Public Health Trends and Redesigned Education

Blue Ribbon Public Health Employers' Advisory Board: Summary of Interviews

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ASPPH ASSOCIATION OF SCHOOLS & PROGRAMS OF PUBLIC HEALTH

FRAMING THE FUTURE
The Second 100 Years of Education for Public Health
Convened by ASPPH

Overview

As the *Framing the Future* task force continues to reconsider the second 100 years of education for public health, employers provide an on-the-ground perspective about the knowledge, skills, and attitudes that the next generation of graduates will need. Under the leadership of David J. Fine, President & Chief Executive Officer of St. Luke's Health System in Houston, TX, the Blue Ribbon Public Health Employers' Advisory Board was formed to solicit that perspective. The 32 members are drawn from the public, private, and nonprofit sectors. A list of members is attached to the end of this report.

In May and June 2013, staff from the Association of Schools and Programs of Public Health (ASPPH) conducted brief telephone interviews with all members of the Advisory Board to discuss emerging trends in public health and ask how public health graduates should be educated to address them. Members were asked these questions:

- What are the major emerging trends in the field of public health that should be considered in preparing future public health graduates for the workforce?
- What unique values, perspectives, or capabilities do you think public health graduates should bring to an organization?
- What do you believe should be the essential elements of a newly designed public health education system in the 21st century United States?
- Any other comments on public health education?

This report briefly summarizes the comments of Advisory Board members. Section II covers emerging trends in public health. Section III describes the essential elements of education in public health. A list of the critical areas of public health identified by the Advisory Board is attached as Appendix I at the end of this report.

While this synthesis is not comprehensive, it does compliment the work that has been extensively covered by more rigorous reports, including *Health Professionals for a New Century: Transforming Education to Strengthen Health Systems in an Interdependent World* (Frenk and Chen, 2011) and *Who Will Keep the Public Healthy: Educating Health Professionals for the 21st Century* (Institute of Medicine, 2002). But the anecdotal observations and insights offered in confidence by this highly accomplished group highlight the importance of developing the essential elements of education for public health that are commensurate with the needs of employers.

> "Philosophy is forever, skills are essential, knowledge is quickly dated."[1]

[1]The quotes in this report are taken directly from interviews with Advisory Board members, who provided their candid comments in confidence.

Emerging Trends in Public Health

There is a consensus among the interviewees that vast and unpredictable changes are coming to society, the environment, and the field of public health. Absent certainty about what those changes will look like, effective public health work demands access to well-organized information, opportunities for lifelong learning, and the ability to adapt. Among broad trends noted by the interviewees:

The core value of public health remains its commitment to the health of populations.

The field is framed by the perspective that the health of individuals is part of the health of all; that resource allocations should be weighted towards "the broader good"; that larger societal forces influence health; and that there is a special responsibility to serve disadvantaged and high-risk populations, not just to provide clinical care for those who walk into a provider's office.

Public health and the health care system are increasingly driving towards interrelated goals.

Among many factors promoting the overlap: the commitment to prevention and focus on population health that is embedded in the Affordable Care Act; shifts in reimbursement and an urgent need to reduce costs; an emphasis on quality, performance measurement, and accountability; growing interest in interdisciplinary strategies and teamwork; and widespread recognition that communities play an essential role in health.

As the health care system is restructured, the conversation needs to focus on "health" through a continuum and not be specifically focused on public health, nor just on health care. An artificial distinction between the disciplines exists. Resources are skewed towards health care delivery and public health has not been very effective at reaching across the table to clarify and assert its role in a changing landscape. The ability of public health to lead, manage, and collaborate with the health delivery sector is fundamental to redesigning current models in order to produce healthier populations, improve the patient experience of care, and build a more cost-effective system.

> "Public health and health care have grown apart for many years. They need to come together…"

Global health is public health.

Sharp distinctions between local and global issues seem increasingly irrelevant when infectious agents can arrive at any airport; carbon emissions on one continent influence agriculture on another; many tobacco, food and beverage companies are global enterprises; and workforce shortages in one country compound health risks elsewhere.

> "A global focus broadens our thinking."

While resource-poor countries increasingly needing organizational, financial, and human resources capacity-building, in addition to public health focused assistance, a global perspective needs to be based on bi-directional learning and a rich understanding of the influence of culture on health. Field opportunities that bridge the gap between theory and practice are essential to promote a fuller appreciation of the global dimensions of public health.

The demand for public health workers is broadening, with opportunities across many settings.

While population health will remain important to local, state, and federal government agencies with a health-related mission, it is also of increasing interest to businesses and an array of not-for-profit and public sector entities engaged in education, transportation, civic affairs, housing, design, international development, health-related activities, and more.

