

The Public Health Enterprise: Examining Our Twenty-First- Century Policy Challenges

The overarching challenge is to build a core infrastructure, connected to the rest of the preparedness infrastructure, to deliver essential services to every community.

by **Hugh Tilson and Bobbie Berkowitz**

ABSTRACT: This paper examines the public health enterprise and its policy challenges in the twenty-first century. Among the many challenges public health faces, we include here collaboration across a broad range of stakeholders, the public health infrastructure, agreement on public health's essential services, preparedness, accountability and measurement, workforce, and a research agenda. Two Institute of Medicine reports on the future of public health have set the context for a more in-depth review of the public health workforce and infrastructure. Policy advocates must ask, however, why, if the way and the means are so clear, the public health system is still in disarray. [*Health Affairs* 25, no. 4 (2006): 900–910; 10.1377/hlthaff.25.4.900]

A LANDMARK FOR PUBLIC HEALTH POLICY was reached in 1985, when the prestigious Institute of Medicine (IOM) determined that the field of public health required a definitive study and statement of principles and directions. The very act of undertaking this exploration was a signal to the medical community and policymakers that public health was in need of their attention. A chapter title in the 1988 report made it perfectly clear: “The Disarray of Public Health: A Threat to the Health of the Public” (p. 19).¹ The evidence-based indictment of public health focused on the official agency infrastructure at the state and local levels, with extensive policy recommendations for strengthening that infrastructure and assuring that no community, no matter how small or remote, should be without the protections of a public health system, which are possible only through the local components of an organized nationwide system of state-level agencies.

But perhaps an even more important product of the IOM's effort was the clear depiction of public health as more than a collection of government agencies. Pub-

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lic health must be seen, understood, and advanced as an enterprise—the collection of society’s efforts to create conditions for people to be healthy. The agents to assure this enterprise are all of those entities whose activities influence these conditions: public, private, and voluntary; federal, state, and local; employers, producers of products with health impact, and developers of the built environment, which may or may not encourage healthful behavior; and those identified as improving health as a primary mission, those with a secondary focus on health, and those with an indirect, often unnoticed impact.

■ **Early failure and reform.** Leading up to this milestone for the field were decades of malaise and uncertainty about an ailing and faltering public health function in America. When challenged in 1976 to protect America against the threat of a resurgent pandemic influenza (swine flu), the system was perceived to fail to deliver vaccine in a safe and timely way. When several cases of Guillain-Barré syndrome (pseudo-polio) occurred among those vaccinated, a faltering and imperfect nationwide surveillance system was unable to quantify the extent to which such cases might have been otherwise expected.² The result was a “black eye” for the field and for mass vaccination. From this, Congress mandated in 1978 that public health should develop standards for preventive services for every community. A proposed system of “model standards for community preventive health services” resulted.³ Reflecting an inventory of the hundreds of practices and dozens of programs commonly considered to be a part of the focus of public health, the model standards report led to an implementation project in the early 1980s to explore the extent to which the public health presence in the widely diverse U.S. communities might be able to deliver on the promise. The findings of the project were disappointing. There was no disagreement that all citizens ought to have public health protections against the threats to their health, ranging from assaults on the physical and social environment to threats of unrecognized or uncontained communicable diseases to ill health from faulty personal habits and inadequate health care. But in test site after test site, the ability of the community-level public health infrastructure to muster the necessary effort to deliver such protections was limited at best.

■ **Impact of the IOM report.** Thus, the IOM undertook its study and issued its landmark report in 1988. And, unlike many reports that might gather dust on the shelf, this report found a ready audience among many constituents interested in and dedicated to improving our approaches to the health of populations.

In its synthesis, the IOM made reference to the Model Standards effort and others in lieu of addressing the full inventory of exactly which programs public health ought to operate to achieve its mission. Rather, it described the system necessary to assure that sustainable processes were in place to consider the problems and challenges of the day (which they called the “assessment” function); determine which to address and with what priority and tools (the “policy development” function); and then go about ensuring that the necessary efforts and protections were in place to deliver on these priorities (the “assurance” function). When con-

sidering how U.S. society organizes to provide these “core functions” in our heterogeneous settings, the IOM concluded that the public health enterprise could determine what work to do and how to go about doing it in many diverse ways, but under all of them, there was an indispensable common denominator: the need for a governmental presence at the local level in every locale.

