

ASPPH Population Health Initiative

Final Report

February 2018



ASPPH
POPULATION
HEALTH

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ASPPH Population Health Leadership Group

Co-Chairs

- **John R. Finnegan, Jr., PhD**, Dean, University of Minnesota School of Public Health
- **Robert Dittus, MD, MPH**, Executive Vice President for Public Health and Health Care and Director, Institute for Medicine and Public Health, Vanderbilt University Medical Center and Senior Associate Dean for Population Health Sciences, Vanderbilt University School of Medicine

Members

- **Donna Arnett, PhD**, Dean, University of Kentucky College of Public Health
- **Ruth G. Bernheim, JD, MPH**, Chair, Department of Public Health Sciences, School of Medicine, University of Virginia MPH Program
- **Susan J. Curry, PhD**, Dean, University of Iowa College of Public Health (named interim executive vice president and provost, University of Iowa, April 2017)
- **Paul K. Halverson, DrPH, FACHE**, Founding Dean, Indiana University Richard M. Fairbanks School of Public Health – Indianapolis
- **Deborah Helitzer, ScD**, Dean, University of New Mexico College of Population Health (named Dean, Arizona State University College of Health Solutions, August 2017)
- **Boris D. Lushniak, MD, MPH, RADM USPH (Ret.)**, Chair, Department of Preventive Medicine and Biostatistics, University Services University of the Health Sciences (named Dean, University of Maryland School of Public Health, January 2017)
- **William J. Martin, MD**, Dean, Ohio State University College of Public Health
- **David B. Nash, MD, MBA**, Founding Dean, Thomas Jefferson University, College of Population Health – MPH Program
- **Barbara K. Rimer, DrPH, MPH**, Dean, University of North Carolina Gillings School of Global Public Health
- **Laura L. Rudkin, PhD, MA**, Director, University of Texas Medical Branch at Galveston Graduate Program in Public Health
- **Phillip L. Williams, PhD**, Dean, University of Georgia College of Public Health

Staff

- **Tony Mazzaschi**, Senior Director for Policy and Research, ASPPH
- **Rita Kelliher, MSPH**, Senior Director for Education, Practice and Data, ASPPH
- **Diane Stollenwerk** and **Jennifer Salopek**, consultants, StollenWerks Inc.
- **Andrew Webber**, consultant, Discern Health

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Introduction

The members of the Association of Schools and Programs of Public Health (ASPPH) are vitally concerned about population health. In late 2015, the Association's Board of Directors formed an ASPPH Population Health Leadership Group (PHLG) to lead the Association's efforts going forward. The charge to the Leadership Group was to:

- Identify and document the existing capabilities and engagement of members in the field of population health, writ large;
- Assess the gaps in institutional and faculty resources limiting members' current and prospective ability to advance population health;
- Gauge external stakeholders' perceptions of academic public health's role in advancing population health; and
- Recommend member and Association actions to enhance members' ability to advance population health locally, regionally and nationally.

John Finnegan, PhD (University of Minnesota School of Public Health), and Robert Dittus, MD, MPH (Vanderbilt University), were appointed co-chairs of the 11-member panel. The PHLG approved an aggressive work plan, intended to engage both members and external stakeholders. This monograph reports on the activities included in the now-completed work plan, along with a summary of the findings and recommendations gleaned by the PHLG from the various initiatives.

The recommendations include suggestions for actions by individual schools and programs and their faculties, along with recommendations for collective action, either through ASPPH or through freestanding consortia. Because a central finding of the initiative is that academic public health can play a critical role in convening and coalescing multi-sector engagement to advance population health, the PHLG also recommends collaborative activities with other disciplines and sectors.

The PHLG activities built upon and were greatly informed, influenced, and indebted to previous ASPPH initiatives related to population health:

- The Association sponsored a May 2014 meeting, "Reconnecting Public Health and Care Delivery to Improve the Health of Populations." The two-day meeting engaged almost 100 leaders in public health and primary care to access the momentum for transforming healthcare delivery into an outcomes-focused system that improves population health, provides value-added services across the continuum of care, and directly engages individuals, families, and communities in achieving health, while simultaneously reducing per-capita cost. This meeting documented the growing consensus that while closer engagement between public health and care delivery is imperative, financial and other incentives, structures of care, and entrenched practices still discourage it. It also highlighted that the nation's approach to education in the health professions continues to keep public health and care delivery in separate silos. *A central conclusion of the meeting was that if we are to achieve better health along the continuum of care from birth to death, we need to work across professional boundaries and better integrate the systems we have established to promote health.*
- As part of the ASPPH's Framing the Future Task Force initiative, a "Population Health Across All Professions" expert panel was formed; issuing its final report in the spring of 2015. The panel

focused on the rationale for and strategies to incorporate population health into other professional degree programs, and concluded that cross-disciplinary collaboration is essential to improve population health outcomes and health equity. The framework the panel developed promotes approaches for integrating population health concepts into the professional and inter-professional curricula of health and other professions. This bi-directional approach recognizes that effective interprofessional collaboration also depends on public health students acquiring the insights, tools, and vocabulary of clinical and other professions.

- The Association devoted its July 2015 leadership retreat to population health issues. The sessions focused on the internal organization and priorities of academic public health and whether member schools and programs were willing and able to break down institutional silos to advance population health. Various institutional models to promote population health were critically examined, along with their impact on the various missions of academic public health.
- The Association has greatly increased its focus on population health at its Annual Meetings. For example, at the 2016 Annual Meeting, the Leadership Session was entitled, "Academic Public Health's Leadership to Advance Population Health." Dr. Bobby Milstein, Director, System Strategy for ReThink Health (Fannie Rippel Foundation), engaged the deans and program directors in multiple exercises focused on "Rethinking and Redirecting Population Health."

The ASPPH Population Health Leadership Group's activities summarized in the following chapters include a member survey, structured interviews, and several roundtable and forum discussions. The sharing of these results is intended to assist ASPPH member institutions to understand and address needed skills, pursue these results is intended value-added activities, and develop interventions that offer maximum possible impact on population health. While designed to inform the academic public health community, the findings and insights gathered through the project will be of interest to all stakeholders who believe that population health can improve the health of our communities and help foster a culture of wellness in American society.

Section 1: STRUCTURED INTERVIEWS

Summary

The first phase of the work consisted of conducting structured telephone interviews with individuals from within and outside the ASPPH membership, representing organizations from large governmental agencies to health professions associations to academic health centers. The goal of the interviews was to gauge perceptions of the value and role of schools and programs of public health in population health improvement and to learn from previous interactions between academic public health and other sectors.

Taken collectively, the results of the interviews revealed several key learnings:

- Schools and programs of public health are primarily perceived as prepares of the future workforce; this is where respondents believe ASPPH member institutions currently bring the greatest value. These contributions are supplemented in the population health field with research and technical assistance on population health assessment, data gathering, and data analysis.
- Rich opportunity exists for an expanded role and significant impact, if schools and programs of public health can step outside what was described by several interviewees as “the ivory tower.”

Interviewees suggested ASPPH members could play a critical role through:

- Convening community stakeholders and providing needed support to bridge across disparate stakeholder “silos” to collectively identify and apply resources towards population health improvement;
- Formulating an evidence base related to population health, including the development and testing of related methodologies;
- Gathering and analyzing data; and
- Educating future MPH and other degree candidates with skills and abilities overwhelmingly identified as crucial to what their role ought to be in population health improvement overall: grassroots organizing, strategic communication, change management, data analysis, organizational management, and leadership.

Methods

Over a period of two months in the fall of 2016, ASPPH consultants conducted a series of 14 structured telephone interviews with internal and external stakeholders on the current status and future opportunities for schools and programs of public health to be involved in population health initiatives. Each interview lasted approximately 30 minutes and focused on six major questions, plus an opportunity for open-ended comments. The questions were developed by the consultants and members of the Population Health Leadership Group (PHLG) during the spring and early summer of 2016. The interviewees were selected to represent a spectrum of stakeholder organizations and agencies from a number of suggestions supplied by PHLG members. See Appendix A for a key to respondent organization types.

Interview Results

Question 1: How do you define population health?

While nearly all interviewees were able to describe how they personally define population health, a notable consensus among interviewees was the recognition that there is no single, commonly shared definition of population health. Several interviewees noted that consensus is building around particular definitions, such as the consensus-based definition of population health published in 2016 by the National Quality Forum,¹ which is largely based on the Kindig-Stoddart² definition published in 2013. Most interviewees described “population” very broadly, as individuals within a jurisdiction or geographic area; while other interviewees viewed “population” quite narrowly, i.e. a risk pool.

One interviewee stated, “It is critically important to start with asking people what they think the definition is—often people talk past each other because they assume that everyone agrees when they actually don’t” (#11). One did not offer a definition but noted that “the definition is one of the big issues that needs to be wrestled to the ground” and that it should comprise “overall health, not just symptoms and conditions” (#7). A third said, “I believe that there are many definitions, and it is most important to understand the intent and value of each” (#10).

Additional comments about the definition of population health from specific interviews:

- *Health outcomes at the aggregate level; necessitates thinking about delivery of those outcomes and what situations contribute to those outcomes (#8)*
- *Those populations where we have some level of risk or shared saving incentive (#13)*
- *Total population health means everyone within some geographic region, not a subpopulation (#6)*
- *At its essence, it’s the health status of a population by geography, but one can drill down to smaller regions or micro-populations such as workforce and dependents for employers, or patients or covered lives within the health care system (#4)*
- *There are two central definitions, one is ‘the health of all people’ and the other is ‘subgroups,’ which is population medicine and largely still a medical approach (#3)*
- *For the definition, health care delivery people focus on systems of care for health conditions, and public health looks at the overall health of the whole population, from an epidemiological perspective. This gets in the way of health care transformation. They must work together on a shared definition, otherwise they cancel each other out. (#7)*

¹ “The health of a population, including the distribution of health outcomes and disparities in the population.” Multi-stakeholder input on *A National Priority: Improving Population Health by Working with Communities—Action Guide 3.0*, National Quality Forum, August 2016.

² “The health outcomes of a group of individuals, including the distribution of such outcomes within the group.” *Am J Public Health*. 2003 March; 93(3): 380–383.

1a. Has your organization defined population health? If so, what is that definition?

One organization defined population health as “relevant to how we define health,” citing the World Health Organization (WHO) definition³, and then added to that the status of “their” population—employees, family members, retirees, and the health of the communities in which their organization operates (#1). Several others referred to the WHO definition of health or the Kindig-Stoddart definition, cited under question 1 above.

An interviewee, whose organization uses the WHO definition, commented that population health is a “multidimensional construct” in which “the components are inextricably linked” (#1). Another commented that her organization had spent three years working on a definition (#6). A third noted an “exciting, big step: definitions now include issues that influence health outcomes beyond the clinical setting” and that health care payers are “beginning to pay for those improvements in outcomes” (#11).

Additional comments about organization definitions of population health from specific interviews:

- *Improving the health status of a population within a jurisdiction (#2)*
- *Population under the care of an organization and/or within a jurisdiction, but we are increasingly appending wellbeing to it, to create a culture of health, addressing public safety, domestic violence, secure employment, city planning to have complete streets, and so on (#3)*
- *The health of a population, including the distribution of health outcomes and disparities in the population (#6)*
- *The determinants of health in a defined geographic area (#9)*
- *Clinicians are responsible for the care delivered to the population assigned to them (#11)*
- *Coordination of medical care delivery to a population to improve clinical outcomes at a lower total cost of care (#12)*
- *Very narrowly defined as performance in our risk products; it's about managing costs of care (#14)*

1b. What is your organization's overall approach to population health improvement, if any?

Responses to this question varied widely and seemed to reflect the type of organization represented. Many interviewees mentioned that their approach included attention to the social determinants of health and that population health improvement should disassociate from a sole focus on the delivery of health care services. They felt the approach to population health should become more holistic and take into account multiple environmental factors and their drivers.

Additional comments on the overall approach to population health improvement from specific interviews:

- *To improve the health of the residents of the United States by improving the quality and performance of health departments (#2)*
- *View it as a spectrum and work across the determinants that include health care, behavior, socioeconomic status, environment (#10)*

³ “Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.” Preamble to the Constitution of the World Health Organization as adopted by the International Health Conference, New York, 19-22 June, 1946; signed on 22 July 1946 by the representatives of 61 states (Official Records of the World Health Organization, no. 2, p. 100) and entered into force on 7 April 1948. The WHO definition of health has not been amended since 1948.

- *Focus on employees and broader community. Work to understand relevance of population health in the context of organizational priorities (#1)*
- *Health care improvement can only advance through researching new approaches and developing tools and resources; see PHI through the lens of health care (#6)*
- *Think about working in many different arenas and employing a wide variety of strategies, focusing on social determinants (#10)*
- *A decades-long approach to managing chronic disease (#12)*
- *As owners of a health plan, greatest engagement is with our own employees. Focus on risk assessment, coaching, incentives for healthy behavior (#13)*
- *Managing costs by thinking about how to move people to lower-cost sites. There is little discussion about prevention, and there is a large gap between how the institution sees population health and how our community benefits organization sees it. (#14)*

1c. If applicable, please provide a couple of examples of population health activities in which your organization is engaged.

In the course of discussing their organization's definition of population health, several interviewees gave examples of activities that illustrate how they apply the definition within programs, projects, and management approaches. Examples aligned with the various definitions of population health. A few were narrow, such as managing population health through health care interventions, but most activities reflected broader approaches to population health.

Examples of how the definition of population health is applied included:

- *Research on new approaches to health care and developing population health-related tools and resources for use by clinicians (#6)*
- *Managing grants to create critical infrastructure to combat opioid abuse (#14)*
- *Participating in a national diabetes prevention program in addition to establishing organizational policies regarding use of tobacco, health assessments, group interventions and occupational health, with a significant focus on creating a culture and environment in the workplace that prioritizes healthy living (#1)*
- *Paying for improvement in the health status of patients, recognizing and involving factors beyond health care services that influence patients' health outcomes (#11)*
- *Spectrum of activities that go well beyond health care, including looking at behavioral and environmental factors that impact health and how the organization uses assets (e.g., "green buildings and walkways," what is done with medical waste) to promote a healthy environment (#5)*
- *Setting standards and measures for accreditation that include assessments of population health and developing community health improvement plans using a community-driven process (#2)*
- *Aligning all programs and policies to create a culture of health (#3)*
- *Refining their approach to Medicaid purchasing to address physical and mental health needs, starting with payments that support interventions to reduce homelessness and rates of incarceration (#7)*
- *Engaging in advocacy on behalf of vulnerable populations to promote interventions that result in better health status (#8)*

Question 2. When you think of schools and programs of public health (that is, academic public health), what services come to mind that they provide?

Overall, the perception across most of the participant interviewees was not that schools and programs of public health provide “services” but that their main role is to educate and train the future workforce, and conduct research relevant to population health. However, some interviewees mentioned the following additional activities: analysis and tool creation, augment the “bench strength” of local public health agencies, participate in community needs assessments, maintain and update the county health rankings, and create the evidence base to make the case for public health and population health protection and improvement.

2a. Where have you seen schools or programs of public health provide the greatest value?

A few of the interviewees stated that they have not directly interacted with a school or program of public health; however, most had comments to share regarding current and potential value. Several noted areas of known value, and others coupled these statements with suggestions for how to increase that value. Several noted inconsistency or variability in the skill sets viewed as essential by schools and programs of public health and their graduates.

Additional comments on observations of where schools and programs of public health provide the greatest value from specific interviews:

- *There is a long history of schools and programs of public health ‘contributing invisibly’ because ‘prevention is what doesn’t happen.’ They play a planning function in understanding how things are connected and whether workforce needs are being met. They equip graduates with theoretical, analytic, and managerial tools and skills, building a large enterprise of people with an increased sense of professionalism. (#8)*
- *They help us with (1) evaluation beyond claims data—cannot use claims data to assess individuals in a community who are not seeking health care—what works, what does not, are we measuring the right things?; value-based purchasing needs this; (2) understanding how services that are delivered outside the health care system can work together with those that are delivered within it and how to work with the health care community; (3) surveillance, which is very important; and (4) workforce training. (#11)*
- *It is possible for them to be more actively involved in the environment around advising, policy promotion, and research, providing best practices and examples, but most are not actively involved in those; it’s all very uneven. (#10)*
- *They provide value through information, education, publications, research, resources, and tools to support decision making. (#1)*
- *As someone with an MPH degree, I feel public health can be too siloed, MPHs have a view that offers just one slice of an overall perspective. Training emphasizes health care or epidemiology, then takes a big leap to look at how to set up water systems in third-world countries. (#6)*
- *There is much variation in the qualifications of MPH graduates; need a base of more consistent professional standards; provide greatest value in the skills and assets of the people with an MPH who bring a public health mindset into other fields and settings (#5)*
- *Some provide future public health workers with a very strong and effective practice component to give students experiences in the real world. This also helps the community by providing direct services, which augments the ‘bench strength’ of local public health agencies. Population health*

research is of great value, especially when there is a translational component. (#2)

- *They are far too clinically oriented. We need a fundamental reorientation in the health system in general to promote a broader understanding of determinants, policies, and programs that can improve health. (#9)*

Questions 3, 3a, and 3b. Have you had any direct experience with schools and programs of public health related to population health? If so, what was the nature of your experience? Please describe. What value did the school or program bring to the table?