The value here is not merely more job openings, but the opportunity for creative collaborations as public health gains influence and visibility. Integration across fields and the formation of new partnerships are at the core of community redesign, increased access to fresh foods, and ready opportunities in the built environment to exercise, for example. Public health has a unique role to play in helping to bridge organizational, philosophical, and political barriers to build interdisciplinary networks.

> "No really important public health problem will be solved by public health alone. We need to find others who have a stake in the issue."

Public health skills can be applied in many fields.

A public health degree focuses on specialized critical thinking and analytical skills, combined with generalized knowledge in a number of topic areas, and offers a unique way to problem solve that can be used in many fields. This training allows public

health workers to move beyond an immediate problem to a larger and more conceptual view when contributing effectively as a team member.

A commitment to social justice and the common good is woven through education in public health.

Schools and programs should view the public health curricula as a tool to serve a larger good. In general, public health training draws altruistic people interested in social causes and eager to serve. Attracting committed, hard-working people who recognize the relationship between personal and social benefit has special importance, particularly when public health is at times under political scrutiny.

> "What draws people to public health is a sense of service and compassion. Schools should not drive that out of people, but equip them with the skills and tools to turn compassion into progress."

Law and policy are core tools for intervening to advance public health.

> "Policy drives everything that we do."

Policy is a fundamental tool for bringing about change — for example, through food and menu calorie labeling, removal of toxins, and advancing workplace safety. Increasing public awareness of the issues, understanding the impact of the political process, learning where influence resides, cross-walking public health and other parts of the health system, advocating for changes in laws and regulations, engaging the media, and bringing the public and private sectors together are all tools for influencing policy.

Fiscal constraints are a given, but shifting priorities will weigh against some areas more than others.

Decreasing governmental support for public health will focus more attention toward return-on-investment principles, and put a higher value on budgeting, priority-setting, and efficient program implementation. New financing mechanisms may emerge, such as through the Affordable Care Act, and public health offers many of the tools needed to emphasize and measure population-based outcomes.

Vast amounts of data are becoming available to researchers, practitioners, policymakers, and the public.

Technology and the information revolution are bringing about "big data" — information that can be analyzed to guide decision-making, provide information for health impact assessments, influence how consumers think about health, and point the way to effective prevention. In addition to de-identified data that is explicitly health-related, such as genetics and medical records, countless other de-identified data — e.g., media and shopping habits — can be layered on to analyses to segment populations under study, while still fully respecting individual privacy.

> "Know the science to interpret the data. Be truth tellers."

Much more is coming, including the wider use of geo-tracking, which allows incidents and interventions in remote locations to be monitored, and Geographic Information Systems to paint a picture of interacting variables, such as pollution patterns, transportation routes, and availability of fresh produce. If we can deal effectively with the resulting volume of data, we will have new opportunities to improve population health, allocate resources more strategically, increase public health partnered interventions, and prevent and manage infectious and chronic diseases.

Research and science will continue to gain prominence as the appropriate foundation for public health recommendations.

Epidemiology remains the core science of public health, but comparative effectiveness research, informatics, big data, evaluations, and root cause analysis are also essential tools for assessing impact, along with identifying the best evidence-based practices. Systems thinking and rigorous analytics allow public health workers to discern the effective elements of an intervention, develop actionable plans, and measure change. Ultimately, public health must be able to answer questions like, "What are we getting for our money?"

> "Science gives cogency to point of view. Without it, we just have an opinion."

Essential Elements of an Education in Public Health

Graduates of public health schools and programs need a solid foundation in the fundamentals of public health, both as generalists and specialists, whether they pursue a career in public health, or a related career in law, medicine, government, health care systems, etc. Any public health curriculum must impart a broad range of skills and knowledge to help students understand how the world works – but importantly, it must also promote the passion and capacity to make it work better and lay the foundation for lifelong learning.

An education in public health should ensure that students are grounded in:

Problem-solving

Education in public health should produce critical thinkers who can identify gaps in knowledge and react quickly, because in an uncertain world, it is impossible to fully anticipate the future. The field needs "adventurers" prepared to apply what they know into unknown areas of public health.

> "An MPH brings a unique way to problem solve."

How the health system works

Public health graduates must understand the relationship among medical care, the public health system, and the factors that promote or damage health, and how they interact, including behavior, environment, genetics, and clinical care, along with health policy, and the role of government.

Leadership

Development of leadership skills to build relationships are key in order to advocate for public health and engage other parts of the health sector as well as non-health focused sectors. By inculcating elements of leadership into education, graduates will be prepared to lead in their chosen fields.

Management and teamwork

More management skills should be incorporated into education for public health so that graduates become effective managers who understand how to work in teams and across disciplines. Their skill set should include knowledge of organizational culture and process improvement, including how organizations work, develop, and change.

