

**ISSUE BRIEF**  
**Local Public Health**  
**at the Crossroads:**  
**The Structure of Health**  
**Departments in Rural Areas**

**March 2006**

Final Report  
KHI/R 06-01

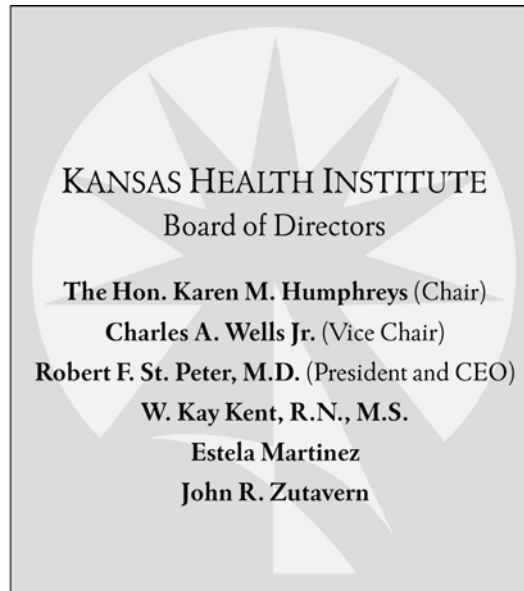
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This project was funded by the U.S. Health Resources and Services Administration  
(Office of Rural Health Policy), grant no. 1 R04RH03597-01-00



The Kansas Health Institute is an independent, nonprofit health policy and research organization based in Topeka, Kansas. Established in 1995 with a multi-year grant from the Kansas Health Foundation, the Kansas Health Institute conducts research and policy analysis on issues that affect the health of Kansans.

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## EXECUTIVE SUMMARY

Roughly one-half of all local public health departments in the United States are both small and rural. Sixty percent of local health departments that responded to a survey in 2000 said they were located in a non-metropolitan area, the designation for “rural” developed by the Office of Management and Budget and used for policy purposes by agencies such as the Center for Medicare and Medicaid Services.<sup>1</sup> Forty-eight percent of local public health departments were categorized as “rural” in 2002 using a more refined definition, Rural-Urban Commuting Area Codes.<sup>2</sup> One-half of local health departments responding to the 2000 survey served populations of fewer than 25,000 people, and 69 percent served populations of fewer than 50,000 people.

The Centers for Disease Control and Prevention reported in 2001 that significant disparities exist between urban and rural areas in regard to risk factors and health outcomes, with rural areas performing less well than urban areas.<sup>3</sup> Some rural areas face additional environmental health challenges from such sources as agriculture-related pollution and unsafe mining and logging practices. Although wide variations in local public health structures exist across the country, problems of infrastructure development are especially pronounced in many rural areas, where access to human and material resources is hampered by low population and isolation. As a consequence, many local health departments in rural areas are called upon to do more to protect the health of the people they serve, relative to urban health departments, but with substantially fewer assets.

### THE STUDY

With funding from the Health Resources and Services Administration’s (HRSA) Office of Rural Health Policy, we studied the structure of local health departments in rural areas. We conducted site visits to six geographically disparate states (Arizona, Georgia, Kansas, Louisiana, Pennsylvania, and Washington) and 12 rural counties within the states to obtain qualitative information about the structure of local health departments in rural areas. The local health department is but one piece of the public health puzzle and, depending on the state in which the department is located, local risk factors, and the community infrastructure available to support public health, the importance of a local health department to the final picture fluctuates greatly. The site visits conducted for the study provided an opportunity to examine a number of local

public health systems and to make some observations and recommendations about the state of public health structure in rural areas.

## OBSERVATIONS

Although the information obtained during the visits is not generalizable to all rural health departments, we believe that certain themes appeared with such regularity that it is worth bringing them to the attention of policymakers.

- **The structure of local public health departments in rural areas is extremely diverse.** The structure of local public health departments varies according to the prescriptions of state law, the services provided locally by state agencies, the health risk factors of the community, and the community infrastructure able to support public health activities. Consequently, focusing on *the community*, rather than health department, may be a more fitting unit of analysis for evaluation and research: What public health services are available to the community? How are those services provided? What services are needed and not available?
- **Local public health governing boards in rural areas are largely ineffective.** Only 25 percent of the local health departments we visited were governed by a local board of health. The rest were governed by county commissioners or had no local governance. While county commissioners may be broadly representative of the community, the governance decisions they make use decision rules that may be contrary to the population's health. Boards of health, on the other hand, may be easily co-opted by local health department administrators and physician health officers. There was little opportunity for broad-based public input into public health governance under any of the governance schemes we saw during our site visits.
- **Rural public health services areas based on existing administrative boundaries may not promote the development of sound public health infrastructure.** Some states have organized public health service delivery into regions or districts to partially address the problem of insufficient public health capacity in rural areas. In these arrangements, local health departments share the resources of state health agencies and rely on regional partners across local jurisdictions. None of the sites we visited had developed public health regions independently of state government, despite the favorable experience of hospitals, physicians, and other providers in rural areas in overcoming some of their environmental weaknesses through greater voluntary collaboration.
- **Inadequate investment in public health system development has taken place at all levels of government.** Among the primary reasons why most rural communities have not formed a local public health system are the lack of leadership and an organizational home for collaborative efforts. Grants often serve as a catalyst for both leadership and agency development. The various components of a public health system exist in most rural

communities, but they lack coordination among the parts and intentionality, a purpose or goal that frames the coordinated action.