■ **Intervening reform efforts.** In the intervening years, the public health enterprise has matured and evolved dramatically, particularly within the official governmental public health agency. For example, Jim Mason, then undersecretary for health in the U.S. Department of Health, Education, and Welfare, convened the agency leaders in his department and instituted alignment of reforms of federal funding to local areas, recognizing the need to identify and build a viable local agency system instead of bypassing it, and requiring that federal funds to local communities should flow either through the official agency or, at least, in accordance with a plan that included the official agency. Reforms of academe were undertaken to ensure the training of public health professionals in the practicalities of community delivery. The Faculty-Agency Forum was created to oversee and ensure accountability of this transformation. The institutional memory for this reform continues today in the legacy organization, the Council on Linkages between Academia and Practice.⁴ Reforms within medicine were initiated to reconnect the practice of personal medical care delivery with the approaches to population health and community health services delivery, including the creation of the Medicine–Public Health initiative between the American Medical Association (AMA) and the American Public Health Association (APHA).⁵ Thus, when the IOM decided to revisit its considerations in 2001–03, it found and reported considerable progress.⁶ However, in reenforcing its prior model that the broader public health system is characterized by segments of society beyond the official public health agency, it observed that in many ways this “system” was as much in disarray at that time as it was in 1988. The components of this system include major community-based efforts outside of government—in schools, community voluntary agencies, businesses, and faith communities.

An example of an effort to recognize and reconnect the community components of the broader public health enterprise can be seen in the Turning Point initiative.⁷ Funded by the Robert Wood Johnson Foundation (RWJF) in 1998, Turning Point has supported twenty-one states in creating considerable innovation in collaboration, increased capacity for policy development, and new or strengthened structures for improving the public’s health. In particular, the initiative’s emphasis on collaboration has prompted partnerships among public health and multiple other sectors that have taken collective action on issues of health disparities, access to care, prevention of disease, promotion of healthier lifestyles, and protection from hazards (including emergency preparedness).⁸

■ **The IOM’s components of reform.** The IOM likewise identified the occupational environment, media, medical care system, and other contributions from private industry as key components needing to be brought together for better function-

ing of the public health system.

Occupational environment. Within the workplace, programs of occupational health not only protect the worker, but also can create the context for healthful behavior among workers and their families. Well-designed medical benefits for workers and their families can put preventive medicine interventions into a proper priority light. The extent to which financial barriers (for example, front-end deductibles) are placed into employer-sponsored preventive health benefits is a key determinant of their use. And employers are needed at the health planning table to ensure effective demand for a healthful environment, to force smoke-free public places, to work for neighborhoods that encourage health and fitness, and to advocate for needed services.

Media. The media are key to the public health system. Public opinion and personal practice are driven by images, advertising, and the roles modeled in entertainment and news media as well as direct reporting of the medical and health news. The IOM recommended serious efforts to ensure a fully informed media, with early and frequent interchange, and emphasized communications skills as a central competence for all members of the public health enterprise.⁹

Medical care system. Although it might appear axiomatic that the medical care system is a vital component of the public health enterprise, the long-standing schism between medicine and public health is also a reality in the early twenty-first century, one that must be bridged if either is to fulfill its promise. Medical care must deliver personal preventive services in a more inclusive way. Insurers must consider dropping copayments and other disincentives. Public health, in turn, must create conditions for these things to happen, and medicine, where it cannot provide them as efficiently or effectively, must support the population-based services of public health. The services targeted at the entire population can effectively be delivered only beyond the individual patient care setting—not simply health education, but also creating the ecology for health, addressing environmental health threats, and recognizing that having a worthwhile future is key to motivating people to preserve their health for such a future. To this end, physicians, nurses, dentists, pharmacists, and other health care providers must be educated in the issues and concerns of public health, lest, through ignorance or apathy, they undermine them. When the state legislator asks his or her private physician or corner pharmacist about H5N1 (avian) influenza, consider how damning it is of the public health enterprise when the only responses concern the hospital isolation unit and neuraminidase inhibitors.

Communitywide coordination. These efforts must be coordinated with others in the community or undertaken in conjunction with a communitywide consensus that the most pressing needs are addressed. The extent to which this occurs is the true measure of whether the public health system is functioning well. The policy advocate in each community needs to look around (and look in the mirror) to assess whether the system's components are aligned or in disarray.