Some of the interviewees had not had direct experience with a school or program of public health. Those who had described interacting through a range of activities including research, data gathering and analysis, needs assessments, technical assistance, and providing expertise in workgroups.

Examples of interactions with schools or programs of public health included:

- *Involvement in developing and updating the county health rankings, participating on an advisory team for a public health school, and research partnerships either conducted in collaboration with or subcontracted entirely to the public health school or program (#1)*
- *Innovative placement of students in programs to build out workforce perspectives and to share ideas and training. (#7)*
- *Close contact with academicians (not students) looking to answer questions that policy leaders are asking, such as the smart use of data and selection of metrics (#11)*
- *Have been on workgroups that included deans of schools and directors of programs of public health (#5)*
- *Technical assistance to public health departments (#2)*
- *Surveys (#9)*

3c. Did you expect the school or program would have had additional capabilities to contribute? If so, exactly what capabilities?

Many of the interviewees mentioned the need for schools and programs of public health to act as conveners, while noting that this will require “descending from the ivory tower” in the spirit of collaboration and cooperation and breaking out of what several people described as “silos.”

Additional comments on the role of schools and programs of public health as a convener from specific interviews:

- *Schools and programs could forge intra-curricular activities and blended education to bring the various parts of the community together to learn from one another. We must change our thinking to create broader communities more conducive to making healthy choices. Schools of public health can play a crucial role in forging those conversations. (#4)*
- *“Old school public health” of biostatistics and epidemiology needs to go beyond theory and connect with the real world. Develop literacy in applied public health for relevance to population health issues. They must discover their relevance in the new world of health systems beyond theory and academics, to a more applied role. Current siloed state is a huge missed opportunity. (#7)*
- *ASPPH should define its members’ role in population health and own it. We’ve been doing this for 200 years, but now that there are major financial incentives in the medical community to do population health, public health no longer owns it. We cannot be hospital-centric in our approach to*

population health. Given finite resources, we all need to work together. (#8)

- *The greatest value can come from embracing 80 to 90 percent of the issues that influence health. We need a common framework to think about the health of people; then we can articulate a niche for schools and programs of public health within that broader context. (#6)*
- *There is an opportunity to be more ecumenical regarding other stakeholders. There is a lot of 'left of center' thinking that demonizes payers and other stakeholders. (#5)*
- *They can work more closely with schools of medicine on workforce development. (#14)*
- *How well are ASPPH members creating a workforce that is ready to step into the job to do what is needed? Is there enough emphasis on teaching theoretical, analytic, programmatic, and management skills? You don't always know what you're getting with an MPH in terms of standardization. For example, you know what you get with a medical degree because the standards are clear. (#8)*
- *Interprofessional education is important—training together in teams is not only interesting, but it's foundationally changing how people understand each other. It's eye-opening to students and faculty; for example, physicians didn't know that nurses do the same physical exam they do on patients. The disconnect is on all sides: physicians don't understand public health, and public health doesn't understand the clinical world. There must be a continuum of providers of prevention, community and clinical services, with an understanding of populations, as part of the population health model. (#8)*
- *MPHs should be knowledgeable leaders about status, interventions, equity, stakeholder engagement, evidence base—transform into a health strategist role—most beneficial to communities. Must get outside of buildings and develop sense of trust within community. (#2)*
- *The breadth of population health issues requires connections to other areas and disciplines. Connect an MPH to social work, or to a law degree, a degree in planning, or an MBA. These good bridging degrees are better than having just an MPH. (#3)*
- *Can partner with public health departments to play leadership roles, bring knowledge of what works to the table. But they can't take an ivory-tower approach; all must be equals at the table. (#2)*
- *An increased understanding of how social determinants can be assessed and data linked to outcomes. Bringing data sets together and helping to decide what to pay for in order to move forward. (#11)*

Questions 4 and 4a. In your experience, what role do state and/or local health departments or public health agencies play in addressing population health? Where have you seen health departments or public health agencies provide the greatest value?

Most respondents felt that the key population health activities of state and/or local health departments and public health agencies were focused on environmental health, surveillance, personal health screenings, and research. While several noted variations in the value offered, interviewees perceive the agencies as being siloed and protective of their turf. The data collected by public health agencies is seen as quite valuable, but the perception is that it could be used with greater efficiency and sophistication.

Additional comments concerning the role of state and/or local health departments in addressing population health from specific interviews:

- *Resource constraints drive a relatively traditional view; there are pretty narrow boundaries that include infectious disease and environmental health. It's a biomedical model of disease based on training and tradition. A lot of that traditional work is important to protecting the community, but it needs to start with a broader understanding, a reorientation from the siloed approach that is largely*

driven by funding. (#9)

- *It depends on the structure of the organization in the state. States and cities like Maine and Chicago appear to be taking the lead. Some projects demonstrate that state and city government can be really effective. (#14)*
- *Public health agencies have been 'pretty invisible,' providing infectious disease surveillance and some population health care screening. (#6)*
- *Public health agencies in my region have been really engaged but it could be better. They currently collaborate with others on research, surveillance like bio-terrorism and infectious disease. (#5)*
- *Their role is changing. The greatest value currently is being a voice that reaches outside of government and into the community. Most of these agencies are able to be leading conveners but are currently focused on managing resources. There is much untapped potential to provide data and perspective. Most do not have the authority they need to solve problems, must develop/use relationships to influence action. (#3)*
- *Mobilizing a broad array of resources to implement policies (#10)*
- *Conveners and collaborators is the area of greatest value. (#1)*
- *Public health agencies should be in the 'chief health strategist' role and the ones that are transforming into this role are being the most beneficial to their communities. This involves partnership, strategies to address health disparities, and using evidence-based approaches. (#2)*

4b. Where could health departments or public health agencies provide greater value?

The majority of interviewees identified opportunities for these agencies to provide greater value to population health, most often by bringing partners and stakeholders together to create healthier communities. There were many calls for far more collaboration and engagement as these agencies are urged to transform their approach by partnering with education, business, Federally Qualified Health Centers, mental health professionals, and other partners.

Additional comments on how health departments can provide greater value from specific interviews:

- *Collaboration with other sectors is key—transportation, urban planning, economic development, education, environmental planning in a much more holistic manner. Focus on how to help people make better decisions and how to change our thinking for the broader community to take actions that result in better health. These sectors don't understand the potential that they have. (#4)*
- *More collaboration is needed on health outcomes. When the CDC director came to figure out why hypertension control rates were so low, it was the first time that public health agencies and private sector providers came together over an issue. There is a lot of opportunity for more public/private collaboration. (#5)*
- *By being better conveners to get collaboration across all social forces to obtain needed breakthroughs in population health. It is imperative to think and act differently. In regard to needs assessments, we need increased sophistication and leverage. There is no need for reinvention by each public health department; we need collaboration, convening, and shared strategies. We must do something different to achieve the desired outcomes and bring people together on shared priorities. (#1)*
- *For most public health agencies, it's a newer role for them to leverage government to empower communities, stay up on trends of what works, let go of things that are outdated, and venture outside of their buildings and into the community. (#2)*
- *Health care is the classic partner of public health agencies but that is too narrow. They need to*

reach out into the community and connect with businesses, chambers, parks, city planning, police, K-12, education agencies and so on. All of these have roles in shaping population health and are important partners. (#3)

- *As an employer, we are doing public health work: We have clinics, health educators, and researchers working in the community. Public health doesn't typically think of business as a collaborator, but we can be great partners. (#1)*
- *The regulatory aspects of public health departments undermine trust. We need a fundamental change in attitude toward collaboration that sets aside ideology. The problem starts with public health leaders as they exist today. The long-term slide of public health in terms of public trust and decline in infrastructure shows that leaders are out of touch. (#5)*
- *Their view of population health is health care-centric and too narrow. It's not just about mammograms and dental clinics, circumscribed or limited by the health care needs of a given neighborhood. They should be helping to decide what the priority health issues are in a community and the needed coordinated initiatives for the health of the population. (#6)*
- *There could be an incredibly powerful role for both local and state public health agencies, using the data they have to combine with claims data to put together a different, more comprehensive view and identify levers. For example, immunization rates and hospital outcomes data. (#7)*
- *Public health people travel in their own circles (e.g., ASTHO, NACCHO, ASPPH). There is a need for fresh air to permeate these circles, to help break out of silos by bringing people together to visualize how it all can come together. We need a common language so purchasing and public health can talk with each other—concretely describe how these things interact. At the state level, bring together departments of health and the state purchasing agencies. (#7)*
- *Public health agencies can help to link efforts to health outcomes, using public health data, and help public and private sector leaders decide what to pay for with a better understanding of the lens through which we are looking at population health. How all can work together to have a bigger impact—health care payers, plus public health agencies. (#11)*
- *There are many things Medicaid could cover if states maximize Medicaid expansion, and public health agencies need to know about those. We could make dramatic headway if people understood the broad array of services available. (#11)*

Question 5. How do you see the field of population health improvement evolving over time?

There were few firm predictions from interviewees in response to this question, aside from an overall sentiment that the field of population health is in its infancy, it will evolve to include more focus on the social determinants of health, and that population health improvement must make its way out of the health care delivery system and into the community.

Additional comments from specific interviews about the future of the population health field:

- *It is at a relatively early stage. There is some real recognition that this is important. There is a better understanding of social determinants but a poor understanding of what we can do to change them. (#9)*
- *Don't know what will happen, but what should happen is that there is agreement on an essential set of services to improve population health, supported by a robust measurement system and transparency consistently applied across partners. Government public health is foundational to this. (#5)*
- *The field will become more data-driven, yielding increased sophistication in insights. (#12)*

- *Education and job creation will have a more profound impact on population health than health care. Understanding social determinants must be increasingly integrated into health care delivery because health care will only have a modest influence on health status improvement. Providers must learn from the public health community how to identify those determinants in care delivery and make efforts to influence them. If doctors built a consideration of these determinants into their conversations, they could begin to have a profound influence on health status and become a true force for improved health. (#4)*
- *With broader trends coming soon, ecosystems, coastal cities, water and particulate matter, and other damage from climate change, will impact population health and planetary health. We must move beyond the narrow focus on health care. (#8)*
- *Many states are working on Accountable Communities for Health (ACHs) using partnerships with the community, but don't yet know how to do it perfectly. (#11)*
- *We have got to integrate the perspectives. Just focusing on risk contracts will have limited results. People see prevention as having a low return on investment (ROI); it has received few resources and little focus. (#14)*

5a. What types of activities or skills are or will be needed for population health improvement?

Many respondents mentioned collaboration and change management, as well as skills related to data, operations, and analytics. Communication skills were noted in several instances, not only in terms of the ability to define the value proposition but also to impart that information effectively to motivate others to engage and collaborate.

The specific skills and competencies described include:

- *Analytics and issue framing, communication skills, leadership (vs. management) to bring stakeholders together and make progress (#3)*
- *Statistics, change management, communication, epidemiology (#12)*
- *Population health is different and bigger than public health and is essential for the future training of the public health workforce. Needed skills include community relations and grassroots organizing and partnerships (#2)*
- *Collaboration across other sectors such as transportation, urban planning, economic development, and education to help people make better decisions. (#4)*
- *Conducting sophisticated needs assessments and reducing duplication of this work among agencies and organizations, collaboration and convening skills, and making the business case for health—not everyone sees this as inherently valuable. Must be able to define how health is a contributor to other priorities and needs (e.g., economic development, education and schools, infrastructure/roads). The cost of health care due to an unhealthy population is a black hole that drives funding from other priorities. (#1)*
- *Need to know who are the players? What is their role? Putting the component parts and stakeholders together using a common language. (#7)*
- *Collaboration and collegiality, strategy and analytical skills. Traditional public health skills will still be needed, such as infectious disease surveillance, food safety, and handling toxic situations. (#6)*
- *Ability to identify the individuals for whom you have risk but who have never interacted with the health system; connect with them (#13)*
- *Many of the tools are good but must be applied in different ways. For example, epidemiology needs to expand its methodologies. We need social science research and modeling; it's not just about*

randomized controlled trials. Logic skills, leadership, and communication skills are needed. (#9)

- *Creative identification of funding sources (#10)*
- *Applying evidence where schools, cities, and states can come together (#14)*
- *Need practical and pragmatic skills, and ability to work with the system pieces like an engineer. Need working knowledge, beyond theory, to be able to identify specific things to move the needle and how to measure them. Data analytics, concrete knowledge, health care, and public health system knowledge. (#7)*

5b. What are the greatest challenges that need to be addressed in population health?

Nearly all interviewees referenced the need to build bridges, break down silos, and increase collaboration in some fashion, noting the barriers to coming together. This included difficulties associated with culture change, overcoming concerns about competing for funding or “turf,” finding a common language, and taking new approaches that enable greater involvement by a wider range of stakeholders.

Additional comments from specific interviews about challenges that need to be addressed included:

- *Culture beats strategy every day. Every group has their biases, language, terminology, philosophies. We must get out of silos and radically rethink the approach and connections. For example, public health is seen as ‘long-haired hippies’ and business as ‘the problem, with workers stressed out and working too hard.’ The business community can be a citadel in promoting health and building a culture of health. It’s natural to move from worksite health to community health. (#4)*
- *The fact that public health is underfunded is evidence that it is out of touch. Government agency structures keep social determinants of health separated: restructuring public health can break down those silos. (#5)*
- *Must find ways to analyze and study science to discuss and determine where policy should go. It shouldn’t be about who gets what service but who gets what outcome. Also, public health doesn’t have the authority it needs to solve problems alone. There is a funding crisis: Public health thinks it’s underfunded but the money won’t be coming back. Instead, expand partners to have the needed impact. There is never enough money, so working with partners is imperative. (#3)*
- *Too many don’t yet buy the concept of population health. What are the goals that need to be used to encourage coordination? If you choose the wrong metric, the focus will be too narrow. (#11)*
- *In the United States, clearly lifestyle and resources, then legislative issues. (#12)*
- *I don’t ever want to see another pie chart that shows health care having only 10 percent influence on health outcomes—that kind of thinking keeps the work in silos. Why not work on it all? (#7)*
- *Challenges are turf, past history, biases, rituals—saying that funding is a problem is just an excuse. (#2)*
- *Need to attract people with the needed skills, and for the entire profession to embrace the fact that these skills are important. The profession isn’t there yet. (#6)*

5c. Where do opportunities exist for schools and programs of public health to add more value to population health efforts in the future?

Many respondents expressed a belief that schools and programs of public health have a valuable potential role to play in bringing diverse players together to collaborate on population health efforts; and to design and deliver a strong, standardized curriculum that provides MPH graduates with the skills and abilities necessary to play that role.

Additional comments from specific interviews about the future role of schools and programs of public health in advancing population health included:

- *Schools and programs can play a crucial role by forging conversations in taking a holistic approach to creating external environments that make it easier for people to make healthy decisions. They can bring a lot to that conversation around the training and education of a future health care workforce that integrates more types of members. This does not substitute the role of public health in the traditional means. (#4)*
- *They can provide standardized curricula that promote this collaborative, strategic framework. (#6)*
- *Fundamentally changing attitudes that keep stakeholders separate, starting with public health leaders. This kind of change tends to start from the outside, rather than the inside. (#5)*
- *Understanding the players and their roles, and figuring out how to bring them together. These are not blue-sky skills, but moving theory into practice. (#7)*
- *Providing a general reframing to understand what produces health and organizing programs and activities around that. They must get out of their silos and change the reward/credit structure and metrics to encourage collaboration. (#9)*
- *Help show linkages between programs and outcomes, such as Meals on Wheels and the impact on health; and (2) student practicum—cross-pollinate with other stakeholders such as payers, providers, public health, community service providers—taking an integrated, coordinated approach as no one can do this alone. (#11)*
- *They could help to better connect the dots between health care costs and what public health can do. Employers are obsessed with costs; we need to help them appreciate that investments will pay real dividends in the long run. (#12)*
- *Using relationships to influence people and partners to take actions that jointly solve problems. (#3)*
- *The health status of any of us is connected to health status of all of us. We must address this together. Approaching health in all policies—religion, schools, transportation—must become as second nature for communities as having a fire department. Collaboration with health departments and community-based organizations, and playing a leadership role in taking information about what works and bringing that to the table. Research on best practices cannot be in an ivory tower; it must be shared among equal partners. (#2)*
- *We have a task ahead to define population health and ensure that the public understands the difference [from public health]. We are at an historic moment for population health, with an opportunity to define it, own it, and be clear about ASPPH's role in it. (#8)*

Questions 6 and 6a. Are you involved in any Accountable Health Communities (i.e., entities broader than Accountable Care Organizations (ACOs) that have a sole focus on health care)? If so, what types of organizations are partners in that effort?

Six respondents (#1, #4, #5, #12, #13, and #14) answered in the affirmative.

Comments from specific interviews:

- *Academia (medical school and health professions), public health, businesses, consumer advocates, FQHCs, mental health and social service professionals, civic leaders, hospitals, and clinics (#1)*
- *Businesses, integrated delivery systems (hospitals, medical groups), health plans, self-funded employers, benefit consultants, TPAs, contractors for claims administration (#4)*
- *Mainly hospital systems and doctors. It's still too narrow as they tend to pull in stakeholders who are specific to the most pressing health problems rather than working upstream to identify needed*

stakeholders. (#5)

- *Public schools (K-12), chain drug stores, skilled nursing facilities (#12)*
- *A group of providers that partner on upside and downside risk (#13)*

6b. [If academic public health is not mentioned] Do you see a role for schools and programs of public health in those efforts? If so, what might that role be?

