From the Schools of Public Health



On Academics

EDUCATION FOR HEALTH: AN EDUCATIONAL UNDERPINNING FOR HEALTHY PEOPLE 2020

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Public health educators now teach in a wide range of settings outside of traditional graduate public health education. *Healthy People 2020* provides an opportunity to step back and think through the roles that public health and prevention education should play in the education of a wide range of students, including the educated citizen and the future clinical health professional.

When looking at prevention and public health education, it is key to examine not only the component curricula, but also how the stages of education fit together. In its 2004 report on health literacy, the Institute of Medicine (IOM) found that "achieving health literacy in students is hindered by a lack of continuity in health education programs across the many age groups." A recent review of undergraduate-to-graduate articulation issues in *Public Health Reports* concluded, "In light of the recent growth in undergraduate public health education, there is potential duplication in curricula between degrees."

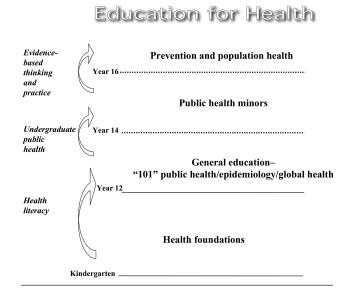
This lack of coordination stems in part from the lack of an integrated framework for health-related education based upon a set of shared goals. This is especially true when attempting to integrate education between kindergarten and grade 12 (K–12), as well as undergraduate and graduate health professions education.

In response to this need and opportunity, the Healthy People Curriculum Task Force has developed a framework called Education for Health (Figure). The Education for Health framework has been proposed as a possible educational underpinning for *Healthy People 2020*.³

THE HEALTHY PEOPLE CURRICULUM TASK FORCE

The Healthy People Curriculum Task Force (hereafter "Task Force") was convened in 2002 by the Association of Academic Health Centers and the Association for Prevention Teaching and Research (APTR) to implement the Healthy People 2010 objective 1.7. Objective 1.7 sought to "... increase the proportion of schools of medicine, schools of nursing, and health professional training schools whose basic curriculum for health-care providers includes the core competencies in health promotion and disease prevention."4 The Task Force has representatives from a wide range of areas, including clinical health professions educators and senior organizational representatives from the American Association of Colleges of Nursing, American Association of Colleges of Osteopathic Medicine, American Association of Colleges of Pharmacy, American Dental Education

Figure. The Education for Health framework



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Association, Association of American Medical Colleges, Association of Physician Assistant Programs, Association of Schools of Allied Health Professions, and National Organization of Nurse Practitioner Faculties.

In addition, the Association of Schools of Public Health (ASPH) and the Community-Campus Partnerships for Health serve as resource groups. Since 2005, the Task Force has received grant support from the Josiah Macy, Jr. Foundation (http://www.josiahmacy foundation.org), which supports programs "designed to improve the education of health professionals in the interest of the health of the public."

In 2004, the Task Force published the Clinical Prevention and Population Health Curriculum Framework⁵ to provide a uniform structure and language for use by participating clinical health professions. The Clinical Prevention and Population Health Curriculum Framework has recently been revised. Feedback on the revised framework was incorporated into the final revision, which is available at member organizations. Data collected by Task Force member organizations allowed objective 1.7 to be converted from a developmental to a regular objective as part of the midterm review of *Healthy People 2010*.

THE EDUCATION FOR HEALTH FRAMEWORK AND ITS GOALS

The Education for Health framework seeks to provide a vertically integrated educational approach connection across age groups. It also aims for horizontal integration among the efforts of educators, public health practitioners, and clinicians. It provides the basis for bringing together diverse educational objectives located throughout previous versions of *Healthy People*. In addition, it is hoped that it will focus attention on the key roles played by education in achieving *Healthy People* objectives, encourage collaboration and innovation, and focus attention on long-term issues of educational coordination across age groups.

The Education for Health framework builds upon three movements that have developed or expanded rapidly in the last decade: health literacy, undergraduate public health, and evidence-based practice. All of these movements have been encouraged or stimulated by IOM publications. IOM's Board on Population Health and Public Health Practice has played an active role in many of these efforts.

