Reconnecting Public Health and Care Delivery to Improve the Health of Populations

Conference Summary

May 4-5, 2014
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Reconnecting Public Health and Care Delivery to Improve the Health of Populations

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May 4-5, 2014

Overview

There is increasing momentum for transforming health care 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. Health professions schools and programs, public health practitioners, and care delivery providers all recognize with growing conviction that health outcomes can be improved and the cost curve flattened by emphasizing population health, particularly in the context of certified primary care health homes and accountable care organizations.

But despite a growing consensus that closer engagement between public health and care delivery is imperative, financial incentives, structures of care, and entrenched practices still discourage it. As well, the nation’s approach to education in the health professions continues to keep public health and care delivery in separate silos.

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. That was the framework that brought more than 70 thought leaders to Washington to participate in an historic, invitation-only two-day conference, “Reconnecting Public Health and Care Delivery to Improve the Health of Populations,” held May 4-5, 2014.

The overarching thematic questions guiding the conference were: How can public health help to shape the transformation of the care delivery system where:

1. Accountable care organizations will have responsibility for the health of a population and for engaging individuals, families, and communities in health and wellness?
2. The prevailing approach to health intervention is to target one person at a time, via disease diagnosis and management?

There was vigorous and thoughtful discussion about how best to leverage the strengths of the public health and health care systems to build a healthier society for all. A path forward began to emerge, but will require significant commitment from many stakeholders.

The Reconnecting conference included a keynote address; a presentation of exemplary models of interprofessional education and collaborative practice; panel discussions and audience interaction; and interdisciplinary breakout sessions (see Appendix 1: Conference Agenda). This paper highlights some of the key themes that emerged over the two-day event.
Structure and Goals of the Conference

The *Reconnecting* conference brought together an exceptionally diverse group of health professionals, people who all too rarely have the opportunity to sit at the same table together – faculty from public health schools and programs, and faculty from medical schools and teaching hospitals; primary care clinicians with expertise in community and family medicine; representatives of health and education associations; payers in the public and private sectors; local public health department leaders and federal officials; and many others (see Appendix 2: Conference Participants).

The discussions were spirited as participants explored activities, research gaps, data, and methods of public health interface among the education, public health practice, and care delivery systems. The conference goal, as laid out in a *Concept Paper* distributed to all participants (see Appendix 3: *Concept Paper*), was to create a common platform of knowledge, practice, and decision making across public health and care delivery that can ultimately lead to improvements in population health and other health outcomes. Participants were not seeking a merger of the two systems, but rather a bridge between them that strengthens their interface at multiple points, from the policy and systems levels down to the clinical encounter. There was general agreement that the disciplines needed a richer understanding of one another’s culture, tools for exchanging and transferring learning more rapidly, and new approaches to education and training.

To inform the discussions, the Association of Schools and Programs of Public Health and the Interprofessional Education Collaborative developed an *Environmental Scan*, distributed to all conference participants, which highlighted models of interprofessional education and collaborative practices already on the ground (see Appendix 4: *Environmental Scan*). The report includes snapshots of 21 exemplary schools and programs, and notes that success is enabled by academic leadership, committed faculty, a curriculum that embeds IPE broadly, early IPE requirements for students, and sustained community participation. Positive results from these efforts include better prepared students, improved outcomes or cost savings, and the leveraging of resources.

There was a welcome sense of urgency at the *Reconnecting* conference, and a feeling that “it is time to get on with it” -- to move more rapidly past the fee-for-service payment system that still dominates health care and towards a performance-based model that rewards outcomes. Interprofessional education has been an early and appropriate driver, helping propel that process forward, although it has not usually included students of public health and is not the sole solution. Certainly, it has been important for various health professionals to learn how to work together in teams to achieve and improve both education and health outcomes, but as health care continues to be reshaped at the point of patient contact, the reach across disciplines will need to become both broader and deeper, with public health involved in fundamentally new ways.

Financial realities, public policies, organizational structures, and consumer engagement are all energizing the discussion about carving out a more central role for public health in a transformed system. Accountable care organizations are one significant model of how shifting incentives are promoting a population health approach. The discussants generally agreed that unless public health and clinical medicine educators and practitioners respond to the tidal wave of change, they will be training people for a world that is rapidly disappearing.
The meeting emphasized opportunities for participants and their professional peers, to take action. Presentations and discussions at the Reconnecting conference focused primarily on meso- and micro-level changes because macro-level changes are already well underway:

- Micro, involving the performance of health professions students, public health agency practitioners and individual care providers.
- Meso, involving the proficiency of interprofessional and transprofessional teams.
- Macro, involving the organizational capabilities embedded in academic institutions, public health agencies and health systems.

