Public Health Infrastructure

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PROGRESS REVIEW

In the 20th session of the second series of assessments of *Healthy People 2010*, Assistant Secretary for Health ADM Joxel Garcia chaired a Progress Review on Public Health Infrastructure. He was assisted by staff of the co-lead agencies for this *Healthy People 2010* focus area, the Health Resources and Services Administration (HRSA) and the Centers for Disease Control and Prevention (CDC). Also participating in the review were representatives from other offices and agencies within the U.S. Department of Health and Human Services (HHS) and from the National Indian Health Board, a private, nonprofit organization. Drawing on his past experience as Deputy Director of the Pan American Health Organization, ADM Garcia observed that insufficient investment in a sound public health infrastructure can lead to serious imbalances in public health personnel, like the severe shortages of nurses in some countries. He stated that although the United States does not collect complete data on a national scale, which would allow for full measurement of all objectives in this focus area, we are much further along in understanding the public health workforce and in bringing public health law into the 21st century. ADM Garcia expressed hope that, through free trade agreements, the United States can bring its advancing knowledge in this field to the benefit of people in other countries as well as our own.

The complete November 2000 text for the Public Health Infrastructure focus area of *Healthy People 2010* is available online at **www.healthypeople.gov/document/html/volume2/23phi.htm**. Revisions to the focus area chapter that were made after the January 2005 Midcourse Review are available at **www.healthypeople.gov/data/midcourse/html/focusareas/fa23toc.htm**. Additional data used in the Progress Review for this focus area's objectives and their detailed definitions can be accessed at **wonder.cdc.gov/DATA2010**. For comparison with the current state of the focus area, the report on the first-round Progress Review (held on May 19, 2004) is archived at **www.healthypeople.gov/data/2010prog/focus23/2004fa23.htm**. The meeting agenda, tabulated data for all focus area objectives, charts, and other materials used in the Progress Review can be found at a companion site maintained by the CDC National Center for Health Statistics (NCHS): **www.cdc.gov/nchs/about/otheract/hpdata2010/focusareas/fa23-phi2.htm**.

Data Trends

In his overview of data for the focus area, Richard Klein of the NCHS Health Promotion Statistics Branch stated that workforce capacity and competency; information, data, and communication systems; and organizational and systems capacity provide the basic infrastructure to deliver essential public health services. Of the 37 objectives and subobjectives that were retained after the 2005 Midcourse Review of *Healthy People 2010* (3 were deleted), 3 have met their targets, 9 are moving toward their targets, 3 show little or no progress, 4 are moving away

from their targets, 13 have only baseline data, and 5 lack data to track progress. Mr. Klein then examined in greater detail the focus area objectives highlighted in the Progress Review.

(Obj. 23-4): In 2007, 26 percent of the 426 population-based *Healthy People 2010* objectives had national data for all select population groups, compared with 13 percent in 2004. The complete population template includes race/ethnicity, income or education, and gender. The 2010 target is 100 percent.

(Obj. 23-6): In 2007, 49 percent of the measurable *Healthy People 2010* objectives, including their subobjectives, (n = 833) were being tracked at least once every 3 years, compared with 44 percent in 2004. The target is 100 percent.

(Obj. 23-7): In 2007, 65 percent of the *Healthy People 2010* objectives, including their subobjectives, (n = 495) that are measured by 22 major data systems had updates released within 1 year of the end of data collection, compared with 62 percent in 2004 and 36 percent in 2000. The target is 100 percent.

(Objs. 23-11a, -11c): In 2007, 18 States participated in the National Public Health Performance Standards Program (NPHPSP) for the essential public health services, compared with 9 States in 2004. The target is 35 States. Of those 18 States participating in the NPHPSP in 2007, 6 percent (n = 1 State) met the standards. No State had done so in 2004. The target is for 50 percent of participating States to meet the public health performance standards. The yardstick for meeting the performance standards is a score of 60 percent or greater; however, participation is voluntary.

(Objs. 23-11b, -11d): In 2007, 20 percent of local public health systems (n = 469) participated in the NPHPSP, compared with 12 percent (n = 273) in 2004. The target is 50 percent. Of those local public health systems participating in the NPHPSP in 2007, 46 percent (n = 214) met the standards, compared with 36 percent (n = 98) in 2004. The target is for 50 percent of participating local public health systems to meet the standards.