All of the interviewees responding to this question saw some kind of role for schools and programs of public health in the current and future functioning of ACOs and other health-care-related organizations that hold some level of accountability for health outcomes. This involves education of future professionals who are knowledgeable about collaborative efforts and have the skills needed to succeed, in addition to support and training for the accountable organizations themselves. Activities for the latter could involve convening, research, data analytics, and evaluation.

Additional comments from specific interviews:

- *There are no schools or programs of public health in the area, so none are involved in the local ACO. Have done some partnership in submitting grants and they were helpful as researchers and advisors based on their expertise (#1)*
- *Help the various participants in ACOs be better prepared to be successful in the ACO model. Educate clinicians and leaders of health care systems in the science of population health improvement such as social determinants of health, influence of non-traditional providers, etc. Create visionary leaders in health care. (#4)*
- *ACOs are arising out of hospitals and health systems to repurpose health care to have a broader mandate, to address population health issues and complement the efforts of governmental public health. Schools and programs can understand the evolution of efforts to develop accountable care and train the necessary professionals. (#5)*
- *They could play a role in ACOs if they can put theory into practice, to understand their relevance to health transformation. (#7)*
- *Assist with research and evaluation, think about data sources (access and analysis), offer trained personnel (#10)*
- *They could help to fine-tune the education pieces and help students to understand the importance of partnerships. (#12)*
- *Supply predictive analytics that can be applied to a population to identify intervention points (#13)*
- *Could play a convener role with city and state agencies to drive collective impact (#14)*

Question 7. Is there anything else that you would like to add to this discussion?

Even though they are busy leaders in their respective roles, several interviewees took the time to offer concluding comments. They felt that the fact that ASPPH has embarked on this project to explore its future role in population health sends a positive signal. In addition, there seems to be cautious hope that greater collaboration could address and improve population health.

Comments from specific interviews:

- *It's great that ASPPH is asking these really tough questions. I would like to see a commitment to population health improvement in schools' mission statements. (#2)*
- *ASPPH has become a more powerful voice. Schools and programs of public health could play two*

roles that they are just now beginning to think of: the first is: universities, as their own communities, [can think about] how they can become, in essence, their own Accountable Health Community. There are many ways that they could be looking at how they can create healthier communities for their students and their employees—and move their universities as a whole. The second is, universities are often anchor institutions, so, they can be the anchor from which development and improvement moves out. For example, in Detroit and other Rust Belt cities, they're talking about a "meds and eds" strategy, in which the major hospitals and universities serve as anchors, and then redeveloping between them and toward each other in corridors, helping the cities revitalize. They are serving as the nidus upon which redevelopment crystallizes. (#3)

- The delivery systems of the future will be more primary care-based. The leaders of those systems must think about how their populations are influenced as they create a complex enterprise that is truly engaged with the goal of improving the health of defined populations. (#4)
- The insurance marketplace plus Medicare is still smaller than the total number of Medicaid beneficiaries. Medicaid could cover telehealth, school-based care, preventive services. The more people understand the array of services that are possible, the more this will open up opportunities for collaboration for both health care and public health. (#11)
- Broad approaches to population health have led some to want funding to move from health care into public health; that's not going to happen. What is happening is a refocusing of health care to attend to population health. There is a risk of failure from aggressive timelines: must allow evolution—don't want to push so hard that people walk away. (#5)
- It would be good to know whether we have made progress regarding the psyche of the people when it comes to one of the Triple Aims being "Healthy People/ Healthy Communities." Five years ago, there was the fear that public health would be taken over by health care. Today, is there a real desire to work together? Have we moved past that fear? If not, we won't get the kind of changes envisioned by the Triple Aim. (#6)

Section 2: SURVEY

Introduction

The second phase of the work was an online survey of ASPPH members. This survey was intended to build on 2015 ASPPH Leadership Retreat discussions, which acknowledged that ASPPH members have widely varying interests in population health and their current levels of engagement depend on many factors. The focus on population health has accelerated in part due to the Affordable Care Act, which was heavily influenced by the “Triple Aim” of quality of care, cost, and improved health outcomes. In addition, health care and medical systems are increasingly required or incentivized to document the value of the care they provide, addressing quality and cost in addition to health outcomes.

The purpose of the survey of ASPPH members was to:

- Identify current activities of schools and programs of public health that are related to population health (e.g., types of activities, partners, types of partnerships);
- Identify specific population health-related assets and resources currently held within schools or programs of public health; and
- Assess the resources that schools and programs of public health need or want to increase their involvement and effectiveness in population health activities.

Defining *Population Health*

The Public Health Leadership Group (PHLG) did not reach consensus regarding a single definition of population health to include in the survey. The discussion about competing definitions highlighted a concern that survey respondents might focus too much on whether they agreed with any stated definition of population health, rather than responding to the survey questions. To avoid this problem, the group decided to include text in the survey preamble to recognize that organizations and health care delivery systems may have different views of the term population health, developed through their own histories, purposes, paradigms, goals, and objectives. The text also notes that public health generally considers a population as an inclusionary group of all people living and/or working within a geographically defined area.

Health delivery systems generally consider a population to be a group of people with a common characteristic that is relevant to health care delivery, such as age, insurer, risk profile, disease condition, among other subgroups. Public health organizations and health care delivery systems share a common pursuit of improving the health of these different types of populations. Their leverage points for interventions have common but also unique features. With the rapid movement of health care payment systems toward payment for population care and health outcomes, rather than volume-based fee-for-service, common interests have become evident in prevention, health, and collaborative partnerships across many sectors that impact health.

The survey recognized that the public health perspective typically draws from the World Health Organization (WHO) definition of health: “a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity.”⁴ For purposes of the survey, the term population was used to refer to a

⁴ World Health Organization, 2017. <http://www.who.int/suggestions/faq/en/>

clustered group of people by some common characteristic, including but not limited to the geography of a person's home or work. To achieve population health, the survey noted the importance of school and programs of public health's engagement with health systems, businesses, other academic units (such as medical schools), and other stakeholders.

The PHLG also struggled with the distinctions between population health and public health in terms of curriculum. Many of the critical educational competencies are identical and their labeling provides little insight. This was particularly true regarding efforts to educate about approaches to the social determinants of health. Thus, few questions in the survey relate to curriculum issues.

Methods

During the spring and early summer of 2016, the ASPPH Population Health Leadership Group provided guidance to the project consultants as they developed a survey instrument designed to learn about the current population health-related activities and perceived needs within schools and programs of public health. While the prototype for the survey was a population health instrument developed by the American Hospital Association for use with its members, the final version of the survey was significantly different, customized to meet the specific needs and interests of the schools and programs of public health that are members of ASPPH.

The survey instrument included eight questions with more than 50 sub-elements. The questions explored the school or program's current levels of engagement in various types of population health activities, in addition to their current working relationships on population health issues with the school or program's parent institution and with numerous external organizations. External organization types were grouped into four categories: health care system, local government agencies, state agencies, and "other" (e.g., federal agencies, foundations, schools, businesses, community organizations, faith-based organizations). Questions also covered the perceived level of need for certain population health-related skills or resources at the school or program itself and the level of perceived need across ASPPH membership as a whole. Finally, respondents were asked to provide examples of population health initiatives in which their school or program has engaged that were successful and those that were particularly challenging. Respondents also had the opportunity to provide additional information about their school or program's population health activities.

In the spring of 2016, the survey was drafted and refined, then tested with members of the ASPPH Population Health Leadership Group. The survey was then finalized and fielded with 105 potential respondents, U.S.-based ASPPH members, in the summer of 2016. Participation in the survey was voluntary, and respondents, by submitting their responses, indicated their informed consent to participate. The response rate was 46 percent, with 48 completed surveys representing 42 identified schools or programs of public health.

Results

Question 1: Beyond public health curriculum content, indicate population health activities in which your school or program is engaged and the type or level of engagement.

In response, the following population health activities were listed:

- Strategic planning and facilitation to ask the right questions about population health and building a culture of health;
- Conducting research focused on health system initiatives in population health;
- Providing analytic expertise, data analytics, intelligence, modeling, big data, health informatics;
- Program monitoring and evaluation;
- Developing the evidence base for population health;
- Bringing together cross-sectoral partners (neutral convener, honest broker);
- Providing expertise in community engagement;
- Continuing education (students, workforce education, engagement of students of population health improvement efforts, interprofessional education); and,
- Other.

For each activity, respondents had the option of selecting one or more levels of engagement:

- No activity;
- Individual (faculty members working independently);
- Planning (included in their annual work plan or strategic plan);
- Formal (contracts or agreements for this activity are in place); or,
- Other.

Findings

For the 48 respondents to this question, the areas with the highest level of any type of engagement were: “providing expertise in community engagement” and “providing expertise in data analytics, intelligence, modeling, big data, health informatics.”

The areas with the lowest level of any type of engagement were: “strategic planning and facilitation with external entities” and “conducting research focused on health system initiatives in population health.”

For every activity listed, the most common level of engagement is by individual faculty members acting independently. Of the activities noted, these individual faculty members were most often involved in providing expertise in community engagement, data analytics, and program monitoring and evaluation.

Regarding planned engagement in population health activities by the schools or programs, as evidenced by the inclusion of the specific activity in the school or program’s work plan or strategic plan, the most common focus was population health-related continuing education, and advancing scholarship or developing the evidence base for population health. In contrast, the activities for which the schools or programs reported the actual existence of contracts or agreements were: providing expertise in community engagement, program monitoring and evaluation, and data analytics.

Perhaps this lack of overlap in “planned” versus “formal” engagement in population health activities is a reflection of the difference between the traditional role that schools or programs of public health perceive for themselves (i.e., education and research) as compared to the specific needs that other community stakeholders meet by contracting with the public health schools or programs for their services.

Eleven of the 48 respondents (23 percent) indicated “other activities” or “other level of engagement” of some type. Nine offered written comments to further explain their responses. Examples of reported activities included:

- Creation of new degree programs in population health and in big data; specific strategic research areas and centers (dissemination, grants, and evaluation; a center for research on U.S. Latino HIV/AIDS and drug abuse; support of healthy aging, research, and education);
- A collaborative for health economics and strategic solutions; an integrated biostatistics and data management center;
- Activities linking health systems to public health entities, including mental health, substance abuse, and special needs of prisoners;
- A contract with a state health agency to facilitate integration of population health within Medicaid expansion;
- A shared center with the city health department; and
- Workforce training for the county health department.

One respondent noted that they are in the process of developing a new strategic plan for the school and it is certain that population health will be a key point of discussion.

Question 2: Select the option(s) that best describe(s) your school or program’s current working relationship on population health issues with groups within your parent institution.

This question explored the current working relationship with groups that are part of the school or program’s parent institution and the type of relationship with each group. The following academic groups were listed:

- Medical school;
- School of pharmacy;
- School of nursing;
- School of dentistry;
- Teaching hospital affiliated with your parent institution;
- Other clinical partners affiliated with your parent institution;
- Business management and/or law schools; and
- Other.

For each group, respondents had the option of selecting one or more types of relationship, noting that they didn’t know, or that the group was not applicable to their parent institution. The relationship types listed were:

- No current relationship;
- Individual (faculty members are engaged with the group independently);

- Planning (relationship is recognized in their annual work plan or strategic plan);
- Formal (specific contracts or agreements in place to provide services); or,
- Other.

Findings

The most common type of relationships with any of these groups was through independent faculty members of the schools and programs of public health. Across all 48 respondents to this question, the groups that were ASPPH schools and programs were most often in relationship with were:

- Medical schools,
- Affiliated teaching hospitals, and
- Schools of nursing.

Relationships with these three groups were usually represented in the work plans or strategic plans of the public health schools or programs; and there were more actual contracts or agreements in place with medical schools than with schools of nursing or teaching hospitals.

Groups that ranked the lowest regarding any type of relationship were dental schools and schools of pharmacy. Notably, there were more reported types of relationships with schools of business management and/or law than with schools of pharmacy or dentistry.

Free-form comments named relationships with several other groups not mentioned in the survey:

- Colleges of education;
- Biomedical engineering, biology, earth, and environment;
- Veterinary schools;
- Schools of nutrition;
- Engineering schools;
- Urban and environmental planning;
- Schools of architecture;
- Schools of public service;
- Schools of social work; and
- Physical therapy.

Thirteen of the 48 respondents (27 percent) indicated “other groups” as listed above, or “other type of relationship.” Six offered written comments to further explain their responses. In addition to the groups listed above, the other types of relationships included: deans and department heads sitting on a shared panel; joint or dual degrees; interprofessional education; and a state-established strategic alliance.

Question 3: Please select the option(s) that best describe(s) your school or program's current working relationship on population health issues with each of the external organizations listed below.

This question explored the school's or program's working relationships with 36 types of external organizations and the type of relationship they have with each one. The organizations were grouped into four categories: five health care system entities, six local government agencies, six state agencies, and 19 other types of organizations.

For each of these organization types, respondents were asked to select one or more levels of their current relationship or note that they didn't know. The relationship options listed were:

- No current relationship;
- Individual (faculty members engaged independently with the external organization);
- Planning (relationship is recognized in their annual work plan or strategic plan);
- Formal (specific contracts or agreements are in place); or,
- Other.

Findings

Of the 46 respondents to this question, ten indicated types of working relationships not listed in the survey and 38 noted a relationship with another type of external organization not listed. Of those "other" organizations, 19 were local government agencies, 11 were health care organizations, six were state agencies, and two were noted as "other" but not described.

Twenty respondents offered written comments to further explain their responses. Many of the comments noted "other" types of organizations, including:

- The criminal justice system;
- A center for health equity;
- State legislators' offices;
- Disaster preparedness agencies;
- Planning commissions;
- Parks and recreation departments;
- County boards of health;
- Agricultural interests;
- Pharmaceutical and biomedical companies;
- A state-level public health association;
- Public health management corporations; and,
- A behavioral science research institute.

Other comments described different types of relationships, such as connections through a health department endowment; shared staff positions; participation in the state waiver to reform Medicaid payment; training and placement of community members to increase civic engagement; and faculty appointed as members of public policy advisory groups and public administration transition teams.

Of the 36 types of external organizations listed in the survey instrument, the following received the most frequent responses:

Health Care System.

The following health care system organization types were listed:

- Hospitals;
- Medical groups;
- Federally qualified health centers and community clinics (health centers, rural health clinics, or free clinics);
- Health plans/insurance companies;
- The VA (Veterans Administration); and
- Other.

Among these, the health care organizations with the highest occurrence of any type of relationship were hospitals, medical groups, and Federally-Qualified Health Centers (FQHCs)/community clinics. More than half of respondents noted relationships between independent faculty members and all five types of health care organizations listed. In addition, nearly half of the respondents reported that their school or program of public health has specific agreements or contracts in place with hospitals and with FQHCs/community clinics. Health plans and the Veterans Administration (VA) were less likely to be included in the public health school or program's work plans or strategic plans, or involved in direct contracts or service agreements.

Local Government.

The following types of local government agencies were listed:

- Public health agency;
- Human services (not public health);
- Public safety/policing;
- Housing/community development;
- Policy/legislative issues;
- Transportation; and
- Other

Among these, schools and programs of public health had the highest level of any types of relationships with the following local government agencies: public health agency, policy or legislative offices, and human services (not public health). More than half of respondents noted specific agreements or contracts with local public health agencies, and more than half of respondents noted relationships via individual faculty members for all of the local government agencies listed, except for transportation. One respondent noted that her state does not have local public health agencies.

Schools and programs reported the lowest levels of any type of relationship for local transportation agencies, and for public safety and policing. In fact, 17 (37 percent) reported no current relationship with local transportation agencies.

State Agencies.

The following types of state government agencies were listed:

- Public health department;

- Human services (not public health);
- Public safety/policing;
- Housing/community development;
- Policy/legislative issues;
- Transportation; and
- Other.

Among these, schools and programs of public health had the most relationships with the following state agencies: public health departments, policy or legislative bodies, and human services (not public health). Twenty (43 percent) respondents noted specific agreements or contracts with state public health departments.

The lowest number of reported relationships were with state housing/community development, public safety and policing, and/or transportation agencies. Given known social and environmental determinants of health, a surprising 41 percent (19) of respondents noted no current relationship with state-level housing or community development agencies. In addition, 17 (37 percent) respondents reported no current relationship with state-level transportation agencies, and/or with public safety and policing organizations.

Other Organizations.

Nineteen types of organizations were listed in this final category:

- Medicare (federal program/agency);
- Medicaid (federal and state program);
- Patient Centered Outcomes Research Institute (PCORI);
- Agency for Healthcare Research and Quality (AHRQ);
- National Institutes of Health (NIH);
- Centers for Disease Control and Prevention (CDC);
- Health Resources and Services Administration (HRSA);
- World Health Organization (WHO);
- Indian/tribal health;
- Voluntary health agencies (e.g., lung, heart, diabetes, cancer, arthritis);
- Healthy community alliance or consortium;
- Minority groups (e.g., race, disability, LGBTQI);
- Faith-based organizations;
- Early childhood education centers;
- School districts (K-12);
- Post-secondary education, including trade schools;
- Chambers or other business groups;
- Businesses, private-sector employers;
- Community service organizations (e.g., United Way, YMCA);
- Foundations; and
- Other.

