less than 25 000 had the lowest mean score on 19 of the 20 indicators. The authors attributed the performance scores to funding levels, planning capability, and adequacy of the public health infrastructure.

RURAL PUBLIC HEALTH PRACTICE: CHALLENGES AND MODELS

The services provided by rural health departments, and the models they use to deliver those services, are influenced by the challenges they face. In 1999, the US Senate Appropriations Committee requested an assessment of the public health infrastructure and the actions that would strengthen its key components. The Centers for Disease Control and Prevention found that local public health was lacking in basic data technology, laboratory capacity, and adequate capability to intervene in behaviorally related conditions.[3] Challenges for public health and health care today are particularly relevant among rural agencies, including capacity to manage health improvement, information technology, performance management, leadership and workforce capacity, and the integration of community health, managed care, and public health.[10] Models that deliver the essential services of public health and that meet these and other challenges have been applied to rural communities. Some models are specifically designed for rural communities that experience health disparities, chronic disease, and lack of access to care.

Models help us think about how to effectively manage the health status of rural populations and how to manage limited infrastructure. Access to care and utilization of comprehensive disease-related services are problematic for rural communities, which makes the application of models that promote collaboration among providers even more important.[11–19] Models that promote the effective use of public health infrastructure have been published elsewhere, particularly as they pertain to prevention,[20] workforce,[21–23] collaborative practice and planning,[23–25] preparedness,[25] and performance.[26–29]

Best parctices are often the first step in establishing models. A good example of best practices in rural public health is the Turning Point Initiative. Between 1996 and 2001, 41 communities across the United States were supported by the W.K. Kellogg Foundation and the Robert Wood Johnson Foundation in an effort to transform and strengthen public health infrastructure in order to improve the public's health. This initiative facilitated systems changes at the community level through the development of partnerships among local public health and other sectors and constituencies to share the responsibility for delivering prevention, promotion, and protection strategies.[30] Today, Turning Point continues to receive funding from the Robert Wood Johnson Foundation to promote best practices for strengthening public health systems. Rural communities have particularly benefited from the creation of new public health capacity at the local level.[31]

Resources have been developed to disseminate examples of models. The School of Rural Public Health at Texas A&M University, through the Southwest Rural Health Research Center, is host to Rural Healthy People 2010, which includes a literature review of key rural health concerns, models for practice, Volumes I and II of *Rural Healthy People 2010: Models for Practice,* and links to rural health resources.[32] Another excellent resource for rural health practice is a collaboration among the University of North Dakota Center for Rural Health, the Rural Policy Research Institute, and the Welfare Information Network called the Rural Assistance Center.[33] Also of interest are initiatives currently in process to improve the public health system and reports from public health leaders and practitioners about what they experience on a day-to-day basis.

WHAT THE LEADERS SAY

To facilitate a dialogue among public health leaders about the capacity of rural public health departments, NACCHO sponsored a rural public health focus group during the Association of State and Territorial Health Officers/NACCHO Annual Meeting on September 10, 2003. Approximately 25 individuals attended the focus group and provided important insights about rural public health practice and infrastructure. Along with the opinions expressed during this focus group, rural public health leaders discussed their experiences via a NACCHO rural health e-mail discussion group during November 2003. They answered questions about the differences between rural and urban health departments in the delivery of public health services (including the models and tools that work well), service delivery methods, and challenges. The primary differences cited between rural and urban agencies included lower funding levels, lack of medical specialists, limited access to grant funding, difficulty recruiting staff, lack of transportation, vast geographic area to cover for services, smaller hospitals with limited budgets, and at times fragmentation among scarce resources.

The responses confirmed findings from both the literature and the focus group. The dedication of these public health leaders to sustaining the availability of public health in rural communities despite the significant challenges was quite striking.

There are still concerns about how to effectively integrate public health and personal health services, such as primary care, home health, and dental care.

The rural public health leaders raised questions about the role of rural public health departments in the provision of direct service, because access to care is still a challenge for many of the communities represented by these public health departments. Both the predictability and the stability of financing for public health plague rural health departments, because single-use grant dollars have made it problematic to be responsive to community needs, seed money for new ventures is hard to come by, and the ability to create new full-time equivalents at the local level is difficult. Most public health services in rural communities are delivered by public health nurses through clinics and home visits, and the difficulty recruiting qualified public health nurses has become critical. Training opportunities are limited, particularly in the areas of population-based practice and grant-writing skills.