## POLICY RECOMMENDATIONS

- **The federal government should define “local public health agency.”** Local variation among public health agencies is desirable, but organizational variation can also impede public policies that seek to integrate health and social services. From a policy perspective it is necessary to have uniform expectations of local health departments from community to community. This does not mean that they all have to look alike and that there is no room for variation. Institutional providers of services to Medicare patients, for example, have to meet conditions of participation to receive payments. The conditions of participation for hospitals are so elastic that they can be stretched to cover a 1,200-bed university medical center or the smallest rural hospital. The conditions of participation create a common definition of a hospital with basic structural features that are recognized across the country. Following the example of Medicare, the federal government could require local health departments to comply with a common definition of local health departments as a condition for receiving grant money.
- **Institute governmental incentives to restructure the delivery of local public health services in rural areas to enhance the availability of technical resources to local health departments and to promote broad-based community governance.** One way to enhance the availability of technical resources made available to local health departments is through regionalization. Regionalization can be accomplished from the top down, by state government dividing the state into administrative regions and providing services to counties from a decentralized hub. Alternatively, local health departments can be encouraged to develop networks in which they share needed resources across counties. Regardless of the method for better obtaining technical resources, it is important for rural communities to develop (or maintain) a source of efficient, broad-based community governance of public health.
- **Invest in rural public health systems development at the local level.** It is clear that the local public health department alone cannot, and should not, be solely responsible for improving the health of the community. To date, the federal government and most state governments have not invested in programs to create public health systems that include all community partners. Creation and maintenance of these systems are relatively low cost. Communities, individuals, employers, and government at all levels will reap the benefits of these investments for years to come.

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<sup>1</sup> National Association of County and City Health Officials. (2001). *Local Public Health Department Infrastructure: A Chartbook*. Washington, D.C.

<sup>2</sup> National Rural Health Association. (2004). *NRHA Policy Statement: Rural Public Health*. Kansas City, MO.

<sup>3</sup> Centers for Disease Control and Prevention. (2001). *Health, United States 2001, With Rural Urban Health Chartbook*. Hyattsville, MD.





## **LOCAL PUBLIC HEALTH AT THE CROSSROADS: THE STRUCTURE OF HEALTH DEPARTMENTS IN RURAL AREAS**

In 2001, the Centers for Disease Control and Prevention released an *Urban Rural Health Chartbook* as part of its annual report on the health status of the nation. For the first time on a national basis, the report described differences in population characteristics, health risk factors, and access to health care services across levels of urbanization. Generally speaking, rural counties and central city counties in metropolitan areas of one million or more residents had greater risk factors and poorer access to services than their counterparts in counties in large metropolitan areas that border the central city and counties in small (less than one million population) metropolitan areas. Many factors are likely responsible for these differences including demographic, economic, environmental, and social characteristics of the counties. The number of children in families, the proportion of elderly (and the probability that they will live alone), economic resources, health-related behaviors, environmental and occupational exposures, and the availability and use of health services all vary with urbanization.<sup>1</sup> These determinants of health contribute to poorer health status for residents of rural and large central city counties.

Local public health departments are charged with the duty of improving the health of their communities. Public health services in the United States began in large central cities to combat infectious diseases, and their structures are long established, highly visible, and well documented. On the contrary, little is known about the structure of rural public health departments.<sup>2</sup> This gap in knowledge is noteworthy because approximately one-half of all local public health departments in the United States are both small and rural.

Sixty percent of local health departments that responded to a survey in 2000 said they were located in a non-metropolitan area, the designation for “rural” developed by the Office of Management and Budget and used for policy purposes by agencies such as the Center for Medicare and Medicaid Services.<sup>3</sup> (Forty-eight percent of local public health departments were categorized as “rural” in 2002 using a more refined definition, Rural-Urban Commuting Area Codes.<sup>2</sup>) One-half of local health departments responding to the 2000 survey served populations of fewer than 25,000 people, and 69 percent served populations of fewer than 50,000 people.<sup>3</sup>

Although wide variations in local public health structure exist across the country, problems of infrastructure development are especially pronounced in many rural areas, where access to human and material resources is hampered by low population and isolation. As a consequence, many local health departments in rural areas are called upon to do more to protect the health of the people they serve, relative to urban health departments, but with substantially fewer assets. The purpose of this study, funded by the Health Resources and Services Administration's Office of Rural Health Policy, is to begin to explore the structure of rural public health departments as one step along the path to improving their performance.