Schools and programs of public health had the highest number of relationships with the following named organizations (in order): National Institutes of Health (NIH), foundations, Centers for Disease Control and

Prevention (CDC), Patient Centered Outcomes Research Institute (PCORI), Health Resources and Services Administration (HRSA), and minority group organizations. Given the types of organizations with which the schools and programs reported the highest level of agreements or contracts in place—namely, the CDC, foundations, PCORI, HRSA, and AHRQ—these relationships may exist because the organization is a source of funding rather than an actual, hands-on partner in population health work.

The lowest reported levels of any type of relationship are with Indian/tribal health entities, chambers or other business groups, and post-secondary education, including trade schools. Twenty-one (46 percent) respondents reported that their school or program has no current relationship with Indian/tribal health entities.

Question 4: For each type of resource or expertise, select the level of need within your school or program.

This question explored the perceived levels of need within each school or program of public health for the following 14 types of expertise or resources:

- Stronger relationships with public health agencies and departments;
- Stronger relationships with medical schools;
- Stronger relationships with the health care sector;
- An evidence base to improve population health, reduce cost, and increase value in the health system;
- Developing curricula focused on population health;
- Using assets to improve patient or individual experience in health care and health improvement;
- Strengthened data analytics, business analytics, big data;
- Increased access to data (clinical and population);
- Increased advocacy for population health and investments in population health;
- New types of faculty with new skill sets (e.g., interventional sciences);
- Ability to move as fast as the health care sector;
- Stronger relationships with business community (employers, chambers, economic development groups);
- Help in communicating and marketing academic public health to health systems as resource to address population health (portal, connector, consulting); and
- Greater awareness in community and public of value of schools and programs of public health.

For each, the respondents were asked to rank the levels of need using an 10-point scale, with zero meaning that there is no need because sufficient expertise or resources are already in place at the respondent's school or program. A ranking of 10 was defined in the survey as meaning, "Much more is needed for my school or program."

Findings

Forty-four people responded to this question, and one of those respondents didn't offer a ranking for two of the items. Although an "other" option was available, none of the respondents selected it, nor did they offer free-form comments. The average rating for each of the 14 items exceeded the midpoint of 5.0, ranging from 5.25 to 8, indicating an overall sense that individual schools and programs of public health are in need of

additional expertise and resources in all areas—to some degree—when it comes to population health work.

Stronger strategic communication is the common theme in the three areas for which respondents noted the greatest need at their own school or program of public health:

- Increasing public awareness of the value of their schools or programs;
- Marketing their services to health systems; and
- Outreach to build relationships with the business community.

Other areas for which the respondents noted a high level of need are the ability to move as quickly as the health care sector, new types of faculty with new skill sets, and increased advocacy for investments in population health improvement.

On the other end of the scale, based on the rankings of need as a whole, respondents believe that their schools or programs are relatively well-positioned in terms of existing relationships with public health agencies and departments, medical schools, and the health care sector. There is a slightly higher perceived need for the existence of a sufficient evidence base to improve population health, reduce cost and increase value in the health care system, and for the development of population health curricula.

Question 5: For each type of resource or expertise, select the level of need across the ASPPH membership as a whole.

In this question, respondents provided their perception of the levels of need for all schools or programs of public health that are members of ASPPH. The responses indicate areas in which respondents feel that ASPPH as a professional association might be particularly helpful in representing and supporting its membership.

As in the previous question, respondents were asked to rank the level of need for specific areas of expertise or resources. See the summary of Question 4 for the exact list. For each area, respondents were asked to rank the level of need using an 11-point scale, with zero meaning that there is no need because sufficient expertise or resources are already in place, and 10 meaning that “much more is needed for ASPPH members as a whole.”

Findings

Forty-one people responded to most of the items in this question, with two respondents choosing not to rank a few of the items. One of those individuals commented, “We are not fully aware of the needs of the full range of programs at some schools and thus could not respond directly to this item. However, we assume that our school response is about average for schools of public health.” In addition, two respondents offered free-form comments to identify two areas of need not listed:

- Economic development leadership within state and local governments; and
- Better understanding and analysis of how various health financing actions promote or impede population health in terms of outcomes, costs, and access.

For ASPPH member schools or programs as a whole, the average rank for each of the 14 items ranged from

6.35 to 8.39. When compared to the average rankings of their own schools or programs from question 4, responses reveal the perception that ASPPH members as a whole have a greater need for every type of resource or expertise listed in this question. Based in the average ratings for ASPPH member schools or programs overall, no area of expertise or resource is seen as being fully or mostly met (i.e., rating lower than 5), thus revealing a perception *that schools and programs of public health need additional population health-related expertise and resources across the board.*

Of the four top-ranked areas of need, three are tied to the health care sector. Respondents see gaps in expertise or resources in marketing, agility, and relationships vis-à-vis the health care sector, indicating the need to:

- Promote the services of schools and programs of public health;
- Be more agile and responsive to match the speed at which the health care sector is evolving; and
- Strengthen health care connections.

The need for increased advocacy for and investments in population health is ranked second highest. Given the common assumption that financial resources are more abundant in health care than public health, respondents may see this item as being related to the health care sector as well.

Just as respondents ranked needs for their own schools or programs, they felt the need for increasing public and community awareness of the value of schools and programs of public health is also great, as is the need to build stronger relationships with the business community.

Areas in which there is a need for additional expertise and resources, but that need is less pressing, relative to the other items listed, include stronger relationships with medical schools and with public health agencies and departments, developing population health curricula, and building the evidence base for the Triple Aim of health care: improving population health, reducing cost, and increasing value.

Question 6: If applicable, provide a two- or three-sentence description of a successful population health initiative in which your school or program is engaged that you would like to bring to the attention of the ASPPH Population Health Leadership Group.

Nearly half of the respondents (19) offered brief descriptions of successful population health initiatives at their school or program, with several of them listing multiple projects. The range of initiatives is diverse in several ways. Activities referenced include degree programs, planning, research and evaluation, data collection, collaboration, and community leadership. The focus areas or topics cover a broad spectrum, for example fracking, HIV, global health, data visualization, obesity, public policy assessment, design and the built environment, infant mortality, community health needs assessments, and hospital readmissions. All 19 responses are listed in Appendix B.

This information provides a solid starting place for the ASPPH Population Health Leadership Group or other leaders at ASPPH to identify examples of the types of activities currently happening within schools and programs of public health. With additional assessment or information regarding specific initiatives, these examples could also provide compelling content in communications regarding the value of schools and programs to improving population health.

Question 7: If applicable, provide a two- or three-sentence description of a particularly challenging population health initiative in which your school or program is engaged that you would like to bring to the attention of the ASPPH Population Health Leadership Group.

Twelve individuals submitted comments in response to this question. Some identified a program and the challenge(s), and others mentioned a program name or focus area without being specific regarding the difficult aspects. Several comments were about overall challenges rather than specific programs. These include the difficulty of trying to establish a population health program across schools and colleges, open access to data relevant to population health and new methods to liberate granular data, maintaining successful programs once grant or contract funding ends, and getting faculty trained in public health to open their eyes and hearts to population health. All 12 responses are listed in Appendix C.

This information could be used by the ASPPH Population Health Leadership Group or other leaders at ASPPH to refine understanding of the difficulties or barriers for schools and programs to engage effectively in population health-related activities and to help improve population health effort overall. It could also provide compelling examples of the current efforts and activities of schools and programs of public health, and how the schools or programs can be a catalyst for overcoming the identified challenge.

Question 8: What other information about your population health activities would you like to share? For example, population health initiatives that are not yet operational.

Nine respondents offered additional information about population health activities at their school or program of public health. Some are broad, such as working on a school-wide population health initiative that includes identifying and cataloging existing activities including research, education (particularly interprofessional efforts), direct program/care delivery, and leadership. Several are narrower in focus, including working on addressing the opioid epidemic, building models for occupational health, developing a joint research agenda with the local health system, and a range of health practice collaborations in children's environmental health, dental health, emergency preparedness, and global health. All nine responses are listed in Appendix D.

As in the previous two questions, this information can be helpful to the ASPPH Population Health Leadership Group or other leaders at ASPPH to cite specific schools or programs of public health as compelling examples in communication about population health activities.

Section 3: ROUNDTABLES

Introduction

The previous stages of the ASPPH project helped to guide the discussions of four Roundtables organized by ASPPH in early 2017. Groups of diverse stakeholders were convened at four locations across the country (Des Moines, Iowa; Minneapolis, Minnesota; Atlanta, Georgia; and, Nashville, Tennessee).

The purpose for each of the four Roundtable was to:

- Discuss major trends emerging in the field of population health improvement; and
- Explore the implications of those trends and suggest new and expanded roles for schools and programs of public health.

The major trends offered for discussion emerged from the ASPPH membership survey and structured telephone interviews:

- Successful efforts to improve population health within and across communities require cross-sector understanding, connections, leadership, and engagement; and the shared implementation of a “health in all policies” strategy.
- The health care delivery system is undergoing a major transformation driven by new public and private sector business models that increasingly reward population health improvement and cost control. This emerging new reality creates a rare opportunity for a wider range of sectors—including but not limited to health care and public health—to partner and collaborate.
- To help fulfill their mission to protect and improve the health of the general population, traditional public health agencies require innovation that applies a broader and more inclusive perspective. New strategies are needed to engage in cross-sector partnerships that can result in collaboration with a much larger mix of heterogeneous stakeholders who will bring practical and multi-faceted resources to the table.
- The workforce needed to enable and catalyze population health improvement requires new skill sets, including the ability to disseminate important public health and population health concepts within all sectors.

Key discussion questions included:

- Do you agree with the major trends as presented? What modifications would you suggest?
- From your perspective, are there are other population health themes with important implications for schools and programs of public health that should be explored?
- For the major identified trends, are there new and expanded roles for schools and programs for public health that should be considered? Please describe these suggested roles in detail. How will these expanded roles benefit other stakeholder groups?
- What are the obstacles to be overcome for these new roles to be realized?

Participants were also encouraged to identify success factors and challenges related to identified and potential activities.

Methods

Roundtables were convened in Des Moines, Iowa (February 22, 2017); Minneapolis, Minnesota (February 23, 2017); Atlanta, Georgia (April 3, 2017); and Nashville, Tennessee (April 4, 2017). Although invitations were issued to a wide range and variety of participants, these general guidelines drove the makeup of the Roundtables:

- Des Moines: Rural health, critical care, geriatrics
- Minneapolis: Academic medicine, interprofessional education, ACOs
- Atlanta: Local and state public health agencies
- Nashville: National for-profit and nonprofit health systems, the Veterans Administration, pediatrics

At each Roundtable, project consultant Diane Stollenwerk provided an overview of the results of the ASPPH member survey, which focused on existing relationships, projects, and initiatives; and of the structured interviews, in which a variety of internal and external stakeholders were asked about the potential for schools and programs of public health to be involved in population health improvement initiatives.

The Roundtable discussions were facilitated by moderator Andrew Webber and scribed by consultant Jennifer Salopek.

This report briefly summarizes the comments of Roundtable participants. The discussion summaries presented here are a synthesis of the conversations across all four sites. Participants were assured of anonymity, so comments appear without attribution.

Challenges

At the beginning of each Roundtable, participants were asked what they perceived to be the greatest challenges to population health improvement and why they had chosen to accept the invitation to attend the Roundtable. Here are the strategic questions they identified:

- How do we build a population-based, community-applied health care improvement approach?
- How do we improve public health to be successful in a value-based world?
- What does the emerging workforce need in terms of competencies and skills to address population health?
- How do we include the aging and Medicaid populations in population health improvement initiatives?
- How do we do health management *with* the population? How do we change the culture in populations early on, to promote healthy choices and wellness?
- What is the next phase of population health?
- How do we address the social determinants of health upstream, and remove any barriers to health?
- How do we integrate population health into curricula for other professions?
- How do we design policies to integrate population health with clinical care?
- How do we integrate population-based methods into traditional health care?
- What are academic and governmental public health's roles in population health? Why should they come to the table?
- Why haven't we made more progress?
- How do social determinants impact quality and cost?
- How will federal policy changes alter the business model?

Summary

TREND ONE: Successful efforts to improve population health within and across communities require cross-sector understanding, connections, leadership, and engagement; and the shared implementation of a “health in all policies” strategy.

Roundtable participants were in agreement about the first part of this trend statement. In wide-ranging discussions, they commented on the fact that communities can be geopolitical but might also be scattered, and can affect residents’ understanding of wellbeing.⁵ All health is local, and successful population health improvement initiatives bring together multiple sectors of communities.⁶ Schools and programs of public health have had more traditional roles, focused on education, research, and technical assistance. However, they may be able to get people in the room together who would not be otherwise engaged.

Many communities think of population health as a major economic differentiator. They noted, particularly in Des Moines, which had greater representation from rural health professionals, that rural communities can serve as microcosms of more densely populated urban areas and can often experiment more quickly. There was strong consensus around the ideal that we must have a healthier America in disadvantaged areas.⁷

“Schools and programs of public health can help clinical care treat individuals in the context of their community and can change the context of the community.”

Regarding cross-sector understanding, participants felt that there is a common misunderstanding of social determinants of health relative to health care; and that health care is a small component of determining and improving health. They noted that the country needs greater clarity on what really improves health and how health care can contribute. They also noted that we cannot assume that people are concerned about health.

Some elements that could contribute to greater clarity include constantly improving-coordinated community health needs assessments, in which local organizations are coordinating and working together to reduce duplication of effort and increase the quality of outcomes.

“The commonality for discussion is health and wellness. We must continue to stress the concept.”

Spreading innovative examples and teasing out elements of success can aid understanding. Participants also noted that innovation can be spread through model programs and learning networks.

Many participants felt that businesses (i.e. employers) are more focused on workforce-specific issues than health issues writ large. Employers often are ahead of the curve in implementing innovative wellness and health improvement programs for their employees. They are focused on their own financial results but willing to collaborate with other sectors. Businesses may not understand how public health can generate return on investment; the business case is not being made. The public health field must do a better job in demonstrating potential results and cost-effectiveness.

⁵ <https://www.takingcharge.csh.umn.edu/community-wellbeing>

⁶ <http://www.healthy.arkansas.gov/programsServices/hometownHealth/HHI/Pages/default.aspx>

⁷ <https://www.firstthingsfirst.org/>

Approach is the key to paving the way for understanding. Participants suggested that we must define what matters to people and start there: Telling people what to do to impact health doesn't work. Don't go in with a list of things that are wrong. Identify assets and build on them, rather than trying to address deficits.

“Do you want people to appreciate population health, or to improve it? They are different. We must lead with what others are interested in—education, economics, and equity—not health.”

Some participants thought that there was less understanding, saying that other sectors do not understand their own role in public health/population health planning or that they can even have a role. They noted that there is a deep distrust of science in some communities, and public health is viewed as a liberal (or “nanny-state”) activity in some rural communities. Public health must connect in ways not viewed as adversarial or patronizing; and can gain stakeholder buy-in through storytelling that resonates.⁸

There was strong consensus that making cross-sector connections is critical to the success of population health improvement initiatives,⁹ and that schools and programs of public health should adopt a similar cross-sector, interprofessional approach to their curricula.

While collaboration itself isn't a new trend, the players at the table make it new; the conversation is extending beyond health care.

A burning question: Who is accountable?

“Who is accountable for population health improvement? The health care delivery system becomes the default, but it's better for health care to be a quiet partner. We need to be at the table, but we don't need to set the table.”

Leadership—broadly defined—is key. Participants identified an increased need for community organizing and development and cited a lack of prepared local leaders. There was strong agreement on the potential role of schools and programs of public health as conveners, because they can get people in a room together who would not be otherwise engaged. Hopefully, they can get people to realize that we share a common vision. They can communicate the principles of population health and allow each sector to create strategies that drive those principles as each sector sees its place in the solution.

Others noted that the convener varies depending on the community; must understand structure and characteristics; and must be trusted and neutral.

Turning to the second half of the trend statement, which posits the shared implementation of a “Health in All Policies” strategy, there was much less consensus. Participants felt variously that the term arose from fear that the health care system would take over. If one sees health as a public good, not a private commodity, we need additional strategies in order to be relevant to involved sectors; but the term scares away people whose core concern is not health. Some preferred the term, “health in all professions.”

⁸ <https://www.transportation.gov/smartcity>

⁹ <http://www.nationalacademies.org/hmd/Activities/PublicHealth/PopulationHealthImprovementRT/2016-DEC-08.aspx>

“Other sectors welcome health in all policies. Only health care bristles at the idea.”

TREND TWO: The health care delivery system is undergoing a major transformation driven by new public and private sector business models that increasingly reward population health improvement and cost control. This emerging new reality creates a rare opportunity for a wider range of sectors—including but not limited to health care and public health—to partner and collaborate.

There was widespread doubt that “new models that reward population health improvement” are sufficiently entrenched to be called an “emerging new reality.” Verging on the cynical, participants said that fee-for-service still drives culture and practice; and focuses doctors on what they are paid to do—public health not included. Stakeholders are entrenched; big health care systems are hunkering down to survive the changes in the policy environment and dragging their feet on taking the next leap into new payment models.

“CMS [the Centers for Medicare and Medicaid Services] has given us a learning opportunity with a long, steep curve, but it follows its carrots with sticks. There is no new money; this will hit us like a tidal wave.”

One participant said, “This trend statement is misguided in its assumption that new models will solve the problem. Rather, they will have a modest impact on efficiency and in reducing payer costs at a huge expense to providers, but will not necessarily make the population healthier. The kinds of things we can readily measure are short-term outcomes, not health status.”