The health literacy movement began as an effort to help consumers cope with the growing complexity of the U.S. health-care system. It has increasingly developed as part of the personal health and wellness movement and has been integrated into the formal educational system especially, but not exclusively, at the K–12 grade levels.⁸

The undergraduate public health education movement has been stimulated by IOM's recommendation that ". . . all undergraduates should have access to education in public health." Undergraduate public health has resonated with arts and sciences educators who have engaged the Association of American Colleges and Universities' (AAC&U's) Liberal Education and America's Promise (LEAP) initiative. The mission of LEAP is to move undergraduate education to a more interdisciplinary, globally focused, experiential education providing skills for lifelong learning. AAC&U and many arts and sciences faculty have seen public health as an excellent example of how to achieve these goals.

At the health professions level, the Clinical Prevention and Population Health Curriculum Framework has incorporated evidence-based practice as a fundamental approach to encouraging the incorporation of prevention and population health into clinical education.³ The revised framework has provided a self-contained structure for organizing, measuring, and seeking formal endorsements to integrate prevention and public health into clinical education. The framework has been widely disseminated and endorsed by clinical health professions and has been incorporated into accreditation standards, including those of pharmacy¹¹ and undergraduate and graduate nursing.¹²

As these movements have developed, only modest thought has been given as to how to connect the pieces, create a coherent education strategy that builds upon prior curriculum, and ensure sufficient reinforcement and measurable outcomes. The Education for Health framework is an effort to take on these unfinished tasks. It is designed to take advantage of the growing student, faculty, and public interest in prevention and public health, and ensure that educated citizens and educated health professionals understand and support public health efforts.

Recent formal educational standards, guidelines, and recommendations have provided the basis for an integrated educational effort brought together under the Education for Health framework. This article examines these educational efforts and looks at how they can be put together based upon the Education for Health framework.

FORMAL EDUCATION STANDARDS, GUIDELINES, AND RECOMMENDATIONS

At the K-12 level, formal national educational standards have been developed for a range of disciplines

including science, social studies, mathematics, and the arts. In the 1990s, the American Cancer Society, in collaboration with K–12 health education associations and the Centers for Disease Control and Prevention (CDC), produced the first National Health Education Standards. Eight standards have been included in the second edition published in 2007. These standards, which are detailed in the next section, have been incorporated into the curriculum standards of the majority of states and have become the national expectations for K–12 health education.

NATIONAL HEALTH EDUCATION STANDARDS

The National Health Education Standards include eight standards along with a coordinated set of outcomes tied to four grade ranges: pre-K–grade 2, grades 3–5, grades 5–8, and grades 9–12. The standards emphasize personal health and wellness, and focus on personal health behavior, including its roots in social and behavioral sciences. Public health is primarily viewed as a vehicle for understanding and improving personal health and health behavior. The eight standards are:¹³

- 1. Students will comprehend concepts related to health promotion and disease prevention to enhance health.
- 2. Students will analyze the influence of family, peers, culture, media, technology, and other factors on health behaviors.
- 3. Students will demonstrate the ability to access valid information and products and services to enhance health.
- 4. Students will demonstrate the ability to use interpersonal communication skills to enhance health and avoid or reduce health risks.
- 5. Students will demonstrate the ability to use decision-making skills to enhance health.
- 6. Students will demonstrate the ability to use goal-setting skills to enhance health.
- Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.
- 8. Students will demonstrate the ability to advocate for personal, family, and community health.

These standards, which have been accepted in principle by the majority of states, assume that personal as well as population health are important goals accepted by students and society as a whole.