## **STUDY: LOCAL PUBLIC HEALTH DEPARTMENT STRUCTURE**

The chief aim of the study was to explore whether structural elements of local public health departments (e.g., financing and staffing) were similar enough across the country to allow a survey of organizational structure in rural areas to be conducted. If so, structural variables would then be modeled against various community health outcomes to determine whether certain local public health structures were predictive of desirable health outcomes.

To judge whether local health departments had enough similar structures to warrant a subsequent survey, we conducted site visits to 12 local health departments in six geographically diverse states: Pennsylvania, Georgia, Kansas, Louisiana, Washington, and Arizona. The selection of states stressed geographic diversity and the range of state-local health relations.\* Within each state, two counties that differed substantially from one another in terms of demographics, economic development, and geography were selected for site visits. The site visits counties were La Paz and Mohave counties, Arizona; Laurens and Telfair counties,

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\* Four types of state-local public health department relationships have been identified:

- **Centralized system:** The local health department is operated by the state health agency or state board of health.
- **Decentralized system:** Local governments have direct authority over the local health department, with or without a local board of health.
- **Mixed system:** Local health services are provided by a combination of the state agency, local government, boards of health, or health departments in other jurisdictions.
- **Shared system:** The local health department is operated under the shared authority of the state health agency, local government, and a board of health (Fraser, 1998).<sup>4</sup>

We combined mixed and shared system and selected states representing one centralized (Louisiana), two decentralized (Kansas and Washington), and three shared/mixed models (Arizona, Georgia, and Pennsylvania). This distribution approximates the distribution of state-local public health department relationships types found across the country.

Georgia; Crawford and Gove counties, Kansas; La Salle and Vermillion parishes, Louisiana; and Grays Harbor and Kittitas counties, Washington. All of the counties were considered non-metropolitan counties (i.e., rural) prior to the Office of Management and Budget adoption of standards defining Micropolitan Statistical Areas (December 27, 2000). Under those standards, Adams, Crawford, Grays Harbor, Kittitas, Laurens, and Mohave counties are considered Micropolitan Areas because the county has an “urban cluster” with a population of at least 10,000 but less than 50,000.

In each state, we interviewed state department of health personnel responsible for state–local health relations; local health department personnel; governing board members in two counties; and the hospital administrator of the largest hospital in each of the counties visited. The remainder of this report highlights observations resulting from the visits and suggests recommendations for improving the delivery of public health services in rural areas. A complete copy of the report including methods, findings, and case studies is available upon request.

## **OBSERVATIONS FROM THE CASE STUDIES**

The most obvious finding from the study is that considerable variation exists among local public health departments both within states and across states. They vary along every dimension of structure we examined: size (geographic area and population served), governance, funding, facilities, staffing, services, system development, planning, and evaluation. One primary determinant of variation is the state–local relationship. In states where the public health relationship between the state department of health and the local health department is centralized, shared, or mixed, there is often a regional or district office interposed between the two levels. The regional or district office typically has jurisdiction over a number of counties and is staffed by a physician, who serves as the medical director or health officer for each of the counties, and a cadre of topical nurse specialists who consult with county-level nurses or provide services directly. These regional or district staff members, in turn, communicate local needs and challenges to the state health agency.

Local health departments operating under this condition typically have smaller staffs, but they also have more timely access to greater resources through the regional office than public

health departments serving similar sized populations and operating more autonomously. While specific public health subject expertise is greater under this model, it is not uncommon for the nuances of community context to be lost on regional office staff. One would expect local nurse supervisors to provide the proper context, but due to small staff size, the local nurse supervisor, who is often a home-grown first-among-equals, has little unclaimed time available to serve as the community specialist. Local public health departments operating under regional direction may also offer a smaller array of services than independent departments. This is because the state department of health (or state law) determines the set of services that will be delivered at the local level, and there may not be an opportunity for local variation or a means of financing local choices. To arrive at a statewide set of services to be implemented locally, state departments of health select those that are needed by all populations. This lowest-common-denominator approach to health planning necessarily narrows the scope of services offered.