Another responded, “If health care organizations restructured around long-term outcomes, they would have a greater impact.”¹⁰

Payment models may serve as a catalyst for different thinking, but participants feel that the rewards are not yet strong enough to inspire truly different thinking among health care providers. Providers and payers may delay taking the next leap because not all want to take the risk; payers who back off from risk cause concern among providers. Leaders must ensure that they make their margins, but the number and complexity of contracts makes this difficult to pursue.

Health status is difficult to measure. A continuing focus on chronic disease, rather than prevention or wellness, means that the total costs of care are still increasing. Further, financial and other incentives are not well aligned, and there are none for patients/consumers.

ACOs make population health the responsibility of doctors, for whom this greater burden and associated increase in paperwork combine with decreased patient engagement to lead to provider burnout. Although we are generating more data all the time, it is underutilized, and the timeframe in which to adopt new models is a constraint. Examples of successful models exist — such as North Carolina’s Cornerstone — which is all in on value-based care,¹¹ but they are few and their scale is small.

Participants see great potential to partner and collaborate. Public health is not included or well-integrated, and must make the case for that inclusion. There are opportunities to leverage care coordination and model effective partnerships.

¹⁰ <http://revcycleintelligence.com/news/all-payer-alternative-payment-model-targets-pa-rural-hospitals>

¹¹ <https://www.cornerstonehealth.com/about-cornerstone>

One participant noted that, while new payment models drive multi-sector collaboration, the question then becomes, “Build or partner?” Building may get in the way of partnership as stakeholders assume that they “own” patients or data. The question arises anew as the community contemplates how to address the opioid addiction epidemic. Currently, we have “shoestring” data sharing, and its use is reactive rather than predictive, which is made difficult by lack of interoperability.

Government can promote partnership and collaboration via regulatory flexibility and using resources differently.¹² In the short term, at least, these efforts may be guided by new HHS Director Tom Price’s priorities—mental health, substance abuse, and obesity—but schools and programs of public health rarely address mental health and the focus on the addiction crisis varies by region.

There is also evidence that changes can happen in the reverse: rather than new payment models driving innovation, innovation may inspire a new payment model. A successful example is the South Carolina/Duke Foundation telepsychiatry initiative, in which practice drove payment reform.¹³

“Payers want stickiness. You must have market share to move the needle on clinical performance.”

Most participants viewed patients/consumers as disconnected from population health improvement and lacking incentives to participate. This is in direct contrast to attitudes in many Scandinavian countries, where people take a personal interest in their own health and the overall health of their country’s population.¹⁴ The health care system needs patients and patient advocates as partners with shared responsibility to truly improve the health of populations.

TREND THREE: To help fulfill their mission to protect and improve the health of the general population, traditional public health agencies require innovation that applies a broader and more inclusive perspective. New strategies are needed to engage in cross-sector partnerships that can result in collaboration with a much larger mix of heterogeneous stakeholders who will bring practical and multi-faceted resources to the table.

While there was widespread agreement that traditional public health agencies require innovation, the suggested strategies to drive that innovative mindset were many and varied. A common thread, however, was that engagement with patients is critical; the public is a key partner. Patients must be able to access and transport their comprehensive health records to participate in shared decision making and their own care. Further, population health improvement initiatives must address health needs upstream, transplanting techniques in order to address social determinants of health strategically.

There are new opportunities for public health to work with the health care system and offer its services in a targeted way. One participant observed that providers are now extensively engaged in these conversations, while another noted that critical access hospitals are very interested in finding innovative solutions. Mental health services are not well integrated but urgently needed; it can be difficult to bridge the divide between departments of public health and state mental health departments.

¹² <https://www.cdc.gov/sixteen/>

¹³ <http://dukeendowment.org/our-work/integrating-and-extending-crisis-mental-health-care>

¹⁴ <http://www.newyorker.com/magazine/2015/02/16/northern-lights-4>

“It would be great if schools and programs of public health could bring innovation to our problems.”

Many participants felt that there is no need to duplicate what is already being done in state and local health departments, but rather to use community health needs assessments to drive collective impact across sectors, beyond hospitals and into the community, and leverage technology to make this collaboration work. There is a need for new funding streams and incentives: State innovation waivers could be a source of funds; schools and programs of public health could be involved in those conversations. It was felt that community health workers can make a big difference. Participants expressed the opinion that potential success depends on state legislatures and whether members believe that health care is a right.

“The challenge is bringing the right people to the table to ask the right questions, analyze and interpret the data, and figure out how to act on it.”

Employers are part of this larger mix of different types of stakeholders who will bring resources to the table. Health care providers are anxious and willing to do direct contracting with employers but most employers lack staff and understanding. A successful example is Boeing, which has contracts with ACOs in four major areas, with quality improvement and population health goals.¹⁵

TREND FOUR: The workforce needed to enable and catalyze population health improvement requires new skill sets, including the ability to disseminate important public health and population health concepts within all sectors.

Near-universal consensus emerged around this trend. However, some of the views of external stakeholders represented incomplete or outdated views of academic public health, indicating a need to better inform partners and potential partners of recent innovations in the missions and curriculum of schools and programs of public health.

It was felt that schools and programs of public health have been reluctant to adopt a competency-based approach to their curriculum development, although it was acknowledged that it is now an accreditation requirement. Many felt that potential expanded roles for MPHs and other graduates will require new skills. The workforce that is needed today is markedly different than what the field required two decades ago. Also, in the past many MPH candidates gained a couple of years of work experience before entering the programs.

One participant noted that it is important to remember the mission of schools and programs of public health, which is not only to educate the future public health workforce but also to develop an evidence base and build partnerships; and that ASPPH member institutions must stay relevant.

Participants felt that it was not only the curriculum that must be transformed, but the entire lifecycle. For example, it is important to consider the admission process, and how/whether it selects for candidates who have the characteristics needed in future leaders. The field would benefit from greater diversity—how might our admissions processes be (inadvertently) discouraging diverse candidates?

¹⁵ <https://hcp-lan.org/2016/03/contracting-directly-with-health-systems-to-achieve-the-triple-aim-the-boeing-experience/>

“Minimum qualifications for getting into professional schools are screening out people who are needed in these fields.”

Other suggestions centered around building earlier access to the pipeline, in the form of high-school courses on public health and/or an undergraduate major in public health. Community colleges were also considered untapped resources. Roundtable participants viewed academic public health as a discipline that also appeals to students’ desire to do good, and felt that public health might be attractive to many more young people if they learned of it sooner.

Similarly, what kind of faculty do we select and what message does their selection send about what schools and programs of public health value? If we are to go beyond traditional education and research to play a meaningful role in population health improvement, then we must change qualifications for promotion and tenure to encourage participation; currently, financial and other incentives are not well-aligned. Faculty need training and professional development to make curricular changes to develop the skills and competencies needed by future MPH holders.

A powerful sub-trend that cuts across all four major trends is the need for interprofessional education (IPE) and training to facilitate understanding and connections and promote cross-sectoral communication and “health in all professions.” Most active IPE programs are currently focused on expanded care delivery teams. The roundtable participants favored more expansion, encouraging IPE efforts outside of the academic health center environment.

To realize that goal, interprofessional training requires interprofessional faculty.

“Working together should be part of the regular curriculum that we are already teaching instead of a concept that creates new things and more to do.”

It was generally felt that, while MPH curricula lacks standardization and consistency, it is also too theoretical and lacking in pragmatism. The new skills and competencies needed by MPH holders of the future are nothing if not pragmatic. These include the need to understand Medicare, Medicaid, and health insurance; to read and analyze legislation; and to scan for policies that impact health.¹⁶

“We cannot afford to be siloed in our teaching. We must bring things together in our curriculum.”

To participate in population health improvement initiatives, MPH candidates need to understand the role of technology, as well as the role of big data and have, if not the ability to analyze big data themselves, to at least understand and interpret its findings.

The need to function within a cross-sectoral world means that they need interpersonal and leadership skills such as communication, active listening, change management, and behavioral interviewing. They need to understand the costs of their proposed initiatives, so must be skilled in finance and negotiation. They should be able to demonstrate the potential ROI of proposed projects and be good stewards of resources.

¹⁶ <https://ddot.dc.gov/page/vision-zero-initiative>

To design such projects, they must understand what motivates people. They should have some training and skills related to what professionals in other fields think about: architecture and urban planning, agriculture, and transportation, for example. Conversely, participants would like to see public health and population health concepts incorporated into the curricula of other professional programs, such as business, education, engineering, and law.

The need for hands-on, practical public health educational activities was widely felt. Many participants suggested incorporating meaningful, practice-based projects like those in Master of Health Administration programs/externships; and/or practicums and CDC placements in rural areas.

Still other suggestions concerned the development of entirely new degree programs, such as a Master of Health Analytics;¹⁷ or offering dual degrees in business, law, or environmental design.

“The skill sets required for this work are all-encompassing. It’s like weaving a basket to hold better health for the entire community.”

Recommendations

Competencies suggested for the future workforce included:

- Building communities of practice;
- Change management;
- Communication;
- Community service orientation;
- Convening;
- Data analytics;
- Design thinking;
- Evidence-based strategies;
- Finance and ROI;
- Grassroots organizing/community engagement;
- Health literacy;
- Influence without authority;
- Leadership;
- Listening;
- Negotiation;
- Problem solving;
- Relational/partnership skills;
- Social learning;
- Systems thinking;
- Teamwork;
- Understanding of health care funding, legislation, government programs; and
- Use of technology.

¹⁷ Many schools do offer a Master’s degree in health informatics.

Conclusion

The process we engaged in (namely bringing ASPPH members together with other stakeholders in their communities) speaks to and reinforces a central idea around the *value* and *need* for multi-stakeholder engagement at a community level, with schools and programs playing a convener and catalyst role. Across the board, participants felt that schools and programs could and should play this role, leveraging community-based leadership to bring disparate stakeholders to the table.

Whether schools and programs of public health should play an active part in population health improvement beyond the convening role is less clear, but what is evident is that, if they do, significant changes may need to be made in the public health education pipeline: the selection, promotion, and tenure processes for faculty; the recruitment and selection of students; and the redesign of the curriculum to reflect needed population health and interdisciplinary competencies and contemporary leadership challenges.

The need for multi-sectoral stakeholder involvement and investment was universally agreed upon, but conversation centered most around attracting, educating, and partnering with employers. To the surprise of the Roundtable organizers, collaboration with the clinical enterprise engendered much less discussion; low potential for partnership seemed almost a foregone conclusion. Moreover, current policy debates at the federal level about the funding of health care delivery were viewed as secondary and lagging issues: participant felt transformation was occurring with or without federal leadership or mandates.

There was also little discussion about how active involvement in population health improvement initiatives might drive the research and evaluation agenda of schools and programs of public health.

Section 4: FACULTY LEADERSHIP FORUM

Following the four Roundtables organized by ASPPH in early 2017, at which major trends from the ASPPH membership survey and structured telephone interviews were discussed, a Forum was convened on June 20 — 21, 2017 in Milwaukee, Wisconsin. In this session, the findings of the Population Health Leadership Group's efforts to date were reviewed; and ASPPH-member faculty leaders in academic affairs, research, and practice were engaged to:

- Hear from stakeholders about how they view academic public health's current and potential role in advancing population health;
- Critically consider the draft recommendations that emerged from the previous phases of the work; and
- Identify design features for advancing population health within schools and programs of public health.

The desired outcome was to develop recommendations for the ASPPH Population Health Leadership Group to enhance the preparation of professionals in public health and other disciplines to improve population health; and increase the engagement of faculty and their institutions to advance the field.

John R. Finnegan Jr., PhD, University of Minnesota, provided an overview of the project and discussed the definition of population health that has been used during the project. He noted that the characteristics of health and health care in the 21st century will be:

- Collaborative, connective, creative
- Interdisciplinary and transdisciplinary
- Cross-sector, cross-system
- Civic: local, regional, national
- Global
- Digital

Robert Dittus, MD, MPH, Vanderbilt University, provided high-level insights arising from the four previous roundtables. In particular, he noted that Roundtable participants had collectively identified these major questions about involvement in population health improvement initiatives by schools and programs of public health:

- How do we build a population-based, community-applied health care improvement approach?
- How do we improve public health to be successful in a value-based world?
- What does the emerging workforce need in terms of competencies and skills to address population health?
- How do we include the aging and Medicaid populations in population health improvement initiatives?
- How do we advance health management with the population?
- How do we change the culture in populations early to promote healthy choices and wellness?
- How do we address the social determinants of health upstream, and remove those barriers to health?
- How do we integrate population health into curricula for other professions?
- How do we design policies to integrate population health with clinical care?

Project consultant Diane Stollenwerk, MPP, President, StollenWerks Inc., provided an overview of the survey and structured interview results.

Project consultant Andrew Webber, Discern Health, moderated a panel discussion among several external stakeholders, most of whom had participated in one of the previous Roundtables:

- Cheryl DeMars, CEO, The Alliance
- Eric Harkness, Director, Office of Health Policy, Tennessee Department of Health
- David Lakey, MD, Chief Medical Officer, Associate Vice Chancellor for Population Health, The University of Texas System
- Sanne Magnan, MD, PhD, Co-Chair of the National Academies of Sciences' Roundtable on Population Health Improvement

The broad purpose of the panel discussion was to hear the insights and perspectives of multi-stakeholder representatives regarding trends, opportunities, and challenges in advancing population health improvement. Panel participants were also asked to provide their views and recommendations on new and expanded roles for schools and programs of public health presented by the current and future environment for population health.

Mr. Webber began by noting the cross-sectoral leadership and collaborative engagement in the project thus far, and asked, regarding “health in all policies,” whether panelists felt that the time is right for gaining more traction in this area. Panelists seemed to feel that the phrase misses the mark, although it does normalize conversations around many difficult issues. Conceding that health in all policies is easier said than done, panelists agreed that perhaps the terminology is itself a barrier. Dr. Magnan noted the need to include *wellbeing* in addition to health. Mr. Harkness noted his state’s new emphasis on livability, rather than health. Dr. Magnan also noted that the standing National Academies of Science Roundtable on Population Health Improvement is focusing on questions of equity, education, and economics as it considers, “How do we, as a society, create a *wellbeing* community?”

Asked how healthcare transformation is playing out in academic medicine, Dr. Lakey commented that CEOs are being incentivized to improve population health measures, but that there is a disconnect between academia and state health agencies.

Questioned about whether employers think of populations only as their own workforce, Ms. DeMars replied that business results are inextricably linked to the health of the workforce. Employers are concerned about costs, as well as about a talent shortage that may affect the workforce of tomorrow. She noted that schools and programs of public health can engage with employers by helping businesses to understand health issues and how they affect business success. She cited the Beaver Dam Community Hospital Blue Zone Initiative as a successful example.¹⁸

Mr. Webber then posed the question, how can schools and programs of public health play a leadership role in population health improvement in their communities, states, and own institutions? Dr. Lakey noted that many faculty believe that activities are only valued if they are rewarded financially. Dr. Magnan said that schools and programs of public health must develop trust and relationships. Mr. Harkness suggested that

¹⁸ <https://www.bdch.com/News-Press/BDCH-Brings-Blue-Zones-Project-to-Dodge-County.aspx>

they get involved in state population health improvement plans, which are not top-down or hierarchical but more of a conceptual framework.

Mr. Harkness also suggested that schools and programs of public health ask themselves these three questions:

- Are we promoting and improving opportunities for optimal health?
- Are we looking upstream?
- Are we learning from as well as teaching others?

Dr. Magnan suggested adding, “Are we building trust?”

When it comes to building the future workforce, Mr. Harkness noted that freshly minted MPH graduates tend to lack critical thinking skills, though they are passionate and motivated.

After the panel discussion, Mr. Webber went over selected draft recommendations that emanated from earlier PHLG initiatives (the structured interviews and member survey) — many from external stakeholders with limited knowledge of the current organization and mission work of academic public health. The recommendations were consolidated into three areas: Research and Evaluation, Future Workforce Education and Training, and Community Partnerships and Institutional Leadership.

Forum attendees participated in discussions at their tables, designed to review these recommendations and to elicit additional mission-specific recommendations. Each table had a scribe to take notes. Each table was assigned one of the recommendation areas and given three questions to consider:

- Do you agree or disagree with the recommendations of the stakeholder participants and why?
- What additional recommendations would you add from your own perspective?
- What are chief barriers and obstacles that will need to be overcome to implement the suggested recommendations?

Discussion for each area was facilitated with the following background, questions, and recommendations.

Research and Evaluation

Background: Diverse stakeholders participating in the interview process and roundtable discussions all expressed frustration with the absence of a compelling evidence base for the success of the population health improvement enterprise. It was recognized that building a demonstrated ROI for population health improvement strategies will be necessary to attract cross-sector leadership engagement, particularly in community-based initiatives.

Question(s): What are the challenges and opportunities for schools and programs of public health in terms of contributing to the evidence base for the population health improvement enterprise?

Recommendations from Multi-Stakeholder Participants:

1. As an important part of its core mission and legacy focus, continue to focus on research and programmatic evaluation related to building an evidence base for population health intervention strategies.

2. As the gold standard, contribute to the research that helps identify the A- and B-rated intervention strategies recommended by the U.S. Community Preventive Services Task Force.
3. For different stakeholder groups, such as the business/employer community, develop a definitive “business case” for why their investments and unique interventions in population health improvement will lead to greater success for their individual enterprises.
4. Continue to contribute to the analysis, transparency, and communication of population health status trends and statistics as ammunition, as well as a “call to action” for needed public and private sector policies, programs, and investments to improve health, particularly for the most vulnerable populations.