(Obj. 23-12b): In 2007 (the baseline year), 56 percent of States and the District of Columbia had implemented a health improvement plan (HIP) to guide providers of essential public health services in addressing problems and gaps that had been identified in an assessment of needs. Three subobjectives of Obj. 23-12 are newly measurable and their targets have not been determined.

(Objs. 23-12c, -12d): In 2005, 54 percent of local health agencies had implemented an HIP, compared with 53 percent in 1999. In 2005, 37 percent of all local health agencies had an HIP that was linked to their State HIP.

Key Challenges and Current Strategies

Representatives from the co-lead agencies presented on the principal themes of the focus area: Stephanie Bailey, Chief of Public Health Practice in the CDC Office of the Director; Lyman Van Nostrand, Director of the HRSA Office of Planning and Evaluation; and Marilyn Metzler of the CDC National Center for Chronic Disease Prevention and Health Promotion. Their statements and Progress Review briefing materials identified a number of barriers to achieving the objectives, as well as activities under way to meet these challenges, including the following.

Barriers

- The infrastructure of the Nation's public health system and the resources of State and local health agencies have been weakened over time because of emerging health threats, such as bioterrorism, as well as the continuing responsibility to aid in disease

prevention, respond to natural disasters, protect against environmental hazards, and encourage healthy behaviors.

- Although the United States is served by a broad range of health agencies—more than 3,000 county, city, and Tribal health departments, 59 State and Territorial health departments, more than 180,000 public and private laboratories, and other public health partners—a report to the U.S. Congress by the Institute of Medicine (IOM), *Public Health's Infrastructure: A Status Report*, found that only one-third of the U.S. population is effectively served by these public health agencies.
- The public health workforce is diminishing because of a number of factors, including attrition through retirement and the difficulty of hiring new staff as a result of State and local budget constraints and noncompetitive wages. In 2000, there were 50,000 fewer public health workers than in 1980. By 2012, over 50 percent will be eligible to retire. An additional 250,000 public health workers will be needed by 2020.
- Systematic collection and reporting of health data on the American Indian/Alaska Native population have been extremely limited for a number of reasons. Tribes are recognized either nationally or on a State-by-State basis—nationally recognized Tribes are eligible to apply for Federal resources and have access to services of the Indian Health Service (IHS). A State- or locally recognized Tribe does not have such eligibility. In particular cases, it is often not clear if States can legally collect data from Tribes and, if so, how the data may be used. In addition, there are no legal authorities that afford Tribal entities recognition among the States as public health authorities, although public health activities of all kinds may occur within the Tribal environment.
- Although information technology is a core component of the public health infrastructure, the systems currently in place are significantly lacking. For example, in its congressional report, the IOM found that, in a test of e-mail capacity, only 35 percent of messages to local health departments were delivered successfully.

Activities and Outcomes

- Initiated in 1998 and revised in 2007, the NPHPSP (see Obj. 23-11 in Data Trends) is a collaborative effort among CDC and several national public health partners to improve the quality of public health system performance through a set of established standards for the 10 essential public health services. Since inception of the program, 18 State health departments, 469 local health departments, 25 Tribal entities, and 218 other governance entities have used these instruments to measure quality improvement in areas such as planning and training. As part of plans for the future, the NPHPSP will assist in current efforts to institute accreditation standards for public health agencies and to establish a public health systems research agenda.
- HRSA is funding 14 Public Health Training Centers, which focus on the needs of the current public health workforce and have a particular emphasis on continuing education training. With the assistance of their academic and practice partners, the centers trained over 111,000 public health professionals in 45 States and the District of Columbia in 2007.
- In 2008, health indicator data related to *Healthy People 2010* objectives were available for public use at the Federal, State, and local levels. Indicator data for Tribal populations are available from some regional Tribal epidemiology centers. Examples of access to information at various levels on health indicators include the following: Federal—CDC's DATA2010 (**wonder.cdc.gov/DATA2010**); State—The Henry J. Kaiser Family Foundation's Web site **statehealthfacts.org/**; local—Community Health Status Indicators, which provide more than

200 health measures for each of the 3,141 U.S. counties (**communityhealth.hhs.gov**); and Tribal—the Community Health Profile, covering Minnesota, Michigan, and Wisconsin Tribal communities and the Great Lakes Epidemiology Center.