Because services that cannot be provided by the health department are often contracted out to other community providers, there is sensitivity about not duplicating services or competing with other providers. The rural public health leaders believe the provision of community health assessment data to other organizations for planning purposes is an important contribution by the local health department.

New public health threats, such as anthrax, smallpox, and West Nile virus, have proved to be both a challenge and an opportunity for rural public health leaders, because they have raised the interest of local policymakers. New funding from bioterrorism grants, although limited for many of the very rural counties, has brought some relief to underfunded infrastructure. While politics is always a challenge for public health officials, these leaders described the importance of developing relationships with policymakers and engaging them in the special problems of rural public health, including the need to advocate for stable financing.

The primary model for planning and delivering public health essential services is collaboration. According to the rural public health leaders, collaboration among community-based agencies is an asset for their rural public health departments. Collaboration takes many forms and ranges from formal partnerships to participation in community coalitions, where regional relationships are formed with nearby local health departments for epidemiology and surveillance.

INNOVATION: SMALL STEPS TO A NEW VISION

A number of important changes have strengthened the capacity of rural public health to deliver essential public health services, and 4 initiatives in particular exemplify how the collaborative model meets some of the challenges I have discussed. These initiatives were supported in part by Turning Point grants.

- The state of Oklahoma, with its geographic vastness and many rural communities, has suffered from some of the worst health statistics in the nation. Undaunted by the enormity of its problems, the Oklahoma State Health Department undertook a change of culture that embraced active community engagement, shared responsibility for health improvement with stakeholders (e.g., academy institutions, businesses, community agencies), and maximized flexible use of public health funding at the local level. Key public health and community leaders throughout Oklahoma and the Oklahoma State Board of Health built new relationships in order to create community coalitions, shift practice to population-based activities, and develop a new Office of Community Development. To date, Oklahoma has active community coalitions throughout most of the state that interact directly with the state and local public health systems to plan for the provision of essential public health services.[34]
- Nebraska, a state that had little local public health infrastructure, created local public health capacity where none existed. After receiving funds from the tobacco settlement, Nebraska refocused its public health effort on core functions and essential services through the creation of multicounty health departments across the state. The funding was made available through the passage of legislation that created a public health trust fund. Through a competitive process, community-based organizations were selected to lead the development of local public health departments. The regional nature of the new health departments provides rural Nebraska with the capacity to build leadership, create partnerships that address community health concerns, and develop intervention strategies and policies that meet identified needs.[35]
- In Haskell County, Oklahoma, 2 new structures were created to enhance the rural public health system, and an integrated health system is being developed to provide “one-stop shopping.” The county is one of the poorest in the country, where 20.5% of the population live below the poverty level compared with 12.4% of the US population. The 11 500 people in Haskell County suffered from some of the worst health statistics in Oklahoma, including disparate rates of cancer, heart disease, motor vehicle injuries, traumatic brain injury, and homicide. A partnership among the local health department, mental health department, hospital primary care service, and community health center has created the Kiamichi Health Authority Inc., a 501(c)(3) nonprofit Oklahoma corporation whose mission is to enhance public health in Haskell County. The authority will focus its efforts on public health data, grant writing, and acting as an agent to receive and administer grants (Mark Jones, Haskell County Health Department and Oklahoma State Department of Health, written communication, November 2003).
- Horry County, South Carolina, is the site of a local Turning Point initiative, where SharedCare–Access to Health Care was created to address the lack of access to care for approximately 15% of the population. The Waccamaw Public Health District, which is part of a coalition of 21 human services agencies and businesses, established SharedCare to serve the indigent and the underserved. SharedCare has obtained 501(c)(3) status and has organized a group of providers who provide primary care on a pro bono basis to eligible individuals (Covia L. Stanley, MD, executive director, Waccamaw Public Health District, written communication, January 2004).

CONCLUSIONS

Service delivery models and public health infrastructure capacity differ among urban and rural public health jurisdictions.

While many of these differences pose problems for rural communities, in some cases the differences are sources of strength. Networks created by local health departments and community agencies serve as powerful assets in rural communities for problem solving. Models that stress collaboration among rural public health departments and community partners hold promise for meeting the challenges of rural public health leaders. Because the models I have briefly described are in process, it remains to be seen whether they will produce the anticipated system enhancements and thus improve health status. Evaluating and testing models such as these must be a part of the public health research agenda. ■

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