Policy Challenge 1: An Official Public Health Infrastructure

■ **Elements of the infrastructure.** The integrating force for the public health system—the “glue”—is the official public health agency infrastructure. Only government has jurisdiction, the power to create and enforce laws, and the mandate to secure our fundamental rights. In the United States, such duties rest within the governments of the fifty states and five territories, each of which has an organized public health unit that oversees the conduct of the government’s public health programs and fulfills the roles that “cannot be properly delegated.”¹⁰ Public health policy coordination and proposals for federal oversight emerge from the Association of State and Territorial Health Officials (ASTHO) and its professional affiliates. Federal responsibilities for public health rest in the several agencies of the U.S. Department of Health and Human Services (HHS), although health programs are also operated by the Departments of Defense, Veterans Affairs, and Agriculture and the Environmental Protection Agency. Delivery on the promise of “assuring conditions in which people can be healthy” occurs at the local level.¹¹ Thus, the building blocks for the public health system are the network of nearly 3,000 local public health agencies and county and city (and district and regional) public health departments. These influence national health policies through their national association, the National Association of County and City Health Officials (NACCHO), and state policies, through similar state-level organizations of local health officers.

■ **Challenges to the infrastructure.** Policy challenges relating to the infrastructure abound. States have organized for public health in ways that might fragment instead of uniting environmental or mental health with other components, that underemphasize and underfund one or another of the essential services of public health, and that provide little if any subsidy to the local public health infrastructure. Likewise, localities, absent a national “template” for what constitutes a good or effective local health department have organized in countless ways, leading to the conventional wisdom: “If you’ve seen one local health department, you’ve seen one local health department.” Although this turn of phrase draws chuckles, it should draw frowns or worse. The policy challenges of aligning the local infrastructure and delivering on the IOM vision, shared by the national leadership in public health and “owned” by NACCHO, include moving toward and adopting a shared organizational definition, agreed-upon parameters of function, and effective and efficient processes for measuring the performance of duties. The outstanding efforts in this regard are outlined in many of the papers in this special issue of *Health Affairs*.

Still, policy advocates must ask: Why is our progress so slow and our effort so fragmented? What will it take to unite constituents, elected officials, the professional community, and others in the larger public health system in insisting on a viable sustainable effective local public health agency infrastructure? We must have a “brand” that sells, a market that is ready to buy, consumers who are impatient with an imperfect market and demand progress from their elected officials, and elected officials who understand their fundamental responsibilities.

Policy Challenge 2: Agreement On The Essential Services

To achieve these goals, policymakers need to understand what we're talking about. The need thus arose to put some flesh on the skeleton of the IOM's core functions of public health. To this end, the APHA's Public Health Functions Work Group, in a landmark collaborative effort emerging among national-level responses to the 1988 IOM report, developed and adopted the concept of the "ten essential services" for public health.¹² These embody the protections and services that every citizen has the right to expect and every government has the obligation to assure. No matter what the unique features of any single community, the concept of the ten essential services recognizes that every community needs a robust and reliable agency infrastructure.

Second, and building on this recognition, NACCHO recognized the imperative to put in plain talk an Operational Definition so that anyone could identify what a local public health agency is expected to be and do.¹³ However, there is still much variation in the way U.S. communities organize to provide for the public's health, and there are countless gaps in delivery on even a minimal level of each of the ten essential services or fulfilling this operational definition.

The policy challenge is to develop a clear vision of what needs to happen to ensure that all U.S. communities have the infrastructure required. The policy advocate must ask: What will it take to sell this vision to those who should be paying for and demanding it?

Policy Challenge 3: A Heightened Level Of Preparedness

The closing years of the twentieth century witnessed increasing threats of terrorism, including several acts of threatened bioterrorism. The latter were mostly hoaxes involving threats of microorganism or spore contamination, such as anthrax threats of family planning units. September 11, 2001, and the intentional dissemination of anthrax spores through the U.S. mail in the weeks immediately following underscored the reality behind those concerns—and our need both for improved preparedness against human-created disasters and for a public health presence in the country's preparedness efforts. Resulting major initiatives to support increased levels of surveillance, response, surge capacity, and biological and health expertise led to clearer realization that efforts at preparedness needed to address not one or two specific biologic agents but, rather, an "all-hazards" threat and that preparedness was not feasible without a competent, trained, and prepared general-purpose public health infrastructure to work with other preparedness partners at the federal, state, and local levels. Efforts to build biohazard-specific preparedness were coupled with broader efforts to ensure that such competencies should rest in multipurpose agencies. The intervening years, with emerging outbreaks of West Nile virus and severe acute respiratory syndrome (SARS) and natural disasters such as Hurricanes Katrina and Rita in the Gulf Coast, have more than justified these infrastructure-building efforts.

