

On Academics

PUBLIC HEALTH EDUCATION IN THE 21ST CENTURY: TOPICS AND TRENDS

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The Association of Schools of Public Health (ASPH) is pleased that *Public Health Reports* will be publishing this new academic column. In this inaugural column, we will present some topics to set the stage for further exploration and understanding of the academic issues, opportunities, and challenges facing accredited graduate schools of public health today, as well as thoughts on the future of graduate public health education in the U.S. and around the world.

In the past several years, ASPH has made much progress in advancing the capacity of schools to meet real-world public health needs through research, teaching, and service missions that facilitate the launch of competent graduates who are prepared to sustain and promote healthy people in healthy communities. Schools of public health fulfill this valuable workforce contribution by remaining true to core academic and university-wide goals and standards while adopting principles, methods, and policies that respond to public health realities—both current and anticipated.

HOW FAR WE'VE COME

The academic public health community eagerly awaited the 2003 report from the Institute of Medicine (IOM), *Who Will Keep the Public Healthy? Educating Public Health Professionals for the 21st Century*, and carefully combed it for recommendations on how “education, training, and research in schools of public health could be strengthened to meet the needs of future public health professionals to improve population-level health.”¹ This report followed up the landmark 1988 report, *The Future of Public Health*, also by the IOM, in which the expert panel declared that public health in the U.S. was in a state of “disarray” and offered several prescriptions for change, including some directed at academic public health.²

One difference between these two publications is especially striking. *The Future of Public Health* pointed out that some schools were “somewhat isolated from public health practice;” 15 years later, *Who Will Keep the Public Healthy?* acknowledged that schools of public health were evolving in response to current and anticipated public health problems in our communities, the realities of the rapidly changing world of science, and evidence of increasingly successful collaborative endeavors with other disciplines and in nontraditional public health settings.

TRAINING THAT PREPARES PROFESSIONALS AND STUDENTS FOR CURRENT AND FUTURE PRACTICE

Strong ties with the Centers for Disease Control and Prevention (CDC), stemming from a historic cooperative agreement in 1981, have helped faculty at ASPH-member schools to supply the government with critical research and training that meet public health needs in a variety of settings. The Health Resources and Services Administration (HRSA) has also supported the development of curricula and training mechanisms in schools. The Centers for Public Health Preparedness (CPHP), funded by the CDC, and Public Health Training Centers (PHTC), funded by HRSA—both with ASPH support—are two major examples of national, federally funded networks of schools of public health working in collaboration with state and local public health departments and other community partners to provide lifelong learning opportunities for public health professionals.

While the CPHP focus on public health preparedness training and have created several guides to national preparedness resources, developed from existing CPHP materials and programs,³ the PHTC more generally aim to strengthen the technical, scientific, managerial, and leadership skills of current and future public health professionals. The PHTC have developed several free resources as well, including a list of ongoing distance-learning courses by the Council on Linkages Between Academia and Public Health Practice, organized by professional public health competency.⁴

The CDC, HRSA, and other federal entities also provide internships and fellowships that allow public health students and graduates to apply their classroom-based learning in real-world scenarios—and in the

Articles for *From the Schools of Public Health* highlight practice- and academic-based activities at the schools. To submit an article, faculty should send a short abstract using the guidelines found at: <http://www.publichealthreports.org/resourcecenter/authors.cfm#asph>.

process get a glimpse of professional employment in service to the nation. These traineeships are designed to support the career development of promising public health researchers and practitioners while simultaneously addressing the workforce crises that federal public health agencies are facing. ASPH is currently working with eight partners—CDC, HRSA, Environmental Protection Agency, Fogarty International Center of the National Institutes of Health, National Highway Traffic Safety Administration, Department of Agriculture, Capitol Hill, and the Office of Public Health Reports—and so far in 2007 has placed a total of 50 trainees at these agencies.

Unfortunately, funding from both CDC and HRSA for education and training activities is lower than it has traditionally been, so ASPH is investigating alternate funding streams to continue support for these critical activities.