In states where public health services are decentralized, local health departments typically have fewer expert resources, but somewhat larger staffs relative to their population, than local health departments that report to regional or district offices. Decentralized local public health departments usually have a public health manager, who may or may not be a registered nurse and who devotes most of her or his time to administration. These health departments typically have a contractual relationship with a physician in private practice in the community. The engagement of the physician in the activities of the local public health department varies widely, but in most communities in which the model is employed, the contract physician serves as a conduit from the department to both the medical community and the local hospital. Decentralized local health departments usually offer a wider array of services than departments supervised by regional offices. Many of the services provided by regionally controlled local health departments are funded by the state pass-through of federal categorical grants. These grants are virtually identical from state to state (e.g., WIC, tobacco cessation, bioterrorism preparedness). Therefore, decentralized local health departments have access to the same programs and sources of funding as regionally controlled departments. In addition, because they are locally controlled and, in part, locally financed, the decentralized departments can also offer other services needed by the community. Because decentralized local health departments are more dependent on the good will of the community for legitimacy and resources, they are more aggressive in pursuing alternative

sources of income—such as government and private foundation grants—to fulfill identified health needs.

The regionally controlled departments tend to have dense business documentation systems — policies, procedures, forms, and so on—to aid in organizational and clinical decision making. These business documentation systems do not vary from site to site, but are used uniformly across the entire state, subject to the state department of health’s control. Decentralized local health departments are less adept at documenting policies and procedures, relying instead on custom and an apprentice-like form of staff orientation and training. Those that have documented their business and clinical systems are of widely varying quality, dependent both upon the clinical expertise of the writer and the technical writing ability of the clinician. As local health departments more frequently become subject to internally and externally imposed standards, accreditation, and licensing, the need for business documentation among decentralized health departments will grow. Smaller and weaker independent local health departments will likely have the greatest problem meeting national performance standards. These local health departments might find it difficult to remedy documented deficiencies, given their limited financial and human resources.

Clearly, both organizational types of state–local relations have something to offer the people they serve. From a purely organizational standpoint, it seems possible to combine the benefits of regionalization—access to specialists and improved business documentation—with the benefits of decentralized departments—local control and programmatic variation. However, in our limited survey of health departments that report to a regional office, we found no examples of organizational models that offer the local health departments substantial autonomy within a regional framework. We found only the most tentative examples of voluntary regionalization among decentralized health departments. The failure to date to search for a middle way between prescriptive regionalization and unassisted autonomy of local health departments in rural areas appears to be a missed opportunity.

One commonality that spans the local public health departments studied is the longevity of staff. There is very little turnover among the staffs of the departments we visited. This is

desirable according to several department directors we interviewed because of the difficulty of recruiting qualified staff to fill vacancies. As a group, the staffs appear to be loyal to their communities and departments and dedicated to the practice of public health as they understand it. Registered nurses employed by local health departments typically earn less than nurses employed at the local hospital. Health department nurses, unlike hospital nurses, work only Monday through Friday and only on the day shift.

While model type is a key determinant of structural variation, there is also considerable variation within the four types. Interested readers are urged to consult the findings and case studies in the full report. In the next sections, we will discuss specific elements of structure from the perspective of our case study findings.

## **Population Served**

While all 12 of the local public health departments studied served only one county, the populations of the counties and the geographic size of the counties varied considerably. The largest county geographically, Mojave County, Arizona, also had the largest population, 171,367 people. A population of that size in an average-sized county would surely push it to the metropolitan side of the ledger, but Mojave County has a population density of only 12.9 persons per square mile. Gove County, Kansas, has the smallest population of any of the sites visited. Its population is 2,910; it has a population density of 2.7 persons per square mile. Gove County (1,072 square miles) is more than twice the size of Adams County, Pennsylvania (520 square miles), the county with the greatest population density in our study, 185.5 persons per square mile. The geographic size of a county, the population, and its density all affect other aspects of public health department structure.

At least one-third of the counties we visited had unstable populations that swell and decline over periods of time as short as a weekend and as long as one or two seasons. La Paz County, Arizona, is the most extreme example from the study sites, but other sites could also illustrate the point. La Paz County has fewer than 20,000 permanent residents, but during a three-month period each year, two million additional people pass through the county to attend one or more of eight international gem and mineral shows. At any time from January through March, the largest

community in the county is the virtual city of recreational vehicles and tents that dot the desert floor outside of Quartzite, Arizona, the home of the gem shows. The local public health department provides population-based services not only to the permanent residents of the county, but also to the highly mobile visitors to the county by inspecting each of a battalion of itinerant food vendors who set up shop to feed the temporary residents, and by offering flu vaccines to high-risk elderly visitors from northern climes who are away from their medical homes. Standard population estimates, as reported by the Census Bureau, may not tell the full story relevant to public health in rural counties that are popular tourism and recreational destinations.

With limited success, we attempted to minimize the variation in population among the study counties by expressing population in terms of the number of people served per public health department full-time equivalent employee. Because some of the services in shared, mixed, and centralized local jurisdictions are provided by regional office staff, state health department staff, and other non-health state agency staff, and because no methods exist for allocating the effort expended in providing these shared services to the local health departments, the population-to-staff ratios of shared, mixed, and centralized local health departments are much larger than those of decentralized local health departments. Consequently, comparisons were not useful.