Inevitably, there were as many questions as answers at the meeting as participants considered the forces reshaping the extraordinarily complex, yet highly adaptive, system that is American health care, and their own role in its transformation. Ideas and suggestions flowed vigorously as they pursued these meeting objectives:

- To initiate the process of bringing together the knowledge and skills of public health and clinical practice.
- To speed up the process of the needed systems redesign and culture change.
- To explore what needs to happen at the macro, meso, and micro levels of the interface.
- To recommend next steps.

Keynote Highlights

The keynote speaker was Steven H. Woolf, MD, MPH, director of the Virginia Commonwealth University Center on Society and Health and professor of Family Medicine and Population Health at that university. The core message of his inspirational address was that health in the U.S. is declining; we spend more on health, per capita, than most other countries, yet have worse outcomes (by such measures as longevity, infant mortality, and communicable and non-communicable disease death rates); and, that we need new approaches to alter these trends. He offered a number of ideas to involve public health in efforts to redesign the care delivery system:

1. Form new partnerships with people who understand the need to invest in the social determinants of health and shift the emphasis from treatment to prevention. Directly engaging communities, businesses and government to invest in Communities of Excellence and other such models, and engaging K-12 education, would produce results.
2. Partner with change agents to make investments in social capital. Such change agents can include: health systems, state and local public institutions and programs, and private sector business interested in improving the productivity of their workforce.
3. Communicate with new audiences, using energized language and framing, rather than talking only to peers in the academy. Embrace the new media, rather than relying exclusively on peer-reviewed publications.
4. Gather data that is robust enough to produce real solutions, and develop metrics to measure progress. Develop standardized definitions, terminology, and data sets to help advance the redesign of health, and make such information available at the macro, meso, and micro levels.
5. Modernize the thinking in the field, and consider what public health knowledge and skills need to be included in educating and training health professionals at the point of patient
contact, as well as at the health system and policy levels. Rather than emphasizing only randomized trials, move towards a model that supports learning organizations and puts the right information in the right place, with the right people, and at the right time, so that the best possible decisions can be made. A continuous improvement process is essential to keep moving towards agreed-on outcomes.

**Panel Discussions: Building a Common Platforms**

In two panels, and accompanying audience interaction, discussants reflected on what it will take to build common platforms that reconnect public health and clinical care at the macro, meso, and micro levels. Strategically, they emphasized starting small, and “working with the willing,” knowing that as results accumulate, others are likely to join in. Likewise, they agreed on the need to promote culture change at the local level, and then build out with compelling examples and successful models that can be shared nationally. They also suggested conveying a sense of urgency by highlighting the poor health status of Americans relative to other countries, and the importance of health to the broader economy. To make the necessary transition from “sick care” to health care, the conversation needs to move away from power and turf issues and towards opportunities to transform the health system.

The panel discussions, thoughts, and recommendations covered three areas: tools, partnerships, and education and training:

**Tools to Build the Interface:** The tools necessary to facilitate cross-cutting collaboration include contracts, cooperative agreements and Memoranda of Understanding. A further step to put stakeholders on the same page is to frame the discussion in terms of paradigms that resonate across disciplines, such as a “community-centered approach” and the “Triple Aim” concept.

In thinking about the framework necessary to create change, participants proposed two approaches. One strategy is to identify an important health problem, define specific measures of progress, and collaborate to generate results. Another option is to have an endpoint in mind, and then define the competencies, roles, and steps necessary for stakeholders to reach it. These approaches are not mutually exclusive, but represent alternate conceptualizations to move forward.

Information management is an important component of any model, as is effective communication – stating a problem clearly and raising its visibility helps to bring people together in search of a solution. Communication strategies include using the power of storytelling as a complement to data; connecting public health to personal health to give an issue resonance; and presenting information in a way that points to results.

**Partnerships across Sectors:** Broad-based participation is essential to draw care delivery and public health closer together, and the need for coalitions is a given, with various approaches suggested for engaging disparate stakeholders. Effective community outreach is part of the picture, and it demands “listening minds” who ask “what do you need?” and connect to local concerns. As well, powerful community stakeholders need to be at the table as multi-sectoral approaches are developed. Likewise, academic institutions need to do local outreach – one university curriculum includes segments that bring patients, families, and community representatives into the classroom.
to tell their stories. Panelists also recommended encouraging collaborations between practitioners and community-based health councils.

Other collaborations demand moving “out of our comfort zones” in order to engage a larger audience about the need to reconnect population health and redesigned care delivery systems, and to build a constituency for action. Participants suggested a number of innovative ways to get stakeholders working together as partners. Among these potential collaborations are: a population health leadership forum that includes small and medium-size business representatives; academics who join local chambers of commerce; clinical partners engaged in community activities or advocating for policy change; attorneys, who have special problem-solving expertise to contribute to the enterprise; public health people serving on corporate boards; MPH graduates working in business settings; and collaborations with Area Health Education Centers, now in 46 states.