Future Workforce Education and Training

Background: Emerging trends and developments in the field of population health—including increased attention to social determinants and disparities in health, the importance of “health in all policies” strategies, the need for cross-sector, community-based partnerships, a paradigm shift in health care delivery towards primary care and prevention, and the critical importance of individual behavior change—all suggest that new skill sets will be required by a future public health workforce and all leaders and participants in the broad population health improvement enterprise.

Question(s): These emerging population health trends and developments present both challenges and opportunities for schools and programs of public health in educating and training the future workforce. How should curricula and the education life cycle change — not only for students pursuing public health degrees but for other professionals pursuing careers that will have an important, but perhaps little understood, impact on population health?

Recommendations from Multi-Stakeholder Participants:

1. Advocate for building an earlier population health workforce pipeline in the form of high school courses on public health and undergraduate majors in public health. As another component of the public health education lifecycle, advocate for changes in the admissions process to encourage the selection of students from diverse backgrounds, with leadership potential, and with interests in community organizing.
2. Advocate and lead interprofessional education and training to facilitate population health understanding and impact within all graduate programs. A “health in all professions” (as a complement to the “health in all policies” movement) educational perspective will promote the cross-sector communication and leadership subsequently needed in population health improvement strategies.
3. Expand public health curricula to emphasize new competencies and skill sets, particularly related to the following: leadership training, community organizing, change management, finances, project management, return on investment (ROI) computations, consumer engagement and behavior change, data analytics, and public communications. Some acknowledged that this shift was already well underway.
4. Expand practica for students to emphasize placement in non-traditional worksite settings including the business/employer community and organizations related to education, transportation, land use, urban planning, and economic development.

Community Partnerships and Institutional Leadership

Background: One of the major themes that emerged from the multi-stakeholder interviews and Roundtable discussions was the idea that successful efforts to improve population health within and across communities require cross-sector understanding, connections, leadership, engagement, and the shared implementation of a “health in all policies” strategy.

Question(s): What are the implications and opportunities for schools and programs of public health presented by this theme and current population health trends? As institutional and community-based leaders with relevant knowledge and expertise, how can schools and programs of public health play a leadership role in population health improvement strategies in communities, states, and colleges/universities where they have an important imprint?

Recommendations from Multi-Stakeholders:

1. Provide support and help to convene cross-sector and community-based population health improvement coalitions. In communities where population health improvement coalitions do not exist, provide the initial leadership to organize, convene, and staff a coalition of cross-sector organizations and leaders.
2. Within cross-sector coalitions, provide support and leadership to develop community health needs assessments as a foundation for identifying population health improvement opportunities. Within cross-sector coalitions, provide technical support and leadership in the systematic evaluation of all coalition-based intervention strategies/initiatives/programs.
3. Provide leadership and become the recognized champion for organizing a population health strategy within a school or program of public health’s own college or university. As the expert “health strategist,” build a culture of health for the college or university and implement programs and initiatives at all levels (e.g. land use and building design, health promotion programs, employee health benefits, health care services) that will lead to demonstrated improvements in the health status of college/university employees and their dependents, faculty, and the student body.

At the end of day one, table scribes were asked to share the two or three main points from their group’s discussion. These were collected and collated into slides to guide the conversations on day two.

Research and Evaluation

Overall, it was felt that the Research and Evaluation recommendations were too wordy and potentially created dissonance by using “insider terminology.” It also was felt that they were not realistic.

Recommendation 1: “As an important part of its core mission and legacy focus, continue to focus on research and programmatic evaluation related to building an evidence base for population health intervention strategies.”

- Participants noted that this evidence base requires community-based participatory research; randomized clinical trial research is not always applicable (academic vs. applied research). Further, this work usually is driven by individual interests rather than career advancement.

Recommendation 2: “As the gold standard, contribute to the research that helps identify the A- and

B-rated intervention strategies recommended by the U.S. Community Preventive Services Task Force.”

- Participants suggested that this could be combined with Recommendation 1, and needs to reflect “real-life” vs. conceptual research standards.

Recommendation 3: “For different stakeholder groups, such as the business/employer community, develop a definitive ‘business case’ for why their investments and unique interventions in population health improvement will lead to greater success for their individual enterprises.”

Recommendation 4: “Continue to contribute to the analysis, transparency, and communication of population health status trends and statistics as ammunition, as well as a ‘call to action’ for needed public and private sector policies, programs, and investments to improve health, particularly for the most vulnerable populations.”

- With regard to Recommendations 3 and 4, participants emphasized the need to improve information and data sharing in order to develop the evidence that drives a business case. To gain the opportunity to demonstrate that case, public health professionals must build trust, relationships, and understanding by speaking the language of other stakeholders.

Participants felt a significant barrier to implementing any of the Research and Evaluation recommendations is the “publish or perish” culture of schools and programs of public health. Due to the level of engagement and length of time for effective studies, randomized controlled trials aren’t always effective for community-based research. Individual/academic financial incentives don’t support community-based research due to the lack of relevant peer-reviewed journals respected for promotion and tenure decisions, but there are few alternative funders and alternative dissemination channels.

Future Workforce Education and Training

Recommendation 1: “Advocate for building an earlier population health workforce pipeline in the form of high school courses on public health and undergraduate majors in public health. As another component of the public health education lifecycle, advocate for changes in the admissions process to encourage the selection of students from diverse backgrounds, with leadership potential, and with interests in community organizing.”

- Participants were nearly unanimous in emphasizing that community colleges are missing from this equation but could play a vital role in attracting new public health undergraduates. There was strong support for including public health education in high school curricula. Regarding changes to the admissions process, there was general agreement, with a strong caution against lowering standards.

Recommendation 2: “Advocate and lead interprofessional education and training to facilitate population health understanding and impact within all graduate programs. A ‘health in all professions’ educational perspective will promote the cross-sector communication and leadership subsequently needed in population health improvement strategies.”

- One table thought this statement was unrealistic, too ambitious, even imperialistic. Intra-professional education also needs to be strengthened and expanded beyond health and with social sciences, urban planning, engineering, etc. “Health in all professions” inappropriately puts health at the center of the universe and makes influence unidirectional. Schools and programs

should acknowledge that public health has much to learn from other disciplines as well. Participants suggested increased utilization of dual degrees and badges. They encouraged more sharing of curricula among ASPPH member institutions, as well as more emphasis on continuing education responsibilities.

Recommendation 3: “Expand public health curricula to emphasize new competencies and skill sets, particularly related to the following: leadership training, community organizing, change management, finances, project management, return on investment (ROI) computations, consumer engagement and behavior change, data analytics, and public communications.”

- While participants expressed general support for this recommendation, they noted the need to recognize that the student with the capacity to master multiple skill set areas is rare. Quantitative skills, communication, program design, community organizing, and leadership skills are invaluable in any field, not just population health. Small programs and schools will have difficulty having adequate skilled faculty to teach in all areas. An emphasis on the evaluation of these competencies and skill sets is lacking and needs to be added. Revised CEPH criteria may be needed to allow increased flexibility to meet evolving workforce needs.

Recommendation 4: “Expand practicums for students to emphasize placement in non-traditional worksite settings including the business/employer community and organizations related to education, transportation, land use, urban planning, and economic development.”

- While generally enthusiastic about the concept of experiential learning in the real world, participants noted that, under CEPH standards, practicums must be learning experiences with preceptors. “Structured internships” may be a better term for what is described. Non-traditional placements can be invaluable.

Community Partnerships and Institutional Leadership

There was general agreement with the three recommendations, but with refinements. Participants felt that the overarching principle should be a commitment to equity and improving health status that should lead all efforts in the community and within our own academic communities.

Recommendation 1: “Provide support and help to convene cross-sector and community-based population health improvement coalitions. In communities where population health improvement coalitions do not exist, provide the initial leadership to organize, convene, and staff a coalition of cross-sector organizations and leaders.”

- Participants felt that schools and programs should play a facilitation and support role rather than a convening role in building cross-sector community coalitions. They suggested that schools and programs do an internal assessment regarding their capacity to do community-based work.

Recommendation 2: “Within cross-sector coalitions, provide support and leadership to develop Community Health Needs Assessments as a foundation for identifying population health improvement opportunities. Within cross-sector coalitions, provide technical support and leadership in the systematic evaluation of all coalition-based intervention strategies/initiatives/programs.”

Recommendation 3: “Provide leadership and become the recognized champion for organizing a population health strategy within a school or program of public health’s own college or university. As

the expert 'health strategist,' build a culture of health for the college or university and implement programs and initiatives at all levels (e.g. land use and building design, health promotion programs, employee health benefits, health care services) that will lead to demonstrated improvements in the health status of college/university employees and their dependents, faculty, and the student body."

- Participants suggested that schools and programs could infuse new ways of learning into communities by building online "learning communities."

They also identified several significant barriers to the achievement of these recommendations:

- Promotion and tenure guidelines often do not align with community-based efforts.
- Size/resources of the public health school faculty may be limited.
- Academic culture/leadership does not value/support community-based engagement.
- The business model for community coalitions is often grant-based and rarely sustainable.

A possible approach to overcome those barriers might be to establish an "Office of Public Health Practice" with "Practice-based Scholars;" and to develop courses focused on practice.

On day two, participants reconvened at their tables. After the foregoing summary of the previous day's conversations, participants were asked to consider how to take the recommendations from ideation to implementation; and what changes are needed in:

- Curriculum
- Faculty skills and composition
- Student expectations and experiences
- Institutional investments
- Community engagement.

They were also asked to discuss what other issues need to be considered to advance the recommendations. For example:

- CEPH accreditation standards
- Promotion and tenure guidelines
- Institutional culture
- Tangible and intangible incentives

Finally, they were asked to address the questions:

- What are short-term and long-term opportunities to engage schools and programs of public health to advance population health?
- What other key issues or questions need to be addressed?

Suggestions generated during the day two discussions were folded into all other information gathered and used in the formulation of the recommendations for schools and programs of public health offered in Section 5, following.

Section 5: RECOMMENDATIONS

Recommendations for Schools and Programs

Based on the foregoing extensive and valuable discussion of critical elements for successful population health improvement initiatives for schools and programs of public health, and with input from the Population Health Leadership Group, we offer the following recommendations and success factors:

Community Partnerships and Institutional Leadership

1. Ensure that all population health efforts in communities and within your own academic unit are driven by a commitment to equity and improving health status. Conduct an internal assessment within your own academic institution regarding its capacity to do community-based population health improvement work. This will help identify assets, resources, and areas for growth.
2. Actively participate in cross-sector, community-based population health improvement coalitions. Help facilitate the convening of such coalitions in regions where none yet exist. Infuse community-based coalitions with new ways of learning, including building online “learning communities.” Provide support and leadership in the systematic evaluation of all coalition-based intervention strategies, initiatives, and programs.
3. Collaborate with non-profit hospitals, public health agencies, and stakeholders from other sectors in developing Community Health Needs Assessments (CHNAs) as a foundation for identifying opportunities to improve population health.
4. Become a recognized champion for organizing a population health strategy within your own academic institution. Act as “health strategists,” partnering with others to build a culture of health for your institution and facilitate initiatives (e.g. land use and building design, health promotion, employee benefits, health care services) that will contribute to demonstrated health improvements for the faculty, student body, and employees and dependents.

Success Factors

- Spread and support wider understanding and acceptance of how promotion and tenure guidelines (and related scholarship portfolio requirements) recognize community-based mission activities.
- Adapt the degree of involvement in community partnerships and internal leadership in population health to reflect the size and resources of your school or program.
- Build support for the value of community-based engagement within the leadership and academic culture of your institution.
- Support community-based coalitions in developing sustainable business models.

Future Workforce Education and Training

1. Build awareness of and interest in public health and population health careers in high-school and community college students. Advocate for innovative approaches to the admissions selection process to encourage student diversity, leadership potential, and skills in community-based engagement, while maintaining or enhancing admission standards regarding academic credentials.
2. Advocate for and pursue opportunities to build intra- and inter-professional education and training that facilitates shared learning among graduate programs, including but not limited to public health, social sciences, urban planning, engineering, health care and business. Offer badges, dual degrees, joint programs within public health schools and programs to build understanding, communication and leadership among students and faculty of the impact of various professions on population health.
3. Expand public health curricula, either directly or by working with other graduate programs, to emphasize new competency areas such as leadership, community organizing, change management, finances, project management, program design and evaluation, return on investment (ROI), consumer engagement and behavior change, data analytics, and communication. Engage students interested or skilled in one or more of these areas, Through ASPPH, share these expanded curricula and increase emphasis on continuing education for public health professionals.
4. Promote integrative learning experiences (ILEs) and applied practice experiences (APEs) that provide, to the extent possible under CEPH standards, experience in non-traditional worksite settings including the business/employer community and organizations related to education, transportation, land use, urban planning, economic development and community-based non-profits.

Success Factors

- As necessary, advocate for revisions in CEPH criteria to allow flexibility to meet evolving workforce needs that will advance population health.
- Offer traditional classroom-based and experiential learning opportunities to expose public health students to other professions whose work affects social determinants of health and population health improvement.

Research and Evaluation

1. Maintain academic and applied research and evaluation as essential elements of the public health mission, in part, to build the evidence base for population health strategies and interventions. Engage in appropriately designed, community-based participatory research to assess the effectiveness and impact of population health programs.
2. For different stakeholder groups, such as employer communities, build relationships, in part, by translating the existing body of population health evidence into definitive and understandable “business cases” that explain the stakeholder’s unique position to impact population health and how taking action to improve health will also help them meet other goals and objectives important to their organization.
3. Continue to contribute to the data sharing, analysis and effective communication of data and trends to build awareness and trust. Signal a compelling “call to action” for population health strategies and interventions, plus public and private sector investments, particularly for our most vulnerable populations.

Success Factors

- Promote the acceptance and academic value of community-based efforts.
- Identify alternative funders and alternative dissemination channels, including and beyond peer-reviewed academic journals, for community-based participatory research.

Recommendations for ASPPH and the Field

During the investigation of successful population health improvement initiatives, many suggestions were made for products or services ASPPH (or academic public health collectively) could develop/offer to aid in the implementation of these ideas or to advance population health more generally. The resulting suggestions deserve further consideration by ASPPH leadership and staff:

Identify, Inventory, and Disseminate Best Practices

- Highlight best practices in community engagement and community-based participatory research.
- Gather and share examples of promotion and tenure guidelines that recognize and value community engagement; identify ways to document community engagement in scholarship portfolios; and, promote and honor the value of community-based participatory research within academic public health. Advocate for enhanced recognition of community-based research by the Council on Education in Public Health (CEPH).
- Document the roles of offices of public health practice and best practices for engaging partners from various profit and non-profit sectors.
- Develop a self-assessment tool (or identify an existing tool) for schools and programs of public health to assess their internal capacity and ability to implement various population health initiatives.
- Help define the range or types of resources a school or program of public health requires to be able to implement various population health activities; identify ways in which financial and other incentives might be aligned to promote population health.
- Produce evaluation guidelines for coalition-based intervention strategies, initiatives, and programs.

Convene Stakeholders

- Identify and/or provide forums for stakeholders within regions to engage on population health issues and consider collaboration opportunities.
- Help members in establishing collaborations with public health institutes, through the National Network of Public Health Institutes, and with various public health foundations.
- Facilitate creation of a community of learners and communities of practice to enable schools and programs of public health to talk with each other (and with members within a community) about population health opportunities and challenges. (Several existing platforms might be utilized for this purpose, such as the HealthDoers Network and the Practical Playbook.)
- Engage academic institutions and various disciplines and health professions in discussions about “team science” involving population health.

Communication

- Document and disseminate information about how population health concepts can be infused into institutional communication efforts.
- Convene stakeholders to reframe conversations about population health, including how to speak the languages of different stakeholder groups. Alternatively, develop information and resources for members to help them communicate about population health using the languages (priority concepts, terminology) of different stakeholder groups.