## **Facilities**

Most of the local health departments studied were located in facilities provided by county government. Although the square footage of the sites varied, the space provided was reported to be adequate in all of the departments but one. Space in the health departments studied was used similarly, divided into waiting areas, examination rooms, offices, conference areas, bathrooms, and space for record and supply storage. Most health departments did not have laboratories. Difficulty complying with Clinical Laboratory Improvement Act regulations was cited as a primary reason. Departments that provided a greater number of primary care services, such as the health departments in Georgia, had more examination rooms than ones that did not. Some of the departments had access to county-owned auditoriums or larger meeting halls where group meetings could take place.

Almost all of the health departments visited provided services at other locations, such as senior centers, schools, shopping malls, and county office buildings, but few had permanent satellite facilities or mobile facilities. Departments that used mobile facilities tended to share them with another entity, such as a private provider or a health department in another county. Clinical staff and health promotion staff typically occupied different areas of the department. In departments where additional space was needed, health promotion, disaster preparedness, and environmental health staff were spun off to additional rented space. Clinical services and administration remained in the space designated and advertised by signage as the county health department.

## **Governance**

Governance of local public health departments often falls to the primary elected governmental entity in the county, a board typically composed of three individuals. When county boards provide the governance for local health departments, they normally do so at regular county board meetings where the business of public health is but one agenda item. Although the public health department administrator, and often the contracted medical director, attend county board meetings and make reports to the board members, public health issues do not consume large portions of the agenda. County board members tend to take a more active role in public health when a constituent makes a complaint; when a regulatory action by the health department threatens the normal business activity of a local firm; when an event causes the health department to spend money beyond the annual budget allocation; and when the public's health is susceptible to some clear and present danger. Otherwise, interest in public health is simply a matter of county finances as epitomized by budget preparation. During budget preparation, health department administrators often come before the county board to explain their programs and justify their expenses.

The second most common form of governance among the 12 counties we visited was governance by a board of health. In Georgia, state law prescribes the composition of a seven-member board of health that is broadly representative of various interests in the county. Washington, the only other state we visited that permitted governance of county health departments by local boards of health, allowed two options. Either the county commissioners can



choose to sit as a board of health or the commissioners can elect to augment their numbers by selecting two community members. In the first case, county commissioners often gavel themselves out of commission meetings and into board of health meetings to conduct health department business. This practice is virtually indistinguishable from merely conducting public health business as a regular county commission meeting agenda item. Some county commissioners in Washington, however, take their board of health responsibilities more seriously and meet as a board of health separate from the time of county commission meetings. Those county commissions *cum* boards of health that feature expanded membership almost always meet independently of other county government business.

One-third of the counties we visited had no local governance. Governance was provided by the state and administered by regional or district offices. Under such an organizational arrangement, one might expect there to be an active local advisory committee showering the local department and the regional or district office with recommendations for improving community health. That expectation was not fulfilled: None of the counties in our study that lacked local governance sought community input through the vehicle of local public health advisory committees. The failure to do so is a lost opportunity. A local advisory committee might be the fulcrum by which community members are induced to begin to form a true public health system within a community.

## **Budget and Finance**

Sources of local health department financing did not vary greatly among the 12 sites we visited. All received funding from state government. Typically, the funding came in two forms. One form was a grant or a contract to fulfill certain public health obligations of the state. The extent to which state obligations were passed to local jurisdictions varies from state to state. The other form of state funding was support for categorical programs, such as tobacco cessation, WIC, and bioterrorism preparedness. Technically, these are not state monies at all, but federal funds that are passed through the state to the local departments. Unless local health departments apply for and are awarded competitive grants by federal agencies such as the CDC or HRSA, most do not receive federal funding directly.

Counties also provide funding to local health departments. In some cases, county governments are expected to make up the cost difference between the state's contribution and the full cost of providing prescribed services. In other cases, county government enlarges the scope of services and pays for them—wholly or in part—out of county revenues. Examples of program expansions might be care to indigents or county prisoners, or both, and non-emergency medical transportation. Some services provided to individual patients are provided on a fee-for-service basis. Fees for primary care health services, vital records, and environmental health inspections are a source of funding for these services. The degree to which local health departments rely on fee income depends on numerous variables, including the range of services offered, alternative methods in the community for obtaining the services, and the ability of the clientele to pay for the services.

The final source of income for local health departments is money from donations, gifts, and grants. Decentralized local health departments are more aggressive than ones controlled by regional offices in seeking donations, gifts, and grants from private and public grant-making organizations. As suggested previously, decentralized health departments are more attuned to the needs of their communities and feel more accountable to them than do health departments that are not decentralized. Because many of the additional services that decentralized health departments make available to the community are not fee-based (even if they are individual health services), the departments must seek alternative funding to operate them. Grant funds are a way of planning for and establishing new programs, but few grant funders will make awards to sustain routine operations. This is where corporate and individual giving comes into play. Although some of the health departments we profiled accepted gifts and donations (both property and cash), none had an active fund-raising program.

