Public Health in Community Colleges

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By 2020, there will be a shortfall of more than 250,000 public health workers in the U.S.

In 2000, the public health workforce was 50,000 less than in 1980

Approximately one-quarter of the current public sector workforce will be eligible to retire by 2012

Over the next 11 years, graduate schools of public health would have to train 3x the current number to meet projected needs
Evidence-Based Thinking and Practice

Undergraduate Public Health

Health Literacy

Clinical Prevention & Population Health

Public Health Studies

General Education Public Health Core

Foundations of Health
Institute of Medicine’s 2003 report *Who Will Keep the Public Healthy?* recommended that “…all undergraduates should have access to education in public health.”

In August 2009, *The Chronicle of Higher Education* identified public health as one of “5 college majors on the rise”

In November 2009, the American Public Health Association adopted a policy to integrate core public health education into undergraduate curricula.
**Objective (proposed):**
- *Increase the proportion of 4 year colleges and universities that offer public health or related majors and/or minors*

**Developmental objective (proposed):**
- *Increase the proportion of 2 year colleges that offer public health or related associate degrees and/or certificate programs*
- Baseline data needed to convert from a ‘developmental’ to ‘regular’ objective
Baseline Data among 4–year Institutions

- Educated Citizen and Public Health Initiative, based at the Association of American Colleges & Universities (AAC&U)

- Catalog Scan conducted in July–August 2008 revealed that 16% of 4–year institutions offer an undergraduate major, minor, or concentration in public health or similar field.
Baseline Data among 2–year Institutions

- Funding provided through ASPH–CDC cooperative agreement

- Definitions:
  - “Community college”: AACC definition
  - “Public health or related”: Based on AAC&U Catalog Scan among 4–year institutions:
    - Program of study includes courses covering material in Public Health 101 and Epidemiology 101 or Global Health 101
    - Program description and/or learning goals address questions of healthy communities and society
Methods

Stratified Sample

- Strata 1 – Identified potential programs through:
  - National Center for Education Statistics, U.S. Department of Education
  - www.universities.com
  - Personal contact

- Strata 2 – Sampled from remaining colleges
<table>
<thead>
<tr>
<th>Method</th>
<th># community colleges</th>
<th>% of community colleges</th>
</tr>
</thead>
<tbody>
<tr>
<td>AACC recognized</td>
<td>1177</td>
<td>100%</td>
</tr>
<tr>
<td>Sampled</td>
<td>414</td>
<td>35%</td>
</tr>
<tr>
<td>Strata 1</td>
<td>114</td>
<td>100% w/in strata</td>
</tr>
<tr>
<td>Strata 2</td>
<td>300</td>
<td>28% w/in strata</td>
</tr>
</tbody>
</table>
## Results

<table>
<thead>
<tr>
<th></th>
<th>Estimated Proportion (95% Confidence Interval)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community colleges with associate degrees and/or certificate programs in public health or related fields</td>
<td>1.58% (0.70 – 2.46%)</td>
</tr>
<tr>
<td>Associate degrees</td>
<td>1.58% (0.70 – 2.46%)</td>
</tr>
<tr>
<td>Certificate programs</td>
<td>0.25% (0.25 – 2.11%)*</td>
</tr>
</tbody>
</table>

*Due to very low frequencies of Certificate programs, the estimated confidence interval was calculated based on a simple random sample.*
Role of Community Colleges
Role of Community Colleges

- Provide general education core courses consistent with those offered at 4-year institutions, easing transfer of course work to 4-year institutions

- Provide public health–related associate degrees and certificate programs to address public health workforce needs, preparing students for public health careers and providing career ladders
Guiding Principles

- Gear curricula to defined areas of public health workforce needs
- Integrate career ladders to connect 2–year and 4–year institutions and graduate education
- Provide access for workers seeking a return to the classroom
- Apply experience from preparing graduates for the clinical health professions
- Build programs upon the core public health curriculum recommended as part of general education
Prototype Public Health Associate Degrees
 Prototype Public Health Community College Associate Degrees

Designed to be:

- Compatible with public health workforce needs
- Compatible with Community College structure (e.g. 30 semester hours) and curriculum for other health professions degrees
- Compatible with transfer to 4-year college and bachelors degree programs
Core public health curriculum compatible with recommendations for public health in general education, e.g.:

- Public Health 101
- Epidemiology 101
- Global Health 101
Structure of Prototypes (cont.)

