

Strengthening and Maintaining the Public Health Infrastructure

Our nation's public health system is the first line of defense against numerous threats, ranging from infectious diseases and food-borne illnesses to natural disasters and bioterrorism. At its core, however, the system faces many obstacles. Funding cutbacks at the federal, state, and local levels; increasing responsibility as the provider of last resort; and lack of support for development and implementation of information and communication systems have all taken their toll on the capacity of the public health infrastructure.

Based on a November 6, 2002 GIH Issue Dialogue, *Strengthening Public Health for a Healthier Future*, this *Issue Focus* presents information on the critical issues facing the nation's public health infrastructure. It also explores strategies to shore up this infrastructure.

WHAT IS THE PUBLIC HEALTH INFRASTRUCTURE?

The public health system is defined as "the broad range of organizations and partnerships needed to carry out the essential public health services (Baker and Koplan 2002)." These organizations include governmental agencies and the non-governmental health sector, including: the health care delivery system, the public health and health sciences academia, and health-focused nonprofit organizations. This definition is further refined by the Institute of Medicine (IOM). In its 2002 report, *The Future of the Public's Health in the 21st Century*, the IOM identified the nation's federal, state, and local government public health agencies as the core of the public health system. It also identified other partners that may not have a specific health focus, but certainly influence health, including businesses, media, schools, churches, and community groups.

The public health infrastructure is the network of people, systems, and organizations making it possible for essential public health services to be carried out. It is also often equated with preparedness. Basic infrastructure is essential to performing core public health services, such as disease surveillance, but also for effective responses to bioterrorism, emerging infections, and other health threats.

HOW CAN HEALTH GRANTMAKERS HELP?

Three basic components form the foundation of this infrastructure and make it possible to conduct programs that

promote the health of the nation: organizational capacity, workforce capacity and competency, and information and data systems. While funding and support for population- or disease-specific interventions is important, communities must first have these necessary building blocks. Philanthropy can play a significant role in these efforts by partnering with federal, state, and local health departments, as well as with academic institutions and community groups that contribute to the public's health.

► **Organizational capacity** includes the physical facilities and laboratories and the financing mechanisms required to ensure that essential services are provided. Foundations are supporting organizational capacity in a number of ways, including funding the physical facility needs of health departments, as well as research and analysis of public policy and financing mechanisms. The CDC Foundation set up a special fund to provide workers from the Centers for Disease Control and Prevention (CDC) with resources to deal with the immediate needs during the September 11th terrorist attacks, the anthrax crises, and future events. The fund will provide for four basic areas of need: emergency purchasing power, short-term staffing needs, consulting services for strategic preparedness planning and crisis management, and rapid procurement of equipment and technology. After the first confirmed case of anthrax in Florida in the fall of 2001, the Marcus Foundation pledged \$3.9 million to the CDC Foundation to help build a state-of-the-art emergency response center at the CDC where experts can work together to direct response efforts and communicate rapidly with colleagues in the field.

To help build strong partnerships between local public health departments and the communities they serve, The California Endowment launched a \$40 million, five-year initiative in partnership with the Public Health Institute in 1999. *Partnership for the Public's Health* will award \$25 million in grants to communities and local health departments over four years. The grants support community partnerships to influence government and other institutions to establish public health improvement goals, redesign systems, and mobilize action to protect and improve the community's health. They also help local health departments to be more responsive to community-based priorities and more effective.

tively perform core public health functions of assessment, assurance, and policy development in the context of community health.

- **Workforce capacity and competency** includes the recruitment, training, and capabilities of nearly 500,000 professionals employed by federal, state, and local public health departments. Foundations help build workforce capacity by providing grants to schools of public health, funding education and training opportunities, supporting research, and sponsoring national conferences. The Rose Community Foundation in Denver provides funding to support the *Leadership Training Program*, which fosters leadership among middle- and senior-level health professionals in the health and environmental fields. Participants come from both the private and public sectors, but all share the commitment of improving health outcomes in their communities. The program lasts for one year. During this time, participants attend quarterly meetings that address substantive health issues and develop leadership skills. In addition to these events, participants complete interactive assignments, participate in on-line discussions, complete self-assessments, and conduct public health projects. At the end of the program, public health professionals are better equipped to provide strategic vision and identify collaborative leadership opportunities.

To bridge the gap between the public and private dental sectors, the Washington Dental Service Foundation provides local funding to the *Access for Babies and Children to Dentistry (ABCD)* program. One component of the program trains private practice dentists to work specifically with low-income children, working to overcome long-standing perceptions about Medicaid clients and the Medicaid program. Dentists receiving the training then become eligible for enhanced state Medicaid payments. As a result, some ABCD counties have seen an increase in enrollment for Medicaid dental benefits. The eventual goal is for increased access to translate into better health outcomes.

- **Information and data systems** are used to monitor disease and enable efficient communication among public and private health organizations and the public, as well as up-to-date guidelines, recommendations, and health alert systems. Many foundations are working to provide the resources necessary for public health departments to purchase, update, and utilize information and communication technology. The Kansas Health Foundation has supported the development and installation of the Kansas Integrated Public Health System (KIPHS), a health information system designed to enhance the quality and effectiveness of public health practice. The system assists state and local health departments in obtaining accurate data in health issues and integrates data from multiple sources. KIPHS is also connected to the CDC's national surveillance system.

Grantmakers have also supported technology designed to track health-related information for children. For example, Baptist Community Ministries awarded a grant to Children's Hospital New Orleans to support a computerized immunization registry that allows hospitals, doctors, and parents to know the type and number of immunizations administered to each child and when the next immunizations are due. Since 1998, nurses at participating hospitals have recorded more than 10,000 newborns and children in the registry. An additional 2,500 have been entered from a mobile immunization unit providing free immunizations at routinely-scheduled locations. The Quantum Foundation in West Palm Beach, Florida, provided an initial grant in 1999 to establish a school health information system that includes both hardware and software that will help school nurses track student health records. The grantee, Palm Beach County Health Care District, also contributed toward implementation and maintenance of the information system, including personnel, training, and support. The foundation subsequently provided additional support in 2002 for updates to the system.

Building and maintaining a strong public health infrastructure makes it possible to conduct work that will alleviate disease, control disease outbreaks, promote healthy behaviors, eliminate health inequities, and protect the nation from emerging health threats. While the risks of bioterrorism and other unusual events dominate the current agenda, one positive outcome of this sense of urgency is that the public health system is benefitting from an unprecedented level of attention and resources. Philanthropic organizations and others involved in supporting public health can take advantage of this window of opportunity to improve the infrastructure so that it is capable of handling emergencies, as well as the day-to-day health needs of communities.

SOURCES

Baker, Edward L., and Jeffrey Koplan, "Strengthening the Nation's Public Health Infrastructure: Historic Challenge, Unprecedented Opportunity," *Health Affairs* 21:15-27, November/December 2002.

Centers for Disease Control and Prevention, *Public Health's Infrastructure: A Status Report* (Atlanta, GA: 2002).

Institute of Medicine, *The Future of the Public's Health in the 21st Century* (Washington, DC: National Academy Press, 2002).

Institute of Medicine, *Who Will Keep the Public Healthy? Educating Public Health Professionals for the 21st Century* (Washington, DC: National Academy Press, 2002).