

REPORT AND RECOMMENDATIONS FROM THE WORKING GROUP ON

PUBLIC HEALTH 101

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Background and Rationale for Public Health as Part of General/Liberal Education

In 2003 the Institute of Medicine of the National Academy of Sciences (IOM) released a report entitled: *Who Will Keep the Public Healthy? Educating Public Health Professionals for the 21st Century*. The IOM committee recommended that: "...all undergraduates should have access to education in public health." (1) From a policy perspective, the rationale for this recommendation is that understanding public health is critical for being a good citizen and necessary for a healthy society. From an education perspective, studying public health has enormous intellectual value in that:

- The study of public health involves critical thinking and critical decision making;
- It gives students a methodology for understanding populations;
- Population-scale thinking relies on multiple disciplines, thus exposing students to current health care and policy issues while gaining an understanding of the depth and breadth of public health;

Moreover, a course in public health exposes students to a potential career path in public health on the graduate level.

Over the past several years, many undergraduate schools have developed an introductory course in Public Health in order to expose students to the core issues of public health. Although the course content varies on every campus, most of the courses introduce students to all or some of the core public health topics such as: biostatistics; epidemiology; environmental and occupational health; behavioral health; health policy and administration; maternal and child health and ethics. Not every survey course touches on all the topics listed above, but it does give students a "taste" of public health and puts public health topics within a context of population-based issues and health. Through Public Health 101, students learn the vocabulary of public health and gain an appreciation of the public health by focusing on the multidisciplinary or ecological foundations of public health.

Curriculum Framework

As an introductory course, Public Health 101 is probably best taught as a survey course. Thus, the framework of the course should be expansive because the goal is to introduce the topics of public health, not to study them in depth, and to excite students about the field and give them tools that they otherwise would not be exposed to on the undergraduate level. Because they are usually survey courses, Public Health 101 (or Introduction to Public Health) are often team taught or at least taught with a variety of guest speakers in order to handle the breadth of topics. The lead professor has a critical role in teaching, coordination and linking the various disciplines of public health to everyday life and good citizenry

Recommendations of the working group on Public Health 101

Multiple methods may be used to teach Public Health 101. For example, utilizing current events as reflected in newspaper articles on public health found almost every day in the media as a discussion tool and employing the classroom as a forum for discussion is one of the major techniques employed by many professors to illustrate the real world nature of the material and its pervasiveness in our lives. Some teachers also utilize the case study method to address public health topics after basic didactic teaching. Encouraging critical thinking, group discussions, team projects (both in and out of the classroom) and promoting oral and written communication are all techniques used in this introductory course.

Each school can integrate local dimensions into their courses through case studies and projects in the local community. This is a powerful pedagogical approach to studying population health. Exposing students to guest speakers from local and state public health departments and other community agencies who are working in the field helps the student gain an understanding of the public health paradigm and roles and functions of the basic public health sciences. Whatever the method(s) used, most courses attempt to increase the core knowledge and vocabulary of public health while fostering liberal education outcomes as proposed by the Association of American Colleges and Universities through LEAP (Liberal Education and America's Promise).

In colleges where there are not public health programs or schools, the structure and content of the course will depend upon the department in which it is housed. For instance, if the course were in the history department, it would take on a very different tone than if it were in the anthropology department. Even within a public health school or program introductory public health courses might be run by the department of epidemiology or health administration and policy, or public health practice, each reflecting a different character that will influence the course content and structure.

The Public Health 101 Working Group generally endorsed the statement from the Association of Schools of Public Health (ASPH) on undergraduate education and the Sample Public Health 101 Curriculum Framework (see appendix). More specifically, the group concurs that an introductory undergraduate course in public health should be built upon a population perspective and provide an ecological understanding of disease causation and prevention, emphasizing health issues that affect society as a whole as well and should include the following:

- An historical perspective on the contributions and roles of public health including the structure and functions of public health institutions;
- An introduction to epidemiological and biostatistical principles including concepts of rates, causation and disease surveillance;
- Determinants of health from a global perspective including environmental, social, cultural, behavioral and biological as well as access to health services;

- An introduction to selected tools of disease control and health promotion including interventions such as vaccinations, screening, counseling and education, environmental-occupational, legal, and policy approaches as well as the roles of health communications;
- Issues of health care delivery addressed from a population perspective including such issues as quality, cost and access as well as organizational structure and their relationship to public health services.