APPENDIX A

Key to Structured Interview Respondent Organizations

1. International employer
2. Credentialing organization
3. Nonprofit foundation
4. Business and multi-stakeholder collaborative
5. Integrated health plan
6. Federal agency
7. State purchasing agency
8. Graduate school affiliated with academic medical center
9. Academic medical center
10. Federal agency
11. Federal agency
12. Integrated health plan
13. Integrated health plan
14. Academic medical center

APPENDIX B

Responses to Survey Question 6 Regarding Successful Population Health Initiatives

1. In the early stages of developing work-plans with the teaching hospital's new population health leadership to engage MPH students in program planning and implementation. (University of Maryland School of Medicine Public Health Programs)
2. We conducted a study requested by the state to assess the public health impact of fracking to inform decision makers. See <https://sph.umd.edu/news-item/umd-public-health-study-inform-md-decision-fracking>. Also, we conducted a study to assess the public health impact of transforming health in a large Maryland county. This study informed the certificate of need for a new hospital and informed a strategic primary care plan for the county. Our report can be found at: <http://sph.umd.edu/content/transforming-health-prince-georges-county> (University of Maryland School of Public Health)
3. Implementing specialization in population health within the MHA program. (Walden University Master of Public Health Program)
4. SHARC: Southern HIV and Alcohol Research Consortium. Ongoing health data collection from HIV positive individuals across the state, with 8 million in funding. One department provides recruiter and faculty salary. Also, global health in rural India with disadvantaged communities providing antenatal health care. (Florida International University Robert Stempel College of Public Health and Social Work)
5. Michael Kosorok (chair of biostatistics), along with a cross-disciplinary team from epidemiology and information science, currently has a grant entitled "Big Data Visualization Methods and Software for Population Health Research" (NC-T32-CA201159). This project supports students to learn "big data" science methodology and innovative ways to apply it to various subject matter areas for improving population health. (University of North Carolina Gillings School of Global Public Health)
6. Technical assistance (TA) to local community coalition to address childhood obesity. TA focused on developing, implementing, and evaluating evidence-based, multilevel intervention strategies. (New York University College of Global Public Health)
7. One of our faculty has served as an advisor to several state governments on implementation of the ACA. (Tufts University School of Medicine, Public Health Program)
8. One faculty member has been retained by a large county to lead the development and implementation of a regional population health roadmap. (Claremont Graduate University)
9. Have initiated two community-based research institutes in population health in the greater Philadelphia area and in the western part of the state. In the process of merging with Philadelphia University with its expertise in design and the built environment, leading to new population health

initiatives in low-income communities. (Thomas Jefferson University, College of Population Health - MPH Program)

10. Interacting with university health care system to define and lead population health research needs and partnerships. (Emory University Rollins School of Public Health)
11. Significant activity in our school working with Native American tribes on a host of programs to improve health of the population. (University of Oklahoma Health Sciences Center College of Public Health)
12. Development and use of computational models and simulations to forecast and to formulate and evaluate population health interventions. (University of Pittsburgh Graduate School of Public Health)
13. Strong community public health practice/practicum program, excellent school/program and patient programs, outstanding global health program led by Dr. Padmini Murthy. Environmental health department highly distinguished research team led by Dr. Diane Heck. Public health faculty are distinguished leaders in the community. (New York Medical College, School of Health Sciences and Practice, and Institute of Public Health)
14. Our community health needs assessment process. (Vanderbilt University Institute for Medicine and Public Health)
15. The New York State Medicaid Program has received a waiver from the Center for Medicare and Medicaid Services (CMS). This waiver provides significant funding for the Program to provide grants to local coalitions designed to strengthen preventive services while reducing hospital readmissions by 25 percent over a five-year period. The University at Albany has received a \$3.5 million grant to evaluate this program. (University at Albany SUNY School of Public Health)
16. Partnered with teaching hospital to conduct its community health assessment and plan. (Northwestern University Feinberg School of Medicine Program in Public Health)
17. The Business Leadership Network is a population health partnership with small and medium sized businesses focused on community well-being/population health. 700+ members. (University of Iowa College of Public Health)
18. Statewide Equity Initiative to reduce infant mortality partnering across colleges to work with state Department of Health and other state and local agencies. (Ohio State University College of Public Health)
19. We are the first college in the nation to have a bachelor of science in population health. We would be happy to share our approach, our curriculum, and our expertise with ASPPH members. (University of New Mexico Public Health Program)

APPENDIX C

Responses to Survey Question 7 Regarding Challenging Population Health Initiatives

1. Trying to establish a population health program across schools and colleges. (Walden University Master of Public Health Program)
2. Pediatric Asthma Initiative in Liberty City (low-income, Miami-Dade). (Florida International University Robert Stempel College of Public Health and Social Work)
3. One of our faculty served on the state's Health Policy Commission to contain rising health care costs. While an invaluable experience for him, and a good source of opportunities for our students, clearly "bending the cost curve" on health care spending is not an easy task and is particularly challenging in MA because of the political power of the biggest and most expensive systems. (Tufts University School of Medicine, Public Health Program)
4. Together with one large county and a major insurer, created a community-based institute for translation of prevention science into community and health system policy and practice and study the impact. (Claremont Graduate University)
5. Evaluation of population health outcomes with Medicare advantage managed care contracts. (Emory University Rollins School of Public Health)
6. Very limited activity with the health care system. (University of Oklahoma Health Sciences Center College of Public Health)
7. Open access to data relevant to population health. New methods to liberate granular data. New standards for rendering real individual level data into "synthetic" or "noise-ified" resources that can be made publicly available. (University of Pittsburgh Graduate School of Public Health)
8. Participation in the Centers for Medicare and Medicaid Services (CMS) Center for Medicare & Medicaid Innovation (CMMI) Transforming Clinical Practice Initiative (TCPI) program. (Vanderbilt University Institute for Medicine and Public Health)
9. The major problem is determining how to maintain successful programs once grant or contract funding ends. (University at Albany SUNY School of Public Health)
10. Engaging the teaching hospital leadership in using the health system as a laboratory to jointly assess implemented approaches to improving population health. (Northwestern University Feinberg School of Medicine Program in Public Health)
11. CTSA narrow vision of population health, under-resourced. (University of Iowa College of Public Health)
12. It is very difficult to get trained public health faculty to open their eyes and hearts to population

health. There is a lot of fear, disrespect for clinical systems, and arrogance that limits our ability to collaborate with the health system. (University of New Mexico Public Health Program)

APPENDIX D

Responses to Survey Question 8 Regarding Information about Other Activities

1. We are working on a school-wide "Population Health Initiative;" as of now, we have identified and catalogued existing GSPH activities to include research, education (inter-professional efforts), direct program/care delivery and leadership; plus major UNC Health Care System initiatives in population health. We have begun discussions with other schools/programs of public health to understand perspectives and activities in population health and have been conducting horizon scans to identify funding opportunities in population health. Through our discussions with faculty in GSPH and the School of Medicine, as well as UNC Health Care System, we have begun the work of facilitating projects to advance the goal of improved population health and advancing opportunities for GSPH faculty and students to learn more about the current landscape of population health. Through the department of nutrition, which is jointly affiliated with SPH and the School of Medicine, we are advancing population health for patients with chronic kidney disease through providing collaborative nutrition care in the Chronic Kidney Disease clinic and delivering a training program in renal nutrition for health care professionals that incorporates a strong emphasis on social determinants of health. (University of North Carolina Gillings School of Global Public Health)
2. MPH program is embedded in Thomas Jefferson University's College of Population Health; hence the MPH program focuses on population health and the synergy between public health and health care. (Thomas Jefferson University, College of Population Health - MPH Program)
3. Conscious focusing of our activities on the opioid epidemic so as to facilitate population health more broadly, i.e. "using" this immediate high-priority issue so as to foster forward-looking changes in inter-sectoral cooperation and data sharing. (University of Pittsburgh Graduate School of Public Health)
4. Strong academic public health practice collaborations in children's environmental health, dental health, emergency preparedness, and global health. We are a CounterAct Center of Excellence. (New York Medical College, School of Health Sciences and Practice, and Institute of Public Health)
5. Support a major multi-school effort to address the opiate addiction problem. (University at Albany SUNY School of Public Health)
6. Academic health department agreement now in place between UNC Charlotte College of Health and Human Services and Mecklenburg County Health Department; (2) UNC Charlotte Data Science Initiative. (University of North Carolina at Charlotte Public Health Programs)
7. Trying to create a joint health system/academic public health shared research agenda. (Northwestern University Feinberg School of Medicine Program in Public Health)
8. Desire to build models of occupational population health based on prior years' experience with occupational health involving businesses and state agencies. (Ohio State University College of

Public Health)

9. See: <http://coph.unm.edu/> (University of New Mexico Public Health Program)

APPENDIX E

Alphabetical List of Roundtable Participants

Craig Acomb

Chief Executive Officer
Institute for Clinical Systems Improvement

Bill Anderson, MBA

Chief Executive Officer
MEDHOST

Chester Antone

President, Tribal Advisory Committee
Tohono O'odham Nation

Stephanie Bailey, MD, MS

Senior Associate Dean of Public Health Practice,
Graduate Studies and Research
Meharry Medical College

Andrew Balas, MD, PhD

Dean, College of Allied Health Sciences
Augusta University

Bettina Beech, DrPh, MPH

Assoc. Vice Chancellor for Population Health,
Professor, Family Medicine and Pediatrics, Exec.
Director, Myrlie Evers-Williams Institute
University of Mississippi Medical Center

Kaye Bender, PhD, RN, FAAN

President and CEO
Public Health Accreditation Board

Matt Bernard, MD

Chair, Department of Family Medicine
Mayo Clinic

Frank Berry

Commissioner
Georgia Department of Community Health

William A. Bornstein, MD, PhD

Chief Quality Officer & Chief Medical Officer
Emory Healthcare

Barbara Brandt, EdM, PhD

Director, National Center for Interprofessional
Practice and Education
Associate Vice President for Education
University of Minnesota

Wendy E. Braund, MD, MPH, MEd, FACPM

State Health Officer and Senior Administrator,
Public Health Division
Wyoming Department of Health

Kari Bunkers, MD

Medical Director, Clinic Office of Population
Health Management and Care Management
Service Line
Mayo Clinic

Howard L. Burley, Jr., MD

Medical Director/Assistant Commissioner
Tennessee Department of Mental Health and
Substance Abuse Services

Jay Butler, MD

Director of Public Health
Alaska Department of Health and Social Services

Jim Chase

President
Minnesota Community Health Measurement
Organization

Jeff Chungath

CEO
Telligen

Gerd W. Clabaugh, MPA

Director
Iowa Department of Public Health

Terry L. Cline, PhD

Commissioner of Health
Oklahoma

Laura Colbert

Director of Outreach & Partnerships
Georgians for a Healthy Future

Kathryn Correia

President and CEO
HealthEast

James W. Curran, MD, MPH

James W. Curran Dean of Public Health,
Emory University Rollins School of Public Health

Sue Curry, PhD

Dean, University of Iowa College of Public Health

Robert Dittus, MD, MPH

Executive Vice President for Public Health and
Health Care and Director, Institute for Medicine
and Public Health, Vanderbilt University Medical
Center and Senior Associate Dean for Population
Health Sciences, Vanderbilt University School of
Medicine

Connie White Delaney, PhD, RN, FAAN, FACMI

Professor and Dean, School of Nursing
University of Minnesota

Colleen McDonald Diouf

Chief Executive Officer, Community-University
Health Care Center
University of Minnesota

Ron Eavey, MD

Medical Director
VUMC Health Plan

Janice Edmunds-Wells

Executive Director
Office of Minority and Multicultural Health
Iowa Department of Public Health

Edward Ehlinger, MD, MSPH

Commissioner of Health
Minnesota

Tom Evans, MD

President and CEO
Iowa Healthcare Collaborative

John R. Finnegan Jr., PhD

Professor & Dean, University of Minnesota
School of Public Health

Gaye Fortner, MSN

CEO and President
HealthCare 21

Allison J. Foster, MBA, CAE

Senior Director
Association of Schools and Programs of Public
Health

Tené Hamilton Franklin, MS

Director, Office of Minority Health and Disparities
Elimination
Tennessee Department of Health

S. Patrick Hammond

Chief Executive Officer
Emory Healthcare Network

Eric Harkness

Director, Office of Health Policy
Tennessee Department of Health

Amy Harris-Overby

Population Health Program Director
Hennepin County Medical Center

Rachel Eisenstein Hauber, MPH, CPH

Program Manager
Association of Schools and Programs of Public
Health

Raphael Hirsch, MD

Physician-in-chief, UI Stead Family Children's
Hospital, and Chair, Stead Family Department of
Pediatrics, Carver College of Medicine
University of Iowa

Jason Hockenberry, PhD

Associate Professor, Dept. of Health Policy and
Management, Emory University Rollins School of
Public Health

Kisha B. Holden, PhD, MSCR

Interim Director, Satcher Health Leadership
Institute
Morehouse School of Medicine

Wenke Hwang, PhD

Director, Master of Public Health Program
Associate Professor, Department of Public Health
Sciences, College of Medicine
Pennsylvania State University

Claude-Alix Jacob, MPH

Chief Public Health Officer, Cambridge Public
Health Department
Cambridge Health Alliance

Patrik Johansson, MD, MPH

Associate Professor, Department of Health
Promotion, Social & Behavioral Health
Director, Rural Health Education Network, College
of Public Health
University of Nebraska Medical Center

Pam Jones, DNP, RN, NEA-BC

Senior Associate Dean for Clinical & Community
Partnerships, School of Nursing
Vanderbilt University

Eric J. Kasowski, DVM, MD, MPH, FACPM

Chief, Population Health Workforce Branch
Division of Scientific Education and Professional
Development
Centers for Disease Control and Prevention

Rita Kelliher, MSPH

Senior Director, Education and Practice
Association of Schools and Programs of Public
Health

Alana Knudson, PhD

Co-Director, Walsh Center for Rural Health
Analysis
NORC at the University of Chicago

Thomas Kottke, MD, MSPH

Medical Director for Wellbeing, HealthPartners
Consulting Cardiologist, HealthPartners Medical
Group
Senior Clinical Investigator, HealthPartners
Institute for Education and Research
University of Minnesota

Deb Krause, MBA

Vice President
Minnesota Health Action Group

David Lakey, MD

Chief Medical Officer, Associate Vice Chancellor
for Population Health
The University of Texas System, Austin

Mary Lawyer, EMBA

Director of Community Health Improvement
Wellmark Blue Cross and Blue Shield

Connie Lo, MPH

Fellow, Academic Partnerships, Division of
Scientific Education and Professional
Development
Centers for Disease Control and Prevention

Jennifer Lundblad, PhD, MBA

President and CEO
Stratis Health

Sanne Magnan, MD, PhD

Co-Chair of the National Academies of Sciences'
Roundtable on Population Health Improvement

Paul Manternach, MD

Senior VP and Chief Medical Officer
Mercy Medical Center – North Iowa

Anthony (Tony) Mazzaschi

Senior Director, Policy and Research
Association of Schools and Programs of Public
Health

Mark Messonnier, PhD

Lead Economist, Population Health Workforce
Branch
Centers for Disease Control and Prevention

José Montero, MD, MHCDS
Director, Office of State, Tribal, Local, and
Territorial Support
Centers for Disease Control and Prevention

Keith Mueller, PhD
Gerhard Hartman Professor of Public Health
Department Head, Department of Health
Management and Policy
Director, Rural Policy Research Institute Center
for Rural Health Policy Analysis
University of Iowa

Gretchen Musicant, RN, MPH
Commissioner of Health
City of Minneapolis

LaQuandra S. Nesbitt MD, MPH
Director, Department of Health
District of Columbia

Linda Norman, DSN, RN, FAAN
Valere Potter Menefee Professor of Nursing and
Dean, School of Nursing
Vanderbilt University

Joel Olah, PhD, LNHA
Executive Director
Aging Resources of Central Iowa

LaVonne Ortega, MD
Lead for Academic Partnerships, Division of
Scientific Education and Professional
Development
Centers for Disease Control and Prevention

Sharon H. Pappas, PhD, RN, NEA-BC, FAAN
Chief Nurse Executive
Emory Healthcare

William S. Paul, MD
Director
Davidson County Metro Public Health Department

Jane M. (Berg) Pennington, MPH
Chief of Staff for the Office of Medical Affairs
UnitedHealth Group

Bill Purcell
Attorney at Law
Farmer, Purcell, White & Lassiter

Jim Raczynski, PhD
Professor and Founding Dean
University of Arkansas for the Medical Sciences
Fay W. Boozman College of Public Health

Michael Romano, MD
Chief Medical Officer
Nebraska Health Network

Mark Rosenberg, MD
Vice Dean for Education
University of Minnesota Medical School

Richard Rothenberg, MD, MPH
Regents' Professor, Associate Dean for Research
and Faculty, Georgia State University School of
Public Health

Eduardo A. Ruiz
Senior Director of Information Technology
Association of Schools and Programs of Public
Health

Lynn T. Simon, MD, MBA
President, Clinical Services and Chief Quality
Officer
Community Health Systems

Adam Skelton, PhD
Lead, Prevention Effectiveness Fellowship,
Population Health Workforce Branch
Centers for Disease Control and Prevention

Jennifer J. Salopek
Consultant

Brock Slabach, MPH, FACHE
Senior Vice President for Member Services
National Rural Health Association

Diane Stollenwerk, MPP
President
StollenWerks Inc.

Reed Tuckson, MD

Tuckson Health Connections, LLC

David Tilstra, MD, MBA, CPE

President, CentraCare Clinic
CentraCare Health

Raedean Vandenoever, RN

Director, Organized System of Care
UnityPoint Health

Jennifer Vermeer

Assistant Vice President for Health Policy and
Population Health
University of Iowa Health Care

Laurie Walkner, MA, RN

Director of Training and Education/Coordinator
Region VII Midwestern Public Health Training
Center
Institute for Public Health Practice, University of
Iowa College of Public Health

Andy Webber

Senior Advisor
Discern Health

Kay L. Wenzl, MPA, CSW

Public Health - Health Promotion Unit
Nebraska Department of Health and Human
Services

Consuelo H. Wilkins, MD, MSCI

Executive Director, Meharry-Vanderbilt Alliance
Associate Professor of Medicine
Vanderbilt University Medical Center and Meharry
Medical College

Mary Yarbrough, M.D., MPH, FACOEM

Executive Director, Vanderbilt's Faculty/Staff
Health and Wellness Programs, and Director,
Vanderbilt Center of Occupational and
Environmental Medicine
Vanderbilt University

APPENDIX F

Suggested Readings

These links are to the various articles, books, and other publications mentioned by participants in various phases of the project and are provided here for your convenience.