## **Organizational Structure and Personnel**

Most of the organizational structures of local health departments are relatively flat, as befits their size. In most, an administrator has two or three subordinates reporting directly to him or her. As mentioned previously, clinical services and disease prevention services often are separate. This organizational feature divides individual health care services from population health care services. Immunizations, sexually transmitted diseases and HIV/AIDS clinics,

tuberculosis services, and the like fall on the clinical side of the organization. Personnel engaged in disease surveillance and investigation, health promotion, and assessment and planning activities report to the person in charge of population-based services. Local health departments with an environmental health component usually organize it as a separate division within the department with a division supervisor who reports directly to the health department administrator. Although environmental health is a cornerstone of public health, environmental health staff rarely report to the person responsible for other population health activities. New functions that are externally imposed upon local health departments, such as bioterrorism coordination, sometimes have a difficult time finding an organizational home. In our site visits, we saw that the person hired for bioterrorism planning and coordination was often appended to an existing organizational chart as a division unto himself or herself or in a staff relationship to the department administrator. Rarely was the bioterrorism function assigned to an existing division of the organization.

Organizational relations with regional or district offices are more complex. In regional offices headed by employed physicians, the physician is often the titular head of all of the local health departments within his or her jurisdiction. In regional offices not headed by a physician, a nurse supervisor may assume executive responsibility for a number of health departments within the region but typically not clinical responsibility. Under both organizational patterns, local public health staff draws directly on the consulting staff of the regional office without seeking authorization from either the nursing supervisor or the regional administrator. Rather, cross-organizational linkages exist among employees at lower levels of both organizations, who seek each other out to better perform their jobs.

Regardless of the state-local health department relationship, state departments of health provide information and educational opportunities to local departments to a major degree. All of the local health departments we visited allow their employees to attend state-sponsored education programs and compensate them for travel expenses. Most local health departments also provide reimbursement for continuing education seminars, workshops, and college classes. Because of the expense of travel, many restrict attendance to in-state programs.

State associations of local health departments provide an ongoing forum for problem-solving and sharing of best practices among local departments. Nevertheless, three of the six states we visited did not have a state association of local health departments. Membership in national public health organizations by local health department administrators was unusual.

Overall, comparison of staff levels across local health departments suffers from the inability to allocate regional office and state level efforts that directly benefit the community to the local health department. Failure to recognize the contribution of these public health workers to the health of county residents overstates the role of county health departments and understates the resources employed to do the job. Matching effort with departmental outcomes is a major problem facing researchers who want to survey the structural characteristics of local health departments.

## **Services**

Basic services provided in almost all local health departments include immunizations, tuberculosis and sexually transmitted disease diagnosis and treatment, HIV-AIDS testing, counseling, and education. Many departments also offer traditional public health services such as infectious disease surveillance, and environmental health services including rabies control and restaurant, septic tank, swimming pool, and well-water inspections. Some departments inspect and license personal care homes and childcare facilities and some initiate and maintain vital records. Most local health departments receive categorical grants for state or federally funded public health programs such as chronic disease prevention, community health planning, diabetes care, family planning, WIC and other nutrition programs, tobacco use prevention and cessation, stroke and heart attack prevention, and postnatal home visitation and other maternal and child health services. Some local health departments have relationships with local school districts to provide or supervise school health services. In the wake of the terrorist attacks in New York City and Washington, D.C., almost all local public health departments received funding for emergency preparedness and bioterrorism response planning. Few local health departments are the provider of last resort in the community. The departments that are the provider of last resort are more prevalent in areas without an adequate health care safety net. They offer personal health care services such as well-baby visits, pap smears and breast examinations, pregnancy testing

and perinatal case management, and oral and mental health care services and management. Finally, local health departments offer a variety of services that are idiosyncratic to their location and governance. Examples from the 12 sites we visited include non-medical transportation, a needle exchange program for intravenous drug users, out-of-county nursing home payment for medically indigent persons, sickle cell anemia screening and counseling, and mammogram and colonoscopy clinics.

Services, like staffing levels, are difficult to measure across local health departments because in some models of state-local relations services may be provided by regional or state government. In others, particularly decentralized models, a wider variety of services, some only tangentially related to public health, are provided. In the case of counties that experience in-migration of transient populations, such as tourists, outdoor enthusiasts, seasonal residents, and migrant workers, public health services may be extended to populations that are not permanent residents of the county.