In addition to the development of National Health Education Standards, guidelines for teaching statistics as part of K–12 mathematics education were endorsed

by the American Statistical Association in 2005. ¹⁴ This curriculum included key statistical concepts as well as an introduction to a range of observational and experimental study designs. The Young Epidemiology Scholars Program and the Disease Detectives component of the Science Olympiad, supported by the Robert Wood Johnson Foundation, the College Board, and CDC, have provided curriculum materials and efforts to stimulate student interest compatible with the goals of the American Statistical Association guidelines. Since its inception in 2004, the Young Epidemiology Scholars Program has received more than 3,500 research papers in epidemiology from students from every U.S. state, and has awarded more than 720 college scholarships. ¹⁵

At the undergraduate level, arts and sciences organizations including AAC&U and the Council of Colleges of Arts and Sciences, along with public health educational organizations including ASPH and APTR, have endorsed a series of learning outcomes and curriculum frameworks as approaches to organizing undergraduate public health education. These approaches have evolved into recommendations for undergraduate public health education¹⁶ that put forth enduring understandings, curricular frameworks, and learning outcomes for Public Health 101, Epidemiology 101, and Global Health 101. Together, these courses provide a self-contained curriculum designed to introduce students to the full range of public health, including an overview of health-care systems. These courses may serve as a core curriculum for a minor or major in public health.

Community colleges represent an underutilized opportunity to introduce students to the population perspective of public health and to address public health workforce needs.¹⁷ An estimated 250,000 new public health workers are needed by 2020.18 Many of these jobs will require skills that can be obtained at the community college level. However, very few community colleges offer programs leading to associate degrees in public health or related fields, despite the fact that nearly 50% of undergraduates and a disproportionate percentage of students from underrepresented minority groups are enrolled in community colleges.¹⁹ Associate degrees from community colleges can and should be seen as part of the Education for Health continuum and should develop specialized and technical curriculum such as environmental health and public health preparedness, building on the core public health curriculum recommended for all undergraduates.

At the clinical health professions level, the Clinical Prevention and Population Health Curriculum Framework has been developed to focus on four key

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components: evidence-based practice, clinical preventive services and health promotion, health care and public health systems, and population health and community aspects of practice. An evidence-based public health approach similar to what CDC calls the Public Health Approach²⁰ has been incorporated into the framework, defining key content areas grouped as problem description, etiology, recommendations, implementation, and evaluation.³ To reinforce this evidence-based approach, the Clinical Prevention and Population Health Curriculum Framework explicitly incorporates the work of the U.S. Preventive Services Task Force²¹ and the Community Preventive Services Task Force.²²

As such, today there are sets of standards, guidelines, and recommendations that cover the spectrum of prevention and public health education at the K–12, undergraduate, and health professions education levels. These expectations were developed during the last 10 to 15 years by a wide spectrum of educators, public health practitioners, and clinicians with little communication among the groups. The next step in the process should be to connect and coordinate these efforts and produce a coherent educational approach.

CONNECTING THE COMPONENTS USING THE EDUCATION FOR HEALTH FRAMEWORK

Healthy People 2020 and the Education for Health framework provide an opportunity to develop a consensus on how to put together these pieces as a cohesive and coordinated whole that is greater than the sum of its parts. The Education for Health framework provides a structure for combining these pieces. In addition, the framework can provide a coherent strategy for teaching public health and personal health and wellness as complementary approaches that reinforce each other.

A fully developed Education for Health framework should encourage K–12 education focused on personal health and wellness, as well as statistical and study design concepts that prepare students to read the daily health news in print or online. It should also incorporate an understanding of the population and social aspects of health and disease beyond their impact on personal health behaviors.

Undergraduate health education may fill in the holes in personal health and wellness and develop specialized associate degrees needed to address workforce needs. It should go beyond these basics to develop an educated citizenry that understands and supports an evidence-based public health approach.

Clinical health professions education may focus

on the individual aspects of prevention and health behavior. However, it needs to incorporate a focus on the complementary contribution of a population or public health focus.

Seeing the Education for Health framework as an educational underpinning for *Healthy People 2020* is a key step in this process. Acceptance of the Education for Health framework will not in and of itself accomplish the goal of a coherent, integrated curricula. However, acceptance of this approach will hopefully set in motion ongoing discussions among educators at the K–12, undergraduate, and health professions levels with the goal of producing a system of education for health by 2020 that fully incorporates an evidence-based public health perspective into the education of all health professionals and other citizens.

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