ASPH COUNCIL, COMMITTEE, AND TASK FORCE CONTRIBUTIONS

In many cases, important ASPH academic-practice activities are advanced by the ASPH Council of Public Health Practice Coordinators (Practice Council) and the ASPH Practice Committee. Established in 1992, the Practice Council, composed of dean-appointed representatives from each member school, serves as both a mechanism for creating and maintaining linkages with the public health practice community and a forum for exploring innovative ways to incorporate public health practice principles into schools' curricula and research.

The Practice Council, for instance, has developed guidelines for strengthening the teaching and research of public health practice in *Examples of Academic Public Health Practice-based Promotion and Tenure Guidelines at Accredited Schools of Public Health*, which includes suggestions for recognizing and encouraging faculty with expertise in a particular practice area.⁵ Council members have also completed three monographs, including *Demonstrating Excellence in Practice-based Teaching for Public Health*.⁶ The ASPH Practice Committee, comprising deans of our member schools, was established in 2004 to ensure stronger support for practice issues in the Association.

Between 2002 and 2006, the ASPH Tobacco Use Prevention Council,⁷ with funding from the American Legacy Foundation (Legacy), awarded 22 grants totaling nearly \$2 million to 11 schools of public health in four categories: predoctoral scholarships, doctoral dissertation scholarships, curricular innovation grants, and small grant/pilot study grants through STEP UP,

the Scholarship, Training, and Education Program for Tobacco Use Prevention. STEP UP also convened two national academic tobacco workshops to promote the development of education in tobacco control and enhance participation in tobacco studies, tobacco research, and competency-based training among graduate public health students and professionals. The program also published a special issue on tobacco education and training in *Public Health Reports*. A few of these projects found alternative sources of funding after the ASPH/Legacy grant expired.

The major locus for academic leadership at ASPH, however, lies within our Education Committee, which has been extremely active these past several years. The Committee recently undertook a core competency model development project in the five traditional master of public health (MPH) disciplines—biostatistics; epidemiology; environmental health science; health policy and management; and social and behavioral sciences.⁸ In addition, the Committee developed competencies in public health biology, including genetics and genomics, to address the fact that many public health students have little or no background in the medical or biological sciences.

The 2003 IOM report also suggested eight new content areas that schools of public health should offer to meet 21st century public health challenges. Most of these new areas were included as interdisciplinary/cross-cutting competencies in the ASPH competency model within six domains: Communication and Informatics, Diversity and Culture, Leadership, Professionalism, Program Planning, and Systems Thinking.

While the MPH degree is the basic professional degree required of all accredited schools of public health, many schools also offer the doctor of public health (DrPH) as an advanced professional degree for public health practitioners. The DrPH Subcommittee of the Education Committee will soon begin to identify core competencies for the DrPH degree, which will serve as a resource and benchmark for schools aiming to develop or reassess their DrPH programs.⁹

In recent years, ASPH has also sponsored a number of curricula development projects and related reports through the Education Committee and other ASPH councils:

- *Beyond Women's Health: Incorporating Sex and Gender Differences into Graduate Public Health Curricula*¹⁰
- *Advocating for Folic Acid: A Guide for Health Professionals*, an educational, Web-based module, sponsored by the March of Dimes, on the benefits of folic acid in the prevention of birth defects¹¹
- *Ethics and Public Health: Model Curriculum*¹²

- *Injury Control and Prevention in Schools of Public Health*, a baseline assessment on injury research, faculty expertise, curricula, and training in accredited schools of public health¹³

Who Will Keep the Public Healthy? also recommended that “. . . all undergraduates should have access to education in public health” (emphasis mine). In response, a number of schools of public health have either moved into undergraduate public health education or are considering it. ASPH’s Undergraduate Public Health Education Taskforce, under the jurisdiction of the Education Committee, has begun to look at undergraduate public health programs being offered across the country and is developing recommendations for curriculum content along with teaching and advising needs for the undergraduate.¹⁴ This is an excellent opportunity to interest undergraduates in public health as a career and alert them to the possibilities of graduate school; at the same time, many health departments are viewing such bachelor’s degree graduates as a cost-effective way to supplement their department staffs. Undergraduate public health offerings also provide a link in the pipeline taking high school students to graduate programs in public health.