Structured Interviews

- Institute for Alternative Futures, “Public Health 2030”
- Institute of Medicine, “For the Public’s Health: Investing in a Healthier Future”
- AACN/Manatt report, “Advancing Health Care Transformation”
- AJPH, “Public Health 3.0”
- Robert Wood Johnson Foundation, Culture of Health Action Framework (<http://www.cultureofhealth.org/en/about.html>)

Roundtables

Articles

- Berwick, Donald M. MD. “Vital Directions and National Will,” *Journal of the American Medical Association*, April 11, 2017.
<http://jamanetwork.com/journals/jama/fullarticle/2612012>
- Diez Roux, Ana V. MD. “On the Distinction—or Lack of Distinction—Between Population Health and Public Health,” *American Journal of Public Health*, April 2016.
<http://ajph.aphapublications.org/doi/abs/10.2105/AJPH.2016.303097>
- Paz, Harold L. MD. “Academic Medicine’s Critical Role in the Third Curve of Health Care,” *Academic Medicine*, May 2016.
http://journals.lww.com/academicmedicine/Fulltext/2016/05000/Academic_Medicine_s_Critical_Role_in_the__Third.10.aspx
- Washington, A. Eugene MD et al. “Academic Health Systems’ Third Curve: Population Health Improvement,” *Journal of the American Medical Association*, February 2, 2016.
<http://jamanetwork.com/journals/jama/article-abstract/2484690>

Books

- *American Nations*, by Colin Woodard
<http://www.colinwoodard.com/americanations.html>
- *Twilight of the Elites: America After Meritocracy*, by Chris Hayes
<http://www.penguinrandomhouse.com/books/207055/twilight-of-the-elites-by-chris-hayes/9780307720467/>

- *The Undoing Project*, by Michael Lewis
<http://books.wwnorton.com/books/The-Undoing-Project/>

Publications

- “Preparing Registered Nurses for Enhanced Roles in Primary Care,” the Josiah Macy Jr. Foundation
<http://macyfoundation.org/news/entry/new-report-registered-nurses-enhanced-roles>
- “Vital Directions for Health and Health Care: Priorities from a National Academy of Medicine Initiative”
<https://nam.edu/vital-directions-for-health-health-care-priorities-from-a-national-academy-of-medicine-initiative/>

APPENDIX G

Alphabetical List of Forum Participants

Linda Alexander, EdD

Associate Dean Academic Affairs
West Virginia University School of Public Health
linda.alexander@hsc.wvu.edu

Tessa Alexander-St. Cyr, BEd, MSc

Accreditation Coordinator/ Instructor
St. George's University Department of Public
Health and Preventive Medicine
tstcyr@sgu.edu

Susan Altfeld, MA, PhD

Associate Dean for Academic Affairs
University of Illinois at Chicago
School of Public Health
saltfeld@uic.edu

Lisa Anderson, MPH

Director of Educational Programs
Virginia Commonwealth University MPH Program
Lisa.S.Anderson@vcuhealth.org

Betty Apenteng, PhD

Assistant Professor
Georgia Southern University Jiann-Ping Hsu
College of Public Health
bapenteng@georgiasouthern.edu

Christine Arcari, PhD, MPH

Associate Dean for Academic & Student Affairs
University of Nebraska Medical Center
College of Public Health
cmarcari@utmb.edu

Melissa Armstrong, MA

MPH Site Director - Wichita
University of Kansas School of Medicine,
KU-MPH Program
marmstro@kumc.edu

Paula Arnett, DrPH, MBA

Interim Associate Dean for Administration
University of Kentucky
College of Public Health
paula.arnett@uky.edu

Betsy Aumiller, DEd

Assistant Professor, Associate Director,
DrPH Program
Pennsylvania State University
Public Health Program
bba104@psu.edu

Mark Bittle, DrPH, MBA, FACHE

Associate Scientist, Department of Health
Policy and Management
Associate Program Director, Masters in Health
Administration Program
Johns Hopkins Bloomberg School of Public Health
mbittle1@jhu.edu ; bnewcomer@jhu.edu

Sarah Blake, PhD, MA

Assistant Professor
Director, MSPH and MPH Programs
Department of Health Policy & Management
Emory University Rollins School of Public Health
scblake@emory.edu

Bernadette Boden-Albala, MPH, DrPH

Associate Dean of Research and Program
Development Director, Division of Social
Epidemiology Professor of Public Health,
Neurology and Dentistry
New York University
College of Global Public Health
bb109@nyu.edu ; marlene.best@nyu.edu

Armando Bolmey, MBA

Executive Director, Department of
Public Health Sciences
Administrator, Center for Public Health Genomics
Administrator, Virginia Center for Translational and
Regulatory Sciences
University of Virginia MPH Program
alb9b@eservices.virginia.edu

Elisabeth Brodbeck, MPH, MA

Assistant Director
Icahn School of Medicine at Mount Sinai,
Graduate Program in Public Health
elisabeth.brodbeck@mssm.edu

Angela Carman, DrPH

Director of Practice and Experiential Education
University of Kentucky College of Public Health
angela.carman@uky.edu

Harold Cox, MSSW

Associate Dean for Public Health Practice
Boston University School of Public Health
hcox@bu.edu

Linda Cushman, PhD

Associate Dean for Field Practice Professor
of Population and Family Health
Columbia University Mailman
School of Public Health
lfc2@cumc.columbia.edu

Ellen Daley, PhD, MPH

Professor, Assoc. Dean for Translational
Research and Practice
University of South Florida
College of Public Health
edaley@health.usf.edu

Nancy Elish, DrPH, MSPH

Associate Professor (Joint Appointment),
Epidemiology and Biostatistics
University of Maryland School of Medicine,
MPH Program
nelish@som.umaryland.edu

Michael Fagen, PhD, MPH

Associate Professor and MPH Program Director
Northwestern University Feinberg School of
Medicine Program in Public Health
michael.fagen@northwestern.edu

Amy Fairchild, PhD, MPH

Associate Dean
Texas A&M Health Science Center
School of Public Health
fairchild@sph.tamhsc.edu

Eleanor Feingold, PhD

Senior Associate Dean and Associate
Dean for Education
University of Pittsburgh
Graduate School of Public Health
feingold@pitt.edu

Annette Fitzpatrick, PhD

Assistant Dean for Graduate Education
University of Washington
School of Public Health
fitzpal@uw.edu

Margaret Formica, MSPH, PhD

Assistant Professor, CNYMPH Program
Central New York Master of Public Health
Program
FormicaM@upstate.edu

Jacquie Fraser, PhD

Senior Faculty
Walden University
Master of Public Health Program
Jacquie.Fraser@mail.waldenu.edu

Daniel Gerber, EdD, MPH

Associate Dean of Academic Affairs
University of Massachusetts-Amherst School of
Public Health and Health Sciences
gerber@schoolph.umass.edu

Annie Gjelsvik, PhD

Assistant Professor
Brown University School of Public Health
annie_gjelsvik@brown.edu

Amanda Golbeck, PhD

Associate Dean of Academic Affairs
University of Arkansas for Medical Sciences Fay
W. Boozman College of Public Health
ALGolbeck@uams.edu

Cynthia Gonzalez, PhD, MPH

Assistant Professor
Charles R. Drew University of Medicine and
Science MPH Program
cynthiagonzalez@cdrewu.edu

Frederic Grant, PhD, MPH, MBA

College Administrative Officer
Georgia State University School of Public Health
fgrant@gsu.edu

Dale Green, MD, MHA

Associate Professor
University of Georgia College of Public Health
DEGreen@uga.edu

Brandon Grimm, PhD, MPH

Director
University of Nebraska Medical Center
College of Public Health
blgrimm@unmc.edu

Donna Gurule, DrPH

Assistant Dean
Loma Linda University School of Public Health
dgurule@llu.edu

Jeffrey Hallam, PhD

Associate Dean
Kent State University
University College of Public Health
jhallam1@kent.edu

James Hardin, PhD

Associate Dean for Faculty Affairs and Curriculum
University of South Carolina
Arnold School of Public Health
jhardin@mailbox.sc.edu

Paul Hattis, MD, JD, MPH

Associate Director, MPH Program
Tufts University School of Medicine,
Public Health Program
paul.hattis@tufts.edu

Timothy Heckman, PhD

Associate Dean for Research
University of Georgia College of Public Health
heckman@uga.edu

Nicole Holt, DrPH

Assistant Professor
Eastern Virginia Medical School
holtnm@evms.edu

Viviana Horigian, MD

Interim Director of Public Health Programs
University of Miami Department of Public Health
Sciences
vhorigian@med.miami.edu

Cerise Hunt, MSW

Director, Colorado School of Public Health
Cerise.Hunt@ucdenver.edu

Lora Iannotti, PhD

Associate Professor & Associate Dean for
Public Health
Washington University in St. Louis - Brown School
Public Health Programs
liannotti@wustl.edu

Janine Jurkowski, MPH, PhD

Public Health Practice Associate Dean
University at Albany SUNY School of Public
Health

jjurkowski@albany.edu

Carole Kacius, PhD

Associate Dean for Education and Training
Indiana University Richard M. Fairbanks
School of Public Health

kacius@iu.edu

Ruth Kafensztok, DrPH

Assistant Professor
Loyola University Chicago MPH Program

rkafens@luc.edu

Marc Kiviniemi, PhD

Director of Undergraduate Public Health Initiatives
and Associate Professor

University at Buffalo School of Public Health
and Health Professions

mtk8@buffalo.edu

Dushanka Kleinman, DDS, MScD

Associate Dean for Research
University of Maryland School of Public Health

dushanka@umd.edu

Matthew Kreuter, PhD, MPH

Professor & Associate Dean for Public Health
Washington University in St. Louis - Brown School
Public Health Programs

mkreuter@wustl.edu

Kimberly Krytus, MSW, MPH, CPH

Director, MPH Initiatives
University at Buffalo School of Public Health
and Health Professions

krook@buffalo.edu

Marian Levy, DrPH

Interim Associate Dean
University of Memphis School of Public Health

mlevy@memphis.edu

Laura Liang, DrPH, CHES

Assoc Dean for Education and Assessment
Rutgers School of Public Health

laura.liang@rutgers.edu

Hala Madanat, PhD, MS

Associate Director for Academic Affairs, Associate
Professor, Division of Health Promotion and
Behavior
San Diego State University Graduate School of
Public Health

hmadanat@mail.sdsu.edu

Paula Masters, DrPH(c), MPH, HCMC

Assistant Dean of Student Services
East Tennessee State University
College of Public Health

mastersp@mail.etsu.edu

Lisa McCormick, DrPH

Associate Professor
University of Alabama at Birmingham
School of Public Health

lmccormick@uab.edu

Keith Mueller, PhD, MA

Gerhard Hartman Professor and Head,
Department of Health Management and Policy
University of Iowa College of Public Health

keith-mueller@uiowa.edu

Craig Newschaffer, PhD

Director
Drexel University Dornsife School of Public Health

cjn32@drexel.edu

Emmanuel Ngui, DrPH, MSc

Associate Professor/MPH Program Director
University of Wisconsin-Milwaukee Joseph J.
Zilber School of Public Health

ngui@uwm.edu

Vikki Nolan, DSc, MPH

Assistant Dean
University of Memphis School of Public Health
vgnolan@memphis.edu

Billy Oglesby, PhD, MBA, MSPH, FACHE

Associate Dean for Academic & Student Affairs
Thomas Jefferson University, College of
Population Health MPH Program
Billy.Oglesby@Jefferson.edu

Elaine O'Keefe, MS

Executive Director Office of Public Health Practice
Yale University School of Public Health
elaine.okeefe@yale.edu

Roy Oman, PhD

Associate Director
University of Nevada, Reno School of Community
Health Sciences
roman@unr.edu

India Ornelas, PhD, MPH

Executive Council, Population Health Initiative
Assistant Professor, Health Services
University of Washington School of Public Health
iornelas@uw.edu

Sara Paton, PhD, CPH

MPH Program Director
Wright State University MPH Program
sara.paton@wright.edu

Vukosava Pekovic, MD, PhD

MPH Program Director
Florida International University Robert Stempel
College of Public Health and Social Work
pekovic@fiu.edu

Cara Pennel, DrPH, MPH

Director, Public Health Practice
University of Texas Medical Branch at Galveston
Graduate Program in Public Health
clpennel@UTMB.edu

Karen Perrin, PhD, MPH, CPH

Associate Professor, Assistant Dean of
Undergraduate Studies; Interim Associate
Dean of Academic Affairs
University of South Florida
College of Public Health
kperrin@health.usf.edu

Julie Preskitt, MSOT, MPH, PhD

Assistant Professor
University of Alabama at Birmingham
School of Public Health
preskitt@uab.edu

Cindy Prins, PhD, MPH

MPH Program Director, Assistant Dean for
Educational Affairs, Clinical Associate Professor
University of Florida College of Public Health and
Health Professions
capfive@ufl.edu

Jill Rissi, PhD, MPA, RN

Associate Dean for Academic Affairs
Oregon Health & Science University/Portland
State University School of Public Health
jrissi@pdx.edu

Cecilia Rosales, MD, MS

Associate Dean and Professor
University of Arizona Mel and Enid Zuckerman
College of Public Health
crosales@email.arizona.edu ;
maryellmartinez@email.arizona.edu

Sylvia Salas, MPH

Assistant Dean, Office of Academic Affairs
Assistant Dean of Academic Administration
University of Texas School of Public Health
Sylvia.Salas@uth.tmc.edu

Pamela Salsberry, PhD, RN, FAAN

Associate Dean for Outreach and Engagement
Ohio State University College of Public Health
salsberry.1@osu.edu

Anthony Santella, DrPH, MPH, MCHES

MPH Program Director
Hofstra University MPH Program
Anthony.santella@hofstra.edu

Darcy Scharff, PhD

Associate Dean for Academic Affairs
Saint Louis University College for Public Health
and Social Justice
scharffd@slu.edu

Anna Schenck, PhD

Associate Dean for Public Health Practice;
Director of the Public Health Leadership Program
and the North Carolina Institute of Public Health
University of North Carolina Gillings School of
Global Public Health
anna.schenck@unc.edu

Yoon-Ho Seol, PhD

Director, Master of Public Health Program
Associate Professor, Clinical & Digital Health
Sciences
Augusta University MPH Program
YSEOL@augusta.edu

Lizheng Shi, PhD

Vice-Chair, Department of Global Health
Management and Policy
Tulane University School of Public Health and
Tropical Medicine
lshi1@tulane.edu

Emily Spence-Almaguer, PhD, MSW

Associate Dean for Community Engagement and
Health Equity
University of North Texas Health Science Center
School of Public Health
emily.spence-almaguer@unthsc.edu

Jane Steinberg, MPH, PhD

Assistant Professor and Practicum Director
University of Southern California MPH Program
janestei@usc.edu

Telisa Stewart, DrPH

Assistant Professor of Public Health and
Preventive Medicine
Assistant Professor of Urology
Central New York Master of Public Health
Program
StewartT@upstate.edu

Jim Stimpson, PhD

Associate Dean for Academic and Faculty Affairs;
Professor of Health Policy
CUNY School of Public Health
jim.stimpson@sph.cuny.edu

Douglas Taren, PhD

Professor and Associate Dean Academic Affairs
University of Arizona Mel and Enid Zuckerman
College of Public Health
taren@email.arizona.edu

Joseph Telfair, DrPH, MSW, MPH

Dual Department Chair and Professor
Georgia Southern University Jiann-Ping Hsu
College of Public Health
jtelfair@georgiasouthern.edu

Michael Thompson, DrPH, MS

Associate Professor
University of North Carolina at Charlotte Public
Health Programs
methomp1@uncc.edu

Kristine Tollestrup, PhD, MPH

Director of Graduate Programs
University of New Mexico Public Health Program
ktollestrup@salud.unm.edu

Edward Trapido, ScD

Associate Dean for Research
Louisiana State University Health Sciences Center
School of Public Health
etrapi@lsuhsc.edu

Nannette Turner, PhD, MPH Chair, Master of Public Health Program
Mercer University Master of Public Health Program
turner_nc@mercer.edu

Pierre Vigilance, MD, MPH
Associate Dean for Public Health Practice
George Washington University Milken Institute
School of Public Health
pndv@gwu.edu

Teresa Wagner, DrPH, MS, CPH, RD/LD
Adjunct Assistant Professor
University of North Texas Health Science Center
School of Public Health
Teresa.Wagner@unthsc.edu

Andy Wapner, DO, MPH, FACOP, FAAP
Director, Center for Public Health Practice
Clinical Assistant Professor of Public Health
Ohio State University College of Public Health
wapner.1@osu.edu

Lance Weinhardt, PhD
Professor of Community and Behavioral Health
Promotion and Associate Dean for Research
University of Wisconsin-Milwaukee Joseph J. Zilber School of Public Health
weinhard@uwm.edu

Monica Wendel, DrPH, MA
Associate Dean for Public Health Practice
University of Louisville School of Public Health and Information Sciences
monica.wendel@louisville.edu

LuAnn White, PhD, DABT
Senior Associate Dean
Tulane University School of Public Health and Tropical Medicine
lwhite@tulane.edu

Susan Wozenski, JD, MPH, JD, MPH
Chair, MPH Interdisciplinary Steering Committee
University of Maryland School of Medicine, MPH Program
wozenski@son.umaryland.edu

Zuo-Feng Zhang, MD, PhD
Associate Dean for Research
UCLA Jonathan and Karin Fielding School of Public Health
zfzhang@ucla.edu