The Sample Curriculum Framework provides additional detail that faculty might find useful to identify topics for course sessions, but is not necessarily appropriate for all Public Health 101 courses as a syllabus.

Learning Outcomes

Public Health 101 may fulfill one of the social sciences education requirements for general education in many schools and colleges. Coupled with Epidemiology 101, which can usually satisfy a science requirement, the student will gain a broad-based knowledge of public health concepts and techniques. In addition to fulfilling a social science requirement, Public Health 101 can be the first course in a minor in public health to introduce the student to an understanding of broad public health concepts. The Working Group on PH 101 recommends a number of learning outcomes for this introductory course. Specifically, students who successfully complete this course will be able to:

1. Describe the key features of the historical development of public health as a domain of specialized knowledge and public policy;
2. Explain the concept of population health;
3. Describe various conceptualizations of health and health status across populations, including people with disabilities, those with low socio-economic status and ethnic minorities;
4. Give examples of how keeping the public healthy involves various disciplines;
5. Discuss the basic principles of epidemiology, including rates, risk factors, disease determinants, and causation;
6. Explain the impact of behavior on health and be able to identify a method(s) for altering behavior at the individual and social levels;
7. Explain what it means to foster a healthy society both locally and globally;
8. Utilize the frameworks for accessing and evaluating the quality of health information on the web and in the mass media and be able to apply that information to a local public health situation;
9. Describe the impact and control of environmental factors on health;
10. Outline the concepts of prevention, detection and control of infectious and chronic diseases;
11. Utilize public health concepts to examine a local public health issue;
12. Explain the relative role of institutions in shaping health outcomes.

Curriculum Resources

The working group recommends that a web site be developed to provide institutions with material to assist them in putting together Public Health 101 courses. Such materials would include syllabi, case studies, methodology for case studies, suggested readings, tools, modules, and best practices for certain aspects of the course or for particular assignments. In addition the working group recommends that:

- All syllabi and teaching aids which are put on the web site should have some form of review by peers.
- An editorial board with representatives from public health, preventive medicine and arts and sciences should be consulted as to the review process.

Relationship Between Graduation and Undergraduate Education

Recognizing that institutions vary greatly in terms of their major, minor and curriculum requirements, the working group does not recommend trying to dictate where Public Health 101 should fit, but rather that a strong statement of principles be articulated (e.g., ideally all undergraduate students should be exposed to the principles of public health through an introductory course) and that the course be flexible enough to fulfill a social science or general education requirement. The working group believes that this undergraduate introductory course should not be viewed by graduate programs as a substitute for a graduate course. Public Health 101 is clearly on the undergraduate level and does not have the depth of a graduate course.

The issue of undergraduate and graduate education in public health is a sticky one. Each graduate program and school has different requirements and policies that dictate waivers or substitution of courses. Ultimately, it is hoped that health professions schools and programs will require an introductory course in public health as a prerequisite for admission.

Faculty and Administrative Issues

The working group recognizes that faculty and administrative issues are very idiosyncratic based on the department from which the course is given and the administrative structure of the educational institution. Once again, if a school develops a minor or major in public health, faculty and administrative issues may become an issue. If the school has a graduate program or school of public health, there may be issues concerning control or decisions as to who teaches particular courses. Utilizing MPH and DrPH students as teaching assistants for the introductory courses will not only give graduate students excellent teaching experience but will also provide mentors to eager undergraduates.

Most importantly, the working group notes that while PH 101 must be interdisciplinary efforts must be made to provide central coherency. Hence the course should be clearly anchored in a specific department. However the working group also recommends that the student be exposed to real world public health issues by utilizing guest lecturers from local and state health departments and health agencies in the community. Case studies, field projects and service learning should be encouraged.

¹ Gebbie K, Rosenstock, Hernandez LM. Who Will Keep the Public Healthy? Educating Public Health Professionals for the 21st Century. Washington D.C.: National Academy Press 2003:144

Appendices to PH 101 Report

Appendix A

Statement on Recommended Content for an Introductory Undergraduate Public Health Course

The Institute of Medicine in its report titled *Who Will Keep the public Healthy? Educating Public Health Professionals for the 21st Century* recommended that "...all undergraduates should have access to education in public health."¹ To implement this recommendation the Task Force on Undergraduate Public Health Education of the Association of Schools of Public Health² endorses the following:

A public health course should be built upon a population perspective and provide a multidisciplinary/ ecological understanding of disease causation and prevention. It should emphasize health issues that affect society as a whole as well as those that affect vulnerable populations.

