

REPORT BRIEF • JUNE 2007

## TRAINING PHYSICIANS FOR PUBLIC HEALTH CAREERS

Public health is defined as “what we as a society do collectively to assure the conditions in which people can be healthy,” according to the 1988 Institute of Medicine (IOM) report, *The Future of Public Health*. Public health efforts have resulted in tremendous improvements in the health of individuals and communities through preventive health services, vaccines, improved sanitation and hygiene, safer workplaces, and enhanced food and drug safety. However, despite the achievements of public health, there is a growing shortage of public health workers, including a critical shortage of public health physicians, and many public health workers are inadequately prepared to face today’s public health challenges.

Concern about this shortage led the U.S. Congress to mandate an IOM study to determine 1) what knowledge and skills are needed by public health physicians, 2) the number of programs needed to maintain an adequate supply of physicians trained for public health careers, and 3) how these programs can be funded. The resulting report, *Training Physicians for Public Health Careers*, makes recommendations that address this charge.

The committee defines public health physicians as those “whose training, practice and world view are based in a large part on a population focus rather than individual practice, that is, on assuring the availability of essential public health services to a population using skills such as leadership, management, and education as well as clinical interventions.”

In this report, the committee identifies three levels of physician involvement in public health: 1) All physicians engage with public health concerns in many areas of their practice and thus participate in public health activities, even though they are not defined as public health physicians. 2) Some physicians practice public health for part of their career, for full or part time, but their primary career path is another practice area (e.g., a pediatrician working in school health). 3) Some physicians specialize in public health, either for their entire career or they enter public health as a change in specialty at some point.

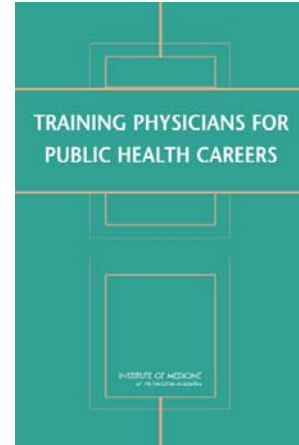
### WHAT SHOULD PUBLIC HEALTH PHYSICIANS KNOW?

In addition to endorsing the recommendations of the 2003 IOM report, *Who Will Keep the Public Healthy?*, the committee recommends additional content areas for a public health physician’s study (see Box 1).

Furthermore, organizational partners should develop models to integrate training in public health principles and practice with physician education at both the undergraduate and graduate levels. Each graduate medical education program should identify and include relevant public health concepts and skills, and medical schools and graduate medical education programs should employ faculty with appropriate public health training and experience in order to teach public health content and serve as role models.

### CONTINUING PUBLIC HEALTH PHYSICIAN EDUCATION

Basic competency in population and public health is important for those already practicing medicine as well, regardless of their specialty. Therefore, the committee recommends that physicians should be able to assess their own public health competency and training needs, and support for continuing education in public health should be provided. Medical specialty societies should encourage self-assessment and support continuing medical education by addressing emerging topics and public health practice updates.



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**Public health schools and programs, state health departments, and specialty societies should develop competency-based certification programs and other training programs based on the recommended content areas to enable physicians to obtain practice-specific public health training.**

**BOX 1.** Summary of Recommended Content Areas for Public Health Physicians

All public health professionals should receive education in the following subjects, per the 2003 IOM report, *Who Will Keep the Public Healthy?*:

- Epidemiology
- Biostatistics
- Environmental health
- Health services administration
- Social and behavior health sciences
- Informatics
- Genomics
- Communication
- Cultural competence
- Community-based participatory research
- Global health
- Policy and law
- Public health ethics

The IOM committee has recommended additional content areas:

- Leadership
- Clinical and community preventive services
- Public health emergency preparedness

An understanding of basic health concepts is important for all physicians, but a smaller number require greater knowledge of particular public health concepts and skills because a specific aspect of their practice, setting, or role involves public health. Examples of these types of physicians include infectious disease physicians who investigate health care institution-associated disease outbreaks, pediatricians who work in school health, and emergency medicine specialists who direct emergency medical services.

Public health schools and programs, state health departments, and specialty societies should develop competency-based certification programs and other training programs based on the recommended content areas to enable physicians to obtain practice-specific public health training. Furthermore, employers of physicians involved with public health concerns should support both initial and ongoing assessments of the training needs of these physicians, prepare personal development plans to address needed knowledge and skill areas, and provide funding for these plans.

Physicians may practice public health for their entire careers or may enter public health as a specialty change at some point in their careers. To ensure that their knowledge and practice meet the current standards for public health professionals, public health physicians require special public health training. They should earn a master of public health from a school or program of public health or through preventive medicine programs, or they should obtain comparable experience or degrees through such programs as the federal or state Epidemic Intelligence Service (EIS) programs.

The training or experience should include all 16 content areas recommended in Box 1. Schools and programs of public health should increase efforts to recruit physicians into public health graduate programs. Graduate programs should include a public health field experience.

## **THE NEED FOR MORE PUBLIC HEALTH PHYSICIANS**

What is an “adequate” supply of public health physicians, and how many training programs are needed? Unfortunately, there is no consistent definition or inclusive approach to identifying and counting public health physicians. It is extremely difficult to accurately determine the current pool, much less the desired number. This, in turn, impedes efforts to plan for the future number and types of training programs needed to prepare physicians for effective public health practice.