Recognizing that organizations are increasingly flat, public health managers also need to feel comfortable working collaboratively, and understand viewpoints and purposes. They need to be "integrators" who can engage other sectors and bring people together as value-added teams to solve problems and achieve health outcomes.

Global health

A global perspective benefits everyone, even those who stay in local health departments or never leave the United States. Global health should be a part of every public health students' education, beyond a specific three credit course. In a nation of immigrants, all public health workers need to understand cultural and geopolitical sensitivities, power dynamics, and the influence of culture on health. Global health presents an opportunity to learn and adopt different models and best practices.

Policy

Policy should be rolled into education for public health, so that graduates have a fuller understanding of the policy process and are prepared to advocate for change. An historical perspective should be part of the curricula so that students understand the nation's past policies as they help to form future ones. They also need a fuller understanding of how public health professionals interact with advocacy groups. The case study method can be applied to demonstrate strategies for influencing policy.

> "More graduates need to understand the policy process, how it works and how to advocate for change."

Analytic methods

Knowledge about the public health science of epidemiology, biostatistics, and quantitative analysis is significant in the training of public health graduates in order to create and access data from multiple sources, and analyze and quantify that information. In addition, qualitative methodology is important for adding substantive knowledge to systems functions and evaluations. Using various analytic methods to understand how information can be optimized for decision-making is an essential problem-solving tool.

> "You need epidemiology/biostatistics skills. If you don't have them when you graduate, then you don't have them for the rest of your career."

Technology and information

As the world becomes ever-more technologically sophisticated, public health students need to understand and use information technology, social media, and mobile applications effectively. These will have enormous implications for health and health care in ways that cannot yet be anticipated – for example, some kind of "tele-public health," comparable to what is happening in medicine could offer a partial solution to workforce shortages.

> "Information science has been underappreciated by schools of public health. The tools could be much more involved in public health – for example, surveillance needs to be modernized with information technology capabilities."

Budgeting and finance

Finance is not a strong component of public health curricula, but fuller knowledge of budgeting, financial modeling and planning, economics, resource sustainability, and other core business skills is increasingly required. Even public health workers who are not directly managing budgets are affected by them and expected to make decisions based on available resources. While there is only so much time in the public health degree curriculum, budget and finance skills may be developed through case studies and capstone projects.

> "The modern public health graduate needs to worry about budgets and spreadsheets."

Communications

Writing and public speaking should be woven throughout the curriculum, with exposure to the use of technology to enhance communication. In addition, learning how to identify, analyze, and effectively communicate with multiple audiences is key for information exchange with partners and populations. Whether it is writing grants and journal articles, sharing insights through social media, commenting on data and analyses, negotiating across disciplines, or advocating for policy, good communication skills are necessary to support work in any environment.

> "We do a poor job on oral and written communication skills. They [graduates] know their piece [e.g., epidemiology, biostatistics] but they need the communication skills to tie into policy. "

Other observations

In addition to identifying the knowledge essential to an education in public health, interviewees emphasized that:

> "Public health graduates need to be multi-lingual. They need to talk finance, health care, and science."

Education in public health should be interdisciplinary. A premium on education across disciplines should be embedded in the core courses required of public health graduates. In particular, there is great need, and huge opportunity, to integrate public health and health care training and promote more interaction between public health schools and programs and with other sectors of the university, such as behavioral and social sciences, engineering, and urban planning.

Field experience is critical. Employers from government, non-profit, and private sectors are increasingly looking for new hires with real-world public health experience who can be quickly integrated into an organization. Advancing learning through practical, hands-on experiences – such as obligatory capstone projects, case studies, and courses focused on how things actually work in the field, in both traditional and non-traditional public health settings – helps connect core public health training with issues on the ground.

Public health schools and programs should view their relationship with students as lifelong. These institutions can play a role in helping graduates throughout their careers with continuing education and networking; for their part, graduates should expect that mentoring students and giving back in other ways is part of the bargain.

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Appendix I: Critical Areas of Public Health

These are among the key topics identified by interviewees as likely to draw attention and resources in the coming years from practitioners, researchers, and policymakers:

- Access to nutritional foods
- Access to prenatal care
- Aging population
- Aging public health workforce
- Behavioral economics
- Built environment
- Climate change
- Disaster and emergency preparedness
- Emerging infections
- Environmental health services
- Food safety
- Health disparities
- Infectious disease management and antibiotic resistance
- Interrelationship among behavior, genetics, environment and access to health care
- Interprofessional collaboration
- Non-communicable diseases
- Personalized medicine
- Social determinants of health
- Surveillance
- Vaccinations

Blue Ribbon Public Health Employers' Advisory Board

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