An introductory undergraduate course in public health should include the following:

- An historical perspective on the contributions and roles of public health including the structure and functions of public health institutions
- An introduction to epidemiological and biostatistical principles including concepts of rates, causation and disease surveillance
- Determinants of health from a global perspective including environmental, social, and behavioral as well as biological and access to health services³
- An introduction to selected tools of disease control and health promotion including interventions such as vaccinations, screening, counseling and education, environmental-occupational, legal, and policy approaches as well as the roles of health communications.
- Issues of health care delivery addressed from a population perspective including such issues as quality, cost and access as well as organizational structure and their relationship to public health services.

The Task Force recommends that an introductory course designed using this approach should be available for all undergraduates and that this course content be part of general undergraduate education. This course is strongly recommended for those students

¹ Gebbie K, Rosenstock, Hernandez LM. *Who Will Keep the Public Healthy? Educating Public Health Professionals for the 21st Century*. Washington D.C.: National Academy Press 2003:144

² The Task Force includes membership from Schools of Public Health with undergraduate majors and minors as well as CEPH accredited Programs affiliated with the Association of Teachers of Preventive Medicine

³ Gebbie K, Rosenstock L, Hernandez LM. *Who Will Keep the Public Healthy? Educating Public Health Professionals for the 21st Century*. Washington D.C.: National Academy Press 2003:33.

considering entering a health profession. It is also suggested that health related professions consider recommending this type of undergraduate course for those who seek to pursue graduate education.

Approved by Association of Schools of Public Health Task Force on Undergraduate Public Health Education 11/2004 as revised 2005.

Appendix B

Public Health 101 Sample Curriculum Framework

Public Health 101 is designed to provide an overview of public health with an emphasis on the population perspective and the cross-cutting or ecological nature of public health including the population impacts of healthcare systems.

I. Overview and Basic Principles

- Context and scope of public health: history, philosophy, literature, essential services, ethics and applications to current events-
A context placing public health into historical and current perspective consistent with a liberal education approach
- Public health as a cross cutting/systems thinking/ interdisciplinary field
Frameworks that encourage cross-cutting interdisciplinary, systems approaches such as examining the options for intervention to address public health issues. These concepts should be introduced early and integrated throughout the course.
- Epidemiological principles/ population perspective
 - rates/ risk factors/ health status indicators of morbidity and mortality
 - disease determinants/ causation/types of epidemiology research-
 - surveillance/ vital statistics*Basic concepts needed to read and understand public health issues. The approach should be compatible with a separate introductory course in epidemiology*

II. Tools of Population Health

- Health Communications and Informatics
Frameworks for accessing and evaluating the quality of health information on the web and in the mass media
- Health and social and behavioral sciences
Basic frameworks for understanding the impact of behavior on health and methods for altering behavior at the individual and social levels
- Health policy, law and ethics
Health policy, law and ethics as tools for implementing health decisions and the potential tensions between individual rights and social responsibilities

III. Disease: Determinants, Impacts, and Interventions

- Environmental health-
Basic frameworks for understanding the impact and control of environmental factors on health
- Infectious disease
Basic frameworks for understanding the prevention, detection and control of communicable diseases from a population perspective
- Chronic disease
Impact of chronic disease on longevity and quality of life and methods to prevent, cure and minimize the disability due to chronic diseases

IV. Healthcare and Public Health Systems

- Health workforce-
Basic information and understanding of the roles of health professions and the professional options in the healthcare and public health workforce
- Organization of healthcare and public health systems-
Frameworks for understanding the institutions and structures of healthcare and public health systems using a global as well as a national perspective. Understand the distinct role and complementary responsibilities of healthcare and public health systems.
- Costs, quality, access- healthcare and public health services-
Frameworks for evaluating healthcare and public health systems including the reasons for increased costs, criteria for quality, and the impacts of inadequate access

V. Special areas of Public Health focus

- Health disparities and vulnerable populations
Overview of public health's commitment to the health of vulnerable populations including maternal and child health, aging, disabled and socio-economically disadvantaged populations
- Public health preparedness and disaster management-
Frameworks for understanding the essential role that public health plays in preparedness for and response to disasters from natural disasters to terrorism
- Global health
Frameworks for understanding global health including the burden and distribution of disease, the impact of globalization, and the potential for collaborative solutions.