Specialized curriculum content linked to workforce needs and transferability

Experiential learning providing community and/or field experience
Proposed Prototypes

- Environmental Health
- Public Health Information Systems
- Public Health Preparedness
- Pre-Health Educator
Environmental health course work should:

- fulfill requirements for the Environmental Health Technician Certification and
- allow students to pursue a bachelor’s degree such as environmental sciences that fulfills the educational requirement to sit for the Environmental Health Specialist Certification
Specialized Environmental Health courses – 18 semester hours designed to fulfill the educational requirements for the Environmental Health Technician

Principles of Environmental & Occupational Health (3 semester hours)

Courses cover the following content areas of the Environmental Health Technician Certification examination – (15 semester hours)
- Food
- Vector and Pest Control
- Occupational Health/Hazardous Exposure
- Water
- Housing/Shelter–Environment
- Toxicology
- Air Pollution
- Solid Waste
- Waste Water

Experiential Learning – 3 semester hours – Field and Community-Based
Public Health Information Systems is designed to prepare graduates for careers in public health informatics that enables them to work as part of a team to collect and manage public health data including surveillance activities, and outbreak investigations.

Public Health Information Systems may be included in as an option within a Health Information Systems program.
Public Health Specialty courses – 18 semester hours – providing broad introduction
Principles of Biostatistics
Introduction to Computerized Data Systems
Applications of Computerized Data Systems
Introduction to Study Design
Data Collection and Data Quality
Surveillance and Public Health Data Systems

Experiential Learning – 3 semester hours
Public health informatics project
The Public Health Preparedness Degree/Certificate Program is designed to prepare graduates for careers in public health preparedness.

Public Health Preparedness should also provide a range of skills compatible with a generalist preparation.
Public Health Preparedness

- **Public Health Specialty courses** – 18 semester hours designed to prepare students for an all-hazards approach to public health preparedness.

  - Overview of Public Health Preparedness
  - Implementing and Managing Public Health Preparedness
  - Health Information Systems
  - Health Communications
  - Environmental Health
  - Applied Epidemiology

- **Experiential Learning** – 3 semester hours Community-based Public Health Preparedness Experience
Pre–Health Educator

- Designed to prepare community college graduates to enter health education programs in bachelor’s degree granting institutions

- Designed to be compatible with completing eligibility for Certified Health Educator examination as part of bachelor’s degree
Pre–Health Educator

- **Health Education Foundation courses** – 6 semester hours of course work that covers fundamental principles and applications of health behavior and health communications.

- **Health behavior**

- **Health communications**

- **Experiential Learning** – 3 semester hours

  Community based experiential learning
Existing Associate Degrees and Certificate Programs
Questions

- Are there existing programs that could be modified?
- Are there existing programs in which public health could become a specialization?
- Are there existing programs that could be upgraded to a higher level?
- Are there specific courses that could be utilized?
Sample of Existing Programs

- Environmental Technology
- Health Information Technology
- Health Care Informatics (Medical Records)
- Emergency Management
- Community Health Worker
Next Steps
Learning from Others

- Howard Community College: Arts and Sciences A.A. transfer degree program in public health

- Diné College: A.S. in public health is both a terminal degree and transfer program

- The New CUNY Community College and the Health Professions: Pathways, Partnerships and Possibilities:
  http://www.cuny.edu/academics/initiatives/ncc/news/MacyFoundationGrant-1.html
The Association of State and Territorial Health Officials (ASTHO) Dec. 2009 workforce policy statement includes a recommendation to provide funding to develop systems and training programs through partnerships with community colleges.

In February 2010, presentation made to the U.S. Dept. of Health and Human Services Public Health Systems Working Group.

Discussions underway with various public health practice associations.
Health Reform Legislation Provisions

- SEC. 5204. Public Health Workforce Recruitment and Retention Programs.
  - SEC. 776. Public Health Workforce Loan Repayment Program.

- SEC. 5206. Grants for State and Local Programs.
  - SEC. 777. Training for Mid-Career Public and Allied Health Professionals.
Discussion