

Regionalization in Local Public Health Systems



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SOLUTIONS-ORIENTED CONVERSATIONS IMPROVING HEALTH POLICY

Heightened fears over threats to public health after September 11, 2001, led many states to step up preparedness efforts by enhancing existing public health services and creating new ones through regionalization. Even before the attacks of September 11, however, many state and local health departments began experimenting with regionalization. They used a variety of methods to identify and leverage or pool available resources within given geographic regions to enhance public health services and provide them in a more

“[In California], we found widespread variation among local health jurisdictions with respect to their ability to respond to infectious disease outbreaks and other public health threats.”

—Nicole Lurie, MD, MSPH, RAND, Testimony Before the California Senate Committee on Health and Human Services, 2004

efficient manner. The rationale for these regionalization efforts, as well as the way they are structured and implemented, varies considerably. Although they do not provide definitive answers, a series of comparative case studies in Massachusetts, Northern Illinois, Nebraska, the San Francisco Bay area, and the National Capital Region (the Washington, D.C., metropolitan area) suggests that regionalization efforts can improve both preparedness and public health in general.¹

Rationale for Regionalization

The federal government responded to rising concerns about bioterrorism and public health preparedness by investing

billions of dollars over the past few years in the public health infrastructure at the state and local levels. Many states used these federal dollars to establish intrastate regional structures, spending money to develop everything from shared training programs to new regional capacities, such as epidemiology offices. Some regions standardized procedures to enable sharing of resources, and others developed coordinated emergency response plans. Preparedness is not the only goal of regionalization of public health resources, however. In California, for example, health departments in the San Francisco Bay area began working together in the 1990s to eliminate health inequities. This regional collaboration includes public health directors, health officers, and other staff from Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Solano counties, and the City of Berkeley (see Figure 1).

In the communities studied, the impetus to form regions arose from a combination of factors: a crisis or perceived need for a coordinated response, a need to build local public health capacity, and an effort to use federal preparedness funds efficiently. In Massachusetts, for example, the state health department established seven regions and 16 sub-regions as part of its preparedness efforts in 2002. The Massachusetts Department of Public Health funds a coordinator for each region and distributes money to each sub-region based on an agreed-upon scope of work. The health department created these regions primarily because federal preparedness funds would be spread too thin to be effective if all 351 separate and independent city and town health authorities received a share. An exception is Massachusetts Region 4b, which consists of 27 communities in the Boston suburbs. It had already started to organize to collaborate on public health preparedness issues before the state initiative. Today it operates more independently than the other regions in Massachusetts, and its coordinator is employed by one of the local health departments rather than the state health department.

Prior to September 11, 2001, Nebraska set up 16 new multi-county health departments to provide essential public health services and strengthen local public health, whereas the state

Figure 1: Bay Area Regional Health Inequities Initiative

The Bay Area Regional Health Inequities Initiative (BARHII), which represents eight San Francisco Bay area health departments, provides a strong example of regionalization in California. Established in 2002, BARHII's mission is "to transform public health practice for the purpose of eliminating health inequities using a broad spectrum of approaches that create healthy communities." BARHII was established by health officials who realized they were struggling with similar concerns and saw the potential for a regional effort to rethink the vision for public health. The Initiative initially focused on nutrition and physical activity in low-income communities of color, but has since expanded to address a wide range of issues, such as community engagement and capacity building, as well as strategies to target institutions that affect community health and well-being.

With support from local community foundations and The California Endowment, BARHII operates through two standing committees. The Practice Committee develops approaches to public health departments' work with communities and other public and private entities. It includes work groups on data, the built environment (e.g., buildings, roads, parks), and communities. The work group on data, which is composed of epidemiologists from member health departments, developed a conceptual framework illustrating the connection between social inequalities and health, produced a social gradient analysis of the effects of poverty and race/ethnicity on life expectancy by census tract, and is developing a matrix of indicators for neighborhood physical and social environments. The Internal Capacity Committee develops member departments' capacity by conducting training, peer consultations, and forums to enhance awareness of the link

between public health and social justice, and to change the organization and culture of public health departments to better address the root causes of health inequities.