Still, the policy challenges remain: not simply to build the core infrastructure to deliver the ten essential services to every community, but also to assure that the emerging system is current, competent, and connected to the rest of the preparedness infrastructure as it, in turn, evolves under our growing and changing insights into homeland security. The policy advocate should ask: Why do the police, fire, and emergency medical services (EMS) teams not even notice when public health isn't invited to the emergency operations center?

Policy Challenge 4: Accountability And Measurement For The Entire System

The network of U.S. local public health agencies is multifaceted and highly variable, ranging from huge, full-service public health agencies serving many major metropolitan areas and counties—for example, the New York City Department of Public Health or the Cook County (Illinois) Health Department—to the many very small and underserved jurisdictions of much of rural America, performing sanitary inspections of restaurants—or indeed to the many jurisdictions with no identifiable local public health agency.

■ **National performance standards.** Out of this diversity emerged, at the close of the twentieth century, the critically important work of the Centers for Disease Control and Prevention (CDC) and its partners, building on twenty years of work on model standards, to develop, field-test, and adopt a set of performance standards that help the community look at the entirety of its public health system and not solely at the performance of its agencies.¹⁴

These standards describe dozens of parameters with which to measure the extent to which the community or state is assuring each of the ten essential public health services. Conceived as a process by which all of the major system partners within the community regularly meet, assess the state of their system, give themselves a “grade,” and establish priorities for improvement, they are the embodiment of the necessary evidence base around which public health policy should be made. The CDC maintains a nationally relevant database of the accumulating experience with these standards, which permits comparison of a community's performance profiles with those of similar communities nationwide. This enables any community, essentially for the first time, to develop its public health priorities against objective benchmarks from around the country.

■ **Accreditation programs.** Similar processes within the hospital system and many other social services systems, from public elementary schools to graduate schools of public health, have resulted in programs of official accreditation. The objective of such programs is to provide the community with external assurances that the efforts being assessed meet minimum standards. A system of accreditation was strongly recommended for consideration by the IOM, and efforts to move in the direction of voluntary efforts at agency or community accreditation, or both, have been endorsed in principle by ASTHO and NACCHO.¹⁵ With funding from the

RWJF, a consortium has been formed (Exploring Accreditation) to establish best practices and make recommendations for a way forward for accreditation.¹⁶

■ **Accountability for outcomes.** Fundamental to public health accountability is the notion of accountability for health outcomes, and not solely processes. During the closing decades of the twentieth century, the benchmarks for such efforts have been included in a no less landmark set of consensus efforts, the Healthy People 1990/2000/2010 reports.¹⁷ These reports have created inventories of nationally agreed-upon measures of health status and health outcomes and have set objectives for their improvement at the national level. These, in turn, rest on the notion that every U.S. community “owns” the success of these objectives by measuring, and as needed, addressing the health behavior and exposure that underlie deficiencies in their own communities.

■ **Solutions.** The public health system performance standards described above represent imperfect although promising tools. A sustainable, nationally agreed-upon strategy is needed for their refinement and evolution, and eventually their application. The vision of accreditation likewise needs national oversight, multiple field tests, and a systematic strategy for implementation. The policy advocate must ask, however, whether the reluctance of the political world to “just do it” really is about the evidence.

Policy Challenge 5: The Public Health Workforce

Delivering on the promise to assure a competent workforce has been particularly nettlesome. Within the agencies and organizations constituting the public health system, much of the work done by those agents is not directly (or even indirectly) related to public health. Most of the workers in private industry work in efforts unrelated to health. Most of those working in the medical care delivery system provide day-to-day, face-to-face personal medical care, not population-based services. But within private industry, those working in occupational health, creating conditions in which employees and their families can be healthy, are performing public health roles; and those in the hospital participating in bioterrorism preparedness exercises are clearly working at the public health level.

■ **Varying competence levels.** The public health workforce comprises nurses, environmental health specialists, educators, administrators, physicians, and many others. Although a master of public health (MPH) degree is perhaps the sentinel credential for public health professionals, a limited percentage of the workforce, including directors of city and county health departments, is estimated to have earned this degree. In lieu of such academic credentials, the collaborative efforts of the Council on Linkages between Academia and Practice (funded by the Health Resources and Services Administration, or HRSA) has created an inventory of areas in which the public health workforce should be expected to demonstrate competence, the depth and breadth of which would vary with the level of responsibility within the public health enterprise.¹⁸ The gaps between the needed and the actual levels of

competency in the field are well recognized, and efforts to bridge these gaps with continuing education, training, and certificate programs from graduate schools are under way.

■ **Dwindling numbers.** An alarming aspect of the public health workforce has been its dwindling numbers and its “graying,” with grave difficulties in recent years in recruiting and retaining young professionals. Contributing to these shortages, low salaries, poor benefits, adverse working conditions, and low status for the enterprise are frequently cited.