## **Information Systems**

Despite claims to the contrary by other researchers investigating the information technology resources of rural public health departments,<sup>5</sup> in our 12 site visits we found that all of the local health departments visited used personal computers to a surprising degree. All departments had at least one computer. Only one of the 12 had less than one computer for every two employees. One-half of all departments we visited had more computers than staff members. Five of 12 had between 0.50 and 1.00 computers per staff member. Not only was access to a computer relatively high in the departments visited, the departments took care to see that the technology they used was relatively current. Most departments had scheduled replacement of computers at two- to three-year intervals.

Information technology plays an integral role in public health assessment, assurance, and policy development activities as well as system management. All local health departments studied had access to high speed Internet services and all used e-mail and had access to the Internet through a Web browser. Fewer used statistical and geographic information system software. Only one of the six states did not have an automated health alert network and

automated disease surveillance system. In at least one state that used regional offices, the local health department reported health information to the regional office either electronically or by telephone and the regional office in turn communicated electronically to the state department of health. Despite the fact that Web pages are excellent information dissemination vehicles, fewer than one-half of the local health departments studied had their own Web sites. Only one of the five that had a Web site made a conscious effort to promote it through electronic and print advertising.

## **Public Health Systems**

Local health department administrators were asked whether they had a relationship with several possible public health system partners and, if so, to describe the relationship. All of the local health departments had a relationship with one or more of the possible system partners, but the character of the relationships varied by the type of partners. In only two of the 12 counties visited did anything resembling a public health system exist.

All of the local public health departments studied had a relationship with the state department of health. In centralized models and other shared/mixed models that featured a regional office, the relationship of the local department to the state department of health was strong but indirect. In other words, the state department of health defined a command-and-control relationship with the local departments that was delegated to the regional offices to implement. Most of the local departments' "state" contacts were carried out by the regional office acting as surrogate for the state. In decentralized models of local–state relationships, the contacts or transactions between local departments and the state department were fewer than those in the other models.

Regardless of model type the relationship is based on the exchange of two key resources, money and assistance. The exchange of money between the state department of health and local departments was already discussed, so the discussion here will focus on information. There are two types of assistance that flow from the state health department to the local health department: programmatic and technical. The programmatic assistance is often tied to the categorical grants made by the state departments to the local departments. Because most local public health departments do not have access to the range of breaking public health news available to the state

department, the state department shares information it deems relevant with the local health departments. Many local public health administrators do belong to professional societies or trade associations, so the link with the state public health department is a key source of information.

The second type of assistance is technical and usually clinical in nature. (On occasion, legal advice might also be sought.) Epidemiological and environmental health advice are the two most common types of technical assistance sought by local health departments. The state department of health laboratory is also a source of service and technical assistance to local departments. Local public health department staff tends to give high marks to state staff that provides the kinds of technical assistance it needs. The relationship with state categorical program managers and staff and local department staff is often more conflictual.

In states where the department of environment is separate from the department of health, local health departments have relations with both. In some states, public health services are assigned to other state agencies. For example, in Pennsylvania, restaurant inspections are conducted by the Department of Agriculture.

The strongest community ties of many local health departments are with other branches of county government. This is because in many areas the jurisdiction for public health overlaps with the jurisdictions of other departments of county and municipal government, such as law enforcement, public works, and animal control. The fact that many public health departments are governed by county commissioners may also influence the frequency with which local public health departments work with other county government departments. These organizations typically share information and coordinate activities. There appears to be little sharing of resources and no documentation formalizing these relationships.

Overwhelmingly, the sites visited reported no formal linkages with the medical community other than those that occur through the medical director or health officer. In states with regional offices managed by a physician, the regional director often attends county medical society or hospital medical staff meetings and discusses public health topics such as bioterrorism preparedness. In one local health department studied for this project, public health nurses visit

private physician offices to share information about local public health programs. Most public health departments have a list of physicians willing to treat low-income patients to whom they make referrals. Aside from these contacts, local health department relationships with community physicians were episodic and unplanned. Given that physicians occupy a key position in the disease surveillance system of public health, a more explicit arrangement between the health department and local physicians would seem desirable.

We met with the hospital administrator of the largest hospital in the county during all of our site visits. We assumed that if a public health system existed within the county we were studying, and if we wanted to find evidence of it, the hospital would be a good place to look. Unfortunately, most contact between the hospital administrator and the local public health department directors centered on emergency preparedness and disaster planning.

Without identifying them as such, we asked hospital administrators which of the Institute of Medicine's essential services of public health the hospital provided (yes or no) and the degree of the hospital's involvement (5-point scale from "hardly at all" to "a great deal"). Overall, the hospital administrators had a favorable view of their hospitals' contributions to public health. All 12 hospital administrators interviewed said the hospitals were involved in informing, educating, and empowering people about health issues; developing health policies and plans; linking people to needed health services; and assuring a competent public health and personal health care workforce. Eleven said they mobilized community health partnerships, and 10 said they diagnosed and investigated community health problems. The lowest response (seven hospitals responded "yes") was to the question "Do you monitor health status to identify community health problems?"