Although not established to address preparedness, BARHII exhibits each of the forms of regionalization identified by the National Association of County and City Health Officials (NACCHO) framework. **Coordination** happens through regional training, forums, and other events. **Standardization** is evident in the Initiative's common framework for aspects of its data work, such as the regional social gradient analysis. BARHII's small staff, working through the nonprofit Public Health Institute, provides a **centralized** resource, via an administrative and communications infrastructure. As with the national case studies described in this brief, BARHII's strongest impact results from **networking** of health department staff and others throughout the Bay Area.

While a formal evaluation is underway, initial impressions suggest that BARHII's effect differs depending on the health department. Among those less committed to the Initiative's central purpose or those that adopted BARHII's perspective and methods years ago and have less room for improvement, the effects may be limited. While members who previously adopted BARHII's methods participate primarily to help colleagues in other health departments, the standardized regional approach should add legitimacy to all departments' efforts to address health inequities with their own county leadership. In any event, the Initiative's leadership hopes that the prominence given to health equity in BARHII's mission and the work toward developing a corresponding practice and internal organizational culture will inform the collective experience of all eight member health departments over time.

previously had health departments only in a few urban areas. These 16 new multi-county health departments have since become an important vehicle for preparedness planning and distribution of federal funds.

Also established before September 11, 2001, the Northern Illinois Public Health Coalition continues today to serve as a vehicle for enhancing public health preparedness. A number of relatively strong local health departments, rather than the state health department, initiated the Coalition in part to advocate for their own interests. As a result, the state was not initially supportive of these efforts.

The public health system in the Washington, D.C., metropolitan area functions in some respects as a region, but there is no single, formal regional structure. Although the Department of Homeland Security groups the area as the "National Capital Region" (NCR), much of the regional preparedness planning and response activities results from voluntary self-organization

through the Metropolitan Washington Council of Governments, and other governmental and nongovernmental organizations (see Figure 2). Even though the number of jurisdictions (multiple counties and cities in Maryland and Virginia, as well as the District of Columbia) and federal agencies involved make a truly coordinated crisis response unlikely, the region does standardize, coordinate, and share resources.

Approaches to Public Health Regionalization

The communities studied illustrate the four approaches to regionalization (see Figure 3) identified by the National Association of County and City Health Officials (NACCHO). Each community used multiple approaches for different public health functions. **Coordinating**—working together deliberately to plan events such as training or exercises—was common in regions with relatively well-established, independent health departments, such as Northern Illinois and the NCR. **Standardizing**—adopting one another's planning tools,

press releases, and even response procedures—was used less frequently, but typically in the same regions. **Centralizing**—controlling or bringing together planning or response by a central entity—was seen in various forms in three of the four case studies. Nebraska, which created local health departments to serve multiple areas that previously had no local public health agency, offers one method of centralization. Massachusetts Region 4b, which has staff members dedicated to preparedness activities that relieve the burdens of local health department staff and are available to assist in emergencies, provides another example. Still another example is shown by the NCR, which has established central capacities for both surveillance and communication. **Networking**—building relationships to facilitate interactions related to preparedness and other public health issues—is most prominent in the NCR, where the number of jurisdictions and federal agencies involved make it unlikely that a clear chain of command will ever exist. Networking also proved important for building social capital by forging connections among individuals in different agencies who would work together during a public health emergency.

The relationship between public health regions and geopolitical jurisdictions in which they sit is complex; all regions studied involved multiple jurisdictions and independent health departments. The regions vary in terms of their congruence with regional structures for partner agencies, such as emergency management agencies, hospitals, and other health services. In Massachusetts, for example, regions established for

Figure 3: Approaches to Regionalizing Public Health Services¹

Coordinating—Occurs when local health departments work together deliberately to plan events such as training or exercises.

Standardizing—Creates uniformity across individual health departments through mutual adoption of one another’s planning tools, press releases, and response procedures leading to interoperability, while all response functions remain under the operational control of the individual health departments in which they reside.