- By means of the Community Health Status Indicators, counties are able to compare their health status with that of their peer counties, as categorized according to 88 strata ranked by population size and density, poverty level, and age distribution.
- The HHS Office of the Assistant Secretary for Preparedness and Response supports the Bioterrorism Curriculum Development Program. The program seeks to develop a health care workforce with the knowledge and skills to recognize indicators of a terrorist event; meet the acute care needs of patients, including pediatric and other vulnerable populations; participate in a coordinated, multidisciplinary response to terrorist events and other public health emergencies; and effectively alert the public health system to such an event at the national, State, and community levels.
- The Model State Emergency Health Powers Act (the subject of Obj. 23-15b) assists State and local governments in empowering public health authorities to take strong, effective, and timely action in response to public health emergencies, including bioterrorism, while also respecting individual rights. The Act has been used as a tool to develop and enact public health legislation in 44 States.
- Through its Public Health Traineeships program, HRSA makes formula grant awards to accredited institutions that provide training in public health. Currently, 22 grantees are selecting individuals to receive traineeships in public health professions experiencing critical shortages, including epidemiology, biostatistics, environmental health, toxicology, nutrition, and maternal and child health. Close to 7,400 students are receiving these traineeships.
- The Council on Education for Public Health (CEPH) is an independent agency recognized by the U.S. Department of Education that accredits schools of public health and certain public health programs offered in settings other than schools of public health. CEPH sets criteria for evaluating schools and programs with respect to their governance, resources, instructional programs, faculty, students, and research efforts. Currently, 37 schools of public health in the United States are accredited.
- The Public Health Information Network (PHIN) is a national initiative managed by CDC that aims to improve electronic communication within the public health community. PHIN defines and documents the systems needed to support public health professionals, identifies industry standards needed to make those systems work together, and develops the specifications required to make the standards function. PHIN includes a portfolio of software and solutions to maintain interconnected systems throughout the domain of public health, including those for supporting surveillance, outbreak management, laboratory response, emergency response, and administration.
- HRSA provides financial assistance for health information technology and telemedicine in community health centers and critical access hospitals in 35 States. Funds granted in 2007 will support electronic health records in more than 170 health centers serving more than 2 million patients. HRSA is also supporting the establishment of 16 regional health information exchange pilots that link primary, post-acute, and tertiary care to improve coordination of patient care in rural communities.
- Owing to the combined efforts of several HHS health agencies—CDC, HRSA, and the National Institutes of Health—and their private sector

partners, a second version of the CHSI is planned for release in mid-year 2008 that will incorporate multi-source data systems and provide for speedier release of data. Planning for a third version is already under way and requests are to be issued for modules that will accord with the evolving framework and principles of Healthy People 2020, for example, the use of social determinants of health. Development and implementation of the CHSI is guided by the public-private Community Health Status Indicators Consortium. The Robert Wood Johnson Foundation is a major source of support for this ongoing activity.

Approaches for Consideration

Participants in the Progress Review made the following suggestions for public health professionals and policymakers to consider as steps to enable further progress toward achieving the objectives for Public Health Infrastructure:

- Include the IHS, State public health agencies, and various Tribal entities, as a working partners in any efforts to develop future strategies for the collection and analysis of Tribal-related data.
- Strengthen the ability of public health agencies to increase their capacity to access health information, receive diagnostics, purchase pharmaceuticals, transmit needed data and other preventive health information to public health providers at the State and local levels, and to share timely information, while protecting patient confidentiality.
- Take additional steps to achieve the goal of establishing a regular reporting system for the reporting system to analyze the size and makeup of the public health workforce.
- Ensure that continuing education and training programs will be available for all sectors of the public health workforce, including nontraditional public health workers.
- Enhance the capacity to track patients across local health systems, while ensuring the maintenance of patient data confidentiality.
- Develop data systems that support population health management.
- Using the model of environmental impact statements, seek to institutionalize the use of health impact assessments when considering the possible effects that social and other developments may have on public health.
- Give greater attention to the role of public health infrastructure in the next decade, particularly to its place and function within the context of Healthy People 2020.

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[Signed July 1, 2008]

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