Thus, the committee recommends that Congress designate funds for the Health Resources and Services Administration (HRSA) to conduct a periodic (every 3 to 5 years), comprehensive enumeration of the public health workforce—both filled and unfilled positions—with particular attention to physicians. This information should be used to project needs for public health physicians and their education programs, and to determine the level of funding necessary.

Governmental agencies form the backbone of the public health system and its actions. Without sufficient numbers of well-trained physicians, the entire public health system is weakened. Due to the centrality of the “backbone” in assuring the public’s health and the available data, which mainly focuses on physicians in governmental agencies, the central focus of this report is physicians in governmental agencies. Based on the numbers and sizes of agencies at all levels of government, the staffing patterns both reported and known to members of the committee, and indications from the agencies at the level of vacancies, the committee’s estimate is that there are currently 10,000 public health physicians.

However, reports from public health agencies identify serious gaps in the supply of public health physicians. Data are insufficient to identify the current number of practicing public health physicians, much less project the number needed, but by using expert opinion and existing data, the committee estimates that 20,000 physicians are needed in public health careers—an increase of 10,000 over the current number.

Box 2 contains the committee’s recommendations for increasing training capacity.

## FUNDING FOR PUBLIC HEALTH TRAINING

Funds for physician education and training in public health are unreliable. Furthermore, in order to save money, agencies have limited physician employment and salaries for public health physicians are significantly lower than their counterparts in private practice. Box 3 lists a number of actions that are needed to ensure adequate funding and sufficient employment to maintain an adequate public health physician workforce.

## CONCLUSION

Public health physicians are vital to improving and maintaining the public’s health. The United States has the opportunity to build a strong public health physician workforce—doing so will require commitment in order to overcome current barriers. The people of the United States will benefit if action is taken now.

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### **BOX 2.** Summary of Recommendations for Additional Training Programs for Physicians

- The Centers for Disease Control and Prevention (CDC) should expand the Epidemic Intelligence Service program to include double the current physician enrollment without diminishing the participation of other disciplines, and expand its Academic Health Departments (AHD) to sustain 30 AHDs;
- State and large local health departments, in conjunction with medical schools and schools of public health, should expand post-residency fellowships in public health;
- Public health/general preventive medicine (PH/GPM) residency programs should expand current capacity and add additional PH/GPM residences as needed to graduate a minimum additional 400 residents per year;
- The Residency Review Committee for preventive medicine should review the content and quality of preventive medicine training programs in the context of the recommendations in this and other recent IOM reports on public health to ensure that the training programs meet the needs of modern public health practice;
- Governmental public health agencies should support both initial and ongoing assessment of the training needs of physician employees; and,
- The American Board of Preventive Medicine, the Board of Public Health Examiners, the American College of Preventive Medicine, the American Association of Colleges of Osteopathic Medicine, the Association of State and Territorial Health Officials, the National Association of County and City Health Officials, the Association of Schools of Public Health, the American Public Health Association, and the Council of Accredited MPH Programs should convene to explore the challenges and mechanisms available to assess minimum competency for physicians in public health practice.

### **BOX 3.** Summary of Recommendations for Funding Public Health Physician Training

- The U.S. Congress should fund a comprehensive educational strategy sufficient to produce the additional number of public health physicians required through the following mechanisms:
  - Funding for residency training in public health should be equivalent and parallel the funding streams for graduate medical education in other medical disciplines;
  - Funding to support the recommended expansion of the EIS and AHD programs; and,
  - Reinstatement and growth of funding for health professions training through the Title VII programs.
- Congress, HRSA, and CDC, should work collaboratively to develop model demonstration and evaluation programs that explore other models than direct physician hiring by health agencies.
- Agencies, particularly state and local health departments, should create and adequately fund additional public health positions (full- and part-time) to accommodate the 10,000 additional public health physicians required.
- The American College of Preventive Medicine, the Association of State and Territorial Health Officials, the National Association of County and City Health Officials, the U.S. Department of Health and Human Services, and the federal Office of Personnel Management should regularly conduct a salary assessment of governmental public health and comparable private sector physicians.
- Federal, state, and local public health agencies should develop the following programs:
  - Loan forgiveness for physicians who enter and continue to work in the public health sector; and,
  - Public health training for physician employees in exchange for continued employment in that agency.
- Employers of physicians in the public health workforce should develop incentives to recruit and retain public health physicians that include:
  - Discretionary benefits;
  - Career development support; and,
  - Opportunities for increased professional interaction for public health physicians practicing in remote or isolate circumstances.
- Federal and state governments develop tax incentives for individuals who train and enter governmental public health.

### **FOR MORE INFORMATION...**

Copies of *Training Physicians for Public Health Careers*, are available from the National Academies Press, 500 Fifth Street, N.W., Lockbox 285, Washington, DC 20055; (800) 624-6242 or (202) 334-3313 (in the Washington metropolitan area); Internet, <http://www.nap.edu>. The full text of this report is available at <http://www.nap.edu>.

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