Centralizing—Involves resources for planning or response that are brought together or controlled by a centralized entity. Regional preparedness is achieved by pooling resources to form a separate regional entity that would assume some functions of a regional public health agency during an emergency.

Networking—Involves building relationships to share information, can lead to coordination of efforts across jurisdictions, and may lead to better coordination during a crisis. It appears to be the most common approach to regionalization, especially in areas where regionalization is new.

¹ National Association of County and City Health Officials, 2007. *Planning Beyond Borders*. Washington DC: NACCHO. Available at: http://www.naccho.org/topics/emergency/documents/PPHR_Guidance_FINAL.pdf

Figure 2: Jurisdictions in the Metropolitan Washington Council of Governments



emergency medical services and hospital planning only partially overlap with the public health regions, making regional efforts more difficult. Some regions focused on formal organizational relationships to coordinate and standardize preparedness and response activities, while others focused on regional capacity and informal professional networks. It is not clear which focus is most effective for building social capital. Regardless of the approach to regionalization, strong leadership skills and trust are required for effective planning, emergency response, and sustainability.

Regionalization’s Impact on Preparedness and Public Health

Does regionalization improve emergency preparedness? Logically, regionalization allows for more efficient use of

Endnotes

- 1 Stoto MA. 2007. Regionalization in local public health systems: Variation in rationale, implementation, and impact on public health preparedness. Report prepared with support of the Robert Wood Johnson Foundation.
- 2 Lurie N, Wasserman J, Stoto M, et al., 2004. “Local variation in public health preparedness: Lessons from California,” *Health Affairs* (Web exclusive on June 2, 2004).
- 3 Bashir Z, Lafronza V, Fraser MR, et al., 2003. “Local and state collaboration for effective preparedness planning,” *Journal of Public Health Management and Practice*, 9:344-351.

resources. And it is true that disease outbreaks do not respect geopolitical boundaries, so coordination is needed. But the answer depends on the setting, existing resources, and approach to regionalization. The communities' work on regionalization of public health services demonstrates progress in terms of:

- planning and coordination;
- memoranda of understanding about coordinating responses and sharing resources;
- development of local and regional capacity, training, and exercises; and
- development of professional networks.

For example, the experience of these communities reveals how regionalization improved response in two areas during recent public health emergencies. Massachusetts Region 4b set up regional clinics during the flu vaccine shortage in 2004. In the NCR, a regional epidemiology center and improved communication among health departments led to a quick resolution of anthrax and tularemia false alarms in 2005.

Regionalization efforts in these four communities are consistent with the limited evidence about regionalization available in the literature. In an in-depth study of local public health preparedness in California, for example, Lurie and colleagues noted in a *Health Affairs* Web exclusive report: "In light of the high fixed costs associated with many public health functions, small health jurisdictions are particularly disadvantaged in this

regard. As a result, it is probably not realistic to expect small counties to ever be sufficiently prepared for a major bioterrorist event, absent more regional approaches. For many functions, not just those related to preparedness, it was apparent that some sort of regionalization and sharing of resources could increase efficiency."² In their study of effective collaborations to ensure adequate response for bioterrorism and emergencies, Bashir and colleagues concluded that adopting a regional approach to planning can help health departments avoid duplication of efforts; share resources; set priorities across regions; develop mutual aid agreements; provide assistance to each local jurisdiction within the region; coordinate efforts between state offices and regions; and achieve consistency among local, regional, and state planning.³

Perhaps the more important question is whether regionalization improves public health overall. The same arguments about the importance of shared resources and coordinated response for preparedness are also relevant to this question. The communities studied identify a number of areas where regional capacities address needs beyond preparedness, such as general epidemiology in the NCR. There is some concern that the recent emphasis on preparedness may be drawing resources and focus away from other important public health issues, though it is focusing communities' attention on creating more effective public health infrastructures. Further experience with regionalization will be required to more definitively assess whether or not it improves public health overall.

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