Hospital administrators rated relatively high their involvement in linking patients to needed services, an average of 4.2 on a 5-point scale. The next highest score for involvement by the hospital in public health functions, an average of 3.7, was accorded to informing, educating, and empowering people about health issues and evaluating the effectiveness, accessibility, and quality of personal and population-based health services. The lowest score (2.8) was for diagnosing and investigating community health problems.



The development of more formal public health linkages between local health departments and rural hospitals in rural communities would seem to be a first step in the development of a community public health system. That the health departments have not done so may indicate their belief that they alone are fully responsible for the delivery of essential public health services, as well as an ignorance among most rural hospitals about the functions of public health.

## **Planning**

Community needs assessments are important public health tools for monitoring health and diagnosing and investigating health problems in a community. Eight of the 12 counties visited had conducted full community needs assessments in 2004 or 2005. In the case of four of these eight counties, the actual assessment was made by regional health office staff and shared with the local health department. Almost all of the sites had performed targeted needs assessments, looking at one aspect or another of the health of the population. These investigations typically focused on a known need, such as the lack of mental or oral health care services, and the assessment was an attempt to quantify the need. Although needs assessments are intended to serve as one of the beginning steps in a planning effort, the departments studied did not always follow through with the additional steps of the process, and there was no evidence presented that the health departments had played significant roles in helping to satisfy identified needs.

## **Evaluation**

Several organizations and organizational collaboratives have developed or are developing evaluation tools for local public health departments. The National Association of County and City Health Officials, the local public health department trade association, developed the Assessment Protocol for Excellence in Public Health (APEXPH) by which health departments can measure their own performance. A coalition of national public health organizations led by CDC developed national public health performance standards, and a number of states have instituted state-based programs of local health department performance measurement.

The rural local health departments in the study were asked if they had ever participated in an assessment of department performance using a standardized assessment instrument created at

either the national or state level. Only four of the 12 said that they had used a standardized instrument to assess department performance. Two of the four used an instrument developed by the state, and the other two used nationally developed instruments and procedures. The two local health departments using the instrument developed by the state were required by the state department of health to participate in the measurement program.

## **POLICY RECOMMENDATIONS**

Most local public health departments in rural areas, with the assistance of state departments of health, do a satisfactory job of protecting the health of the populations they serve from contagious diseases and injuries. The nature of public health, however, is changing just as the environment around it has changed and will continue to change. Improvements in transportation, communication, and information technology have improved the ability of public health departments to react to problems and may have released them somewhat from their local moorings. Continued advance in technological supports, increased prevalence of chronic disease, and changing demographic and economic patterns in many rural areas will substantially alter which public health services are provided at the local level and how they are delivered.

- **The federal government should define “local public health agency.”** Local variation among public health agencies is desirable, but organizational variation can also impede public policies that seek to integrate health and social services. From a policy perspective it is necessary to have uniform expectations of local health departments from community to community. This does not mean that they all have to look alike and that there is no room for variation. Institutional providers of services to Medicare patients, for example, have to meet conditions of participation to receive payments – but the conditions of participation for hospitals are so elastic that they can be stretched to cover a 1,200-bed university medical center or the smallest rural hospital. The conditions of participation create a common definition of a hospital with basic structural features that are recognized across the country. Following the example of Medicare, the federal government could require local health departments to comply with a common definition of local health departments as a condition for receiving grant money.
- **Institute governmental incentives to restructure the delivery of local public health services in rural areas to enhance the availability of technical resources to local health departments and to promote broad-based community governance.** One way to enhance the availability of technical resources made available to local health departments is through regionalization. Regionalization can be accomplished from the top down, by state government dividing the state into administrative regions and providing services to counties from a decentralized hub. Alternatively, local health

departments can be encouraged to develop networks in which they share needed resources across counties. Regardless of the method for better obtaining technical resources, it is important for rural communities to develop (or maintain) a source of efficient, broad-based community governance of public health.

- **Invest in rural public health systems development at the local level.** It is clear that the local public health department alone cannot, and should not, be solely responsible for improving the health of the community. To date, the federal government and most state governments have not invested in programs to create public health systems that include all community partners. Creation and maintenance of these systems are relatively low-cost. Communities, individuals, employers, and government at all levels will reap the benefits of these investments for years to come.

There is no question that every community of every size in every corner of the United States needs and deserves the full protection of public health services. How those services are most effectively provided, however, remains a topic of debate. Within a well-formed public health system there will always be a role for government-financed public health delivery at the local level. As the federal and state governments are chief funders of public health services, they need to participate with rural communities in shaping public health systems that are both efficient and responsive to the needs of rural residents.

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