■ **Solutions.** Here the policy challenges are clear. To break the cycles of low levels of competency and difficulty in maintaining a qualified workforce, recognition of public health as a profession in its own right, with establishment of a formal credential in public health, has been proposed by the IOM.¹⁹ Proponents of professional certification cite the complexities of modern public health and the need for qualified, trained leaders, particularly in an era of bioterrorism threats and emerging epidemics. And, of course, they exhort society to accredit professionals whose professionalism is otherwise difficult for the layperson to judge adequately. Opponents cite the difficulties financing the public health infrastructure and concerns about increasing salary demands among credentialed employees. They also cite the relative paucity of evidence of quality improvement from requiring certification in other professional areas such as preschool teaching.

For the policy advocate, convincing evidence is needed that a more competent workforce will make any demonstrable difference in local population health or even get any notice. This becomes even more vital when, in a fixed-sum negotiation with hospitals and EMS providers, public health leadership speaks in abstractions and about the long term. Public health leadership sounds too much like fiddlers while Rome burns, and the competition, like firefighters.

Policy Challenge 6: The Public Health Research Agenda

Development of policies for building, improving, or sustaining the public health infrastructure requires evidence. Yet research to study the public health system has been singularly underfunded and therefore underdeveloped.²⁰ Indeed, there is no equivalent of the National Institutes of Health (NIH) in public health to provide a single or substantial source of public or private funding for research to improve understanding of the public health system; therefore, there is little substantial emphasis within academic programs of scholarly research or major research centers with a public health infrastructure emphasis. Emerging scholars or graduate fellows thus have only minimal opportunity to work on or receive funding for public health research.

■ **Persistent research questions.** Nevertheless, major, fundamental research questions persist. For example, little is known about the optimal organization, funding, scope, size, or service mix of such agencies or the optimal balance of responsibilities between state and local levels. There can be no doubt that a strong,

central, national-level public health apparatus is needed to sustain the system, provide one-of-a-kind technical expertise, assure surge capacity, and finance and help coordinate the remainder of the system. However, little is known about how best to organize, configure, staff, fund, and manage such an enterprise. And although no one contests that we need more and better public health professionals in the workforce, there is amazingly little evidence upon which to base workforce needs projections, to target workforce education strategies, to mandate minimal staffing or staff mixes, or to link evidence about the quality of public health's people with the quality of their programs.

■ **Need for research centers.** Although there can be no doubt that a robust, well-financed, competent, and comprehensive network of research centers should be sustained within academe, little is known about how many such centers, performing which research projects with what priorities, to what end, are needed, much less how best to staff such centers; support and develop methodology; educate the current and future generations of researchers; or create the learning society in which research findings may be applied, evaluated, and continuously improved.

■ **Recent progress.** Much progress toward a coherent approach to public health systems research has been made in recent years. Much of this progress has been made through the pioneering efforts of the Council on Linkages, as it has advocated for the creation of forums for public health systems science, development of a priority research agenda, and convening of potential funders. Several such funders have already contributed, including a pioneering effort in public health finance research funded by the RWJF and public health systems research fellowships from Pfizer. AcademyHealth has shown the way in creating a public health systems research affiliate and providing space on its mainstream agenda for the emerging research from the field.²¹ Still, funding is meager, funders are few, and solid data resources are hard to find. Therefore, public health policy continues to labor under the mantle of inadequate evidence.

■ **Solution.** The policy challenge is clear: Break this senseless cycle of benign neglect. Fund the requisite research and research infrastructure to undertake it. And agree on the vital building blocks for measuring performance in the public health system so that we can get on with it. The policy advocate must find the convincing "sell" and convincing partners in the sales force. Perhaps the best chance is to combine forces with those already lining up around their righteous indignation about the lack of support for the clinical research enterprise, including the IOM's recent and highly provocative Clinical Research Roundtable.²²

AS NEVER BEFORE, THE UNITED STATES IS AWARE of the need for a competent and prepared public health infrastructure. Thus, as never before, public health policy advocates must align with their peers from the other components of the broad public health system to insist on competent, all-hazards-prepared local public health agencies, coordinated by responsible and responsive

state-level organizations, and led and assisted by properly resourced and enfranchised federal agencies, all of which work effectively with partners in a highly functioning system that is not in disarray. To do so, leadership will require an aligned vision of the future. Otherwise, most any of the roads we are now taking will surely not get us where we need to be.

NOTES

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