Another Education Committee task force, this one of ASPH epidemiologists and a practice partner, is developing sample curricula that explicitly map to appropriate CDC/Council of State and Territorial Epidemiologists Applied Epidemiology Competencies. The task force will also provide guidelines for and examples of ways to develop practica that map to some of the more applied competencies.¹⁵

PROMOTING DISTANCE EDUCATION

The rise of the Internet and the growing needs of place- and time-bound students to access graduate public health education have led ASPH to make a strong commitment to developing the distance-learning capacity of accredited schools of public health, primarily through our Distance Education Council. Distance-learning programs at member schools range from single courses to entire degree programs.¹⁶ Schools have been especially encouraged to provide distance training to practitioners in the field to meet some of the current public health challenges, including emergency preparedness, mental health, oral health, and health disparities.

COLLABORATION IN SUPPORT OF THE ECOLOGICAL MODEL

A third IOM report, *The Future of the Public’s Health in the 21st Century*, described a number of determinants of population health that it terms the “ecological” model.¹⁷ In *Who Will Keep the Public Healthy?*, it is recommended that graduates have an “understanding of the multiple determinants of health within the ecological model.” The broad range of determinants—including innate characteristics of the individual, behavior, environment (natural and built), access to health care, and employment—reflects many areas in which schools of public health can collaborate with other academic schools and departments, and not just other health professional schools. Many schools have developed joint degree programs with medicine, nursing, dentistry, and pharmacy, but increasingly we are seeing public health partnerships with social work, public affairs, law, business, and, most recently, veterinary schools.

NEW SUPPORT AND REWARDS FOR TEACHING EXCELLENCE

In addition to the type of curricular material that schools of public health offer, the quality of education and training, which is shown through the teaching excellence of the faculty, is important. The ASPH/Pfizer Award for Teaching Excellence was developed in 2005 to recognize public health faculty who are notable for teaching and mentoring students; the brand new ASPH/Pfizer Early Career in Public Health Teaching Award honors junior faculty who are outstanding in teaching and mentoring students toward distinction in public health research, teaching, and practice.

In addition, ASPH and Pfizer, Inc. have launched the Public Health Academy of Distinguished Teachers, which seeks to “elevate the excellence, visibility, scholarship and impact of learning and teaching in public health.”¹⁸ The Academy was launched in June 2007 with an inaugural group of member candidates who had been nominated for the ASPH/Pfizer Award for Teaching Excellence in 2005 and 2006. Proposed Academy activities include development of an Academy Forum for the exchange of teaching best practices, shared resources, a communications list serve, and solicitation of articles for a new column on academic excellence in *Public Health Reports*. In addition, the Academy will sponsor both the ASPH/Pfizer Award for Teaching Excellence and the ASPH/Pfizer Early Career in Public Health Teaching Award.

CONCLUSION

Schools of public health are considering how to organize education and training in other areas, as well. Globalization, for many reasons, has triggered worldwide interest in global health—a field for which competencies have not yet been developed.

Schools of public health will be challenged to meet the education and training needs of public health professionals not only in new and expanding content areas, but for new audiences and with the incorporation of new technologies as well. For instance, at the same time that an aging population and the obesity epidemic are causing unprecedented rates of chronic disease, emerging and reemerging infectious diseases are increasing; it will be a challenge for schools to prepare graduates in the many areas that public health now touches.

ASPH is working hard to forge meaningful links with the practice community to serve the health needs of people in neighborhoods around the world and also train our students—the public health practitioners of the future. The challenges are many, but the goal is steadfast: to improve the public's health. The initiatives I've described previously—and many more in development—will ensure that schools of public health across the country will continue to train the public health professionals needed to take on that task.

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