Ultimately, power, politics, and financial incentives will need to be aligned to make progress. Building the business case for a common platform, and demonstrating a return on investment, can help to rally partners and generate support for action. A number of long-standing challenges need to be addressed along the way, notably racial and ethnic disparities in population health.

**Education and Training:** A shift from professional health education organized in siloes to models of interprofessional training has begun, but much more needs to happen to drive change, the discussants agreed. Inevitably, individual disciplines will have to realign as they find new ways to connect. In return, they will gain the opportunity to model new ways of thinking and meet the foundational goal of improving health, either at the population level or one patient at a time in a planned clinic or community encounter.

To build a next-generation constituency for the public health/care delivery interface, students should be exposed to population health-focused activities at every educational level, beginning as undergraduates. As well, masters and doctoral degrees in public health should be highlighted as avenues for building leadership and generating change. Other recommendations included recruiting a more diverse student body; introducing “convening” and “change agent” competencies; emphasizing team-based activities to take advantage of a student culture that already favors collaboration; and developing tools to test what students actually learn in IPE settings.

At the faculty level, collaborations across schools and within communities need to be encouraged and supported, with efforts made to prepare faculty for new roles in a changing world. Attendees advanced many ideas to build on academic expertise, including promoting academic involvement in community health assessments and having academics function as the collaborating unit for health departments.

To engage public health and clinical practitioners, discussants identified four areas of special focus: bridge-building leadership; systems team-building; communication; and outcomes-oriented informatics. The need to put stakeholders on the same page underscores the value of agreeing on a common construct of team-based collaborative care, and related standards of accountability, and using the tested team-based models already in existence, or those in development.

To become part of the transformation, many practitioners will need additional training, which gives schools the opportunity and responsibility to promote continuing education in IPE, health analytics,
and population health strategies. Conference participants also called for team-based care in the field that links to IPE taught in the schools, and for partnerships with local training centers (e.g., Public Health Training Centers, Preparedness and Emergency Response Learning Centers, and Preparedness and Emergency Response Research Centers).

Breakout Sessions: Promoting Connections

At two rounds of interdisciplinary breakout sessions, participants were guided by a series of questions designed to promote an exchange of ideas across fields and inform the panel discussions. The topics and associated comments and recommendations are summarized as follows:

What changes in health care and the health care system must occur to achieve true integration of population health and health care delivery?

Echoing many of the themes explored in the panels, participants in the breakout sessions discussed the need for: common definitions and measures; data that highlight health trends; financial incentives and approaches to health professions education aligned with outcomes-based health delivery models; and highlighting successful programs for possible replication. They also considered many strategies for expanding the constituency that understands the value of population health and can help to influence policy, including: engagement with communities and businesses; adapting to the interests of students in IPE; developing a cadre of faculty who can teach common competencies across the health professions; recognizing the roles and contributions of all the health disciplines; and giving all professions a leadership role in the drive towards change.

These and other steps to achieving change need to proceed in parallel – for example, by promoting both patient-centered care and population health; seeking out financial and non-financial incentives for integrating population health into clinical care delivery models; pursuing incremental and transformational change; identifying common and targeted approaches; and making small, local changes initially, with an eye towards scaling what is supported by opportunity and data.

How will health professions education and the practice environment be impacted by integration?

Participants recognized that culture change is likely to occur across the spectrum of health professions education as integration advances. Specific impacts will likely include access to better data to support research; students and practitioners who can communicate with diverse audiences; an emphasis on cross-disciplinary problem-solving; more IPE infrastructure in schools; and well-tested curricula that can serve as a foundation for change.

At the practice level, the greater availability of data offers more opportunity to influence institutional and governmental policy, inform collaborations, and develop targeted approaches of value to communities. A more integrated approach should also lead to better alignment of resources and incentives, and payment reform, including more sharing of costs, risks, and benefits across all players. A shift in emphasis from specialization to primary care could result in more collaborative approaches to health, with more involvement from consumers and non-traditional partners, and IPE
teams that include practitioners whose disciplines have not historically been recognized as part of health care.

**How will we know when population health and clinical care integration has occurred?**

Short-term and long-term measures of integration include a greater focus on wellness and prevention, lower health insurance premiums for individuals who achieve health goals, and coverage for health-generating and disease prevention activities other than medical care. Policy changes at the systems level, transformations within academic health centers, and indicators of a healthier population are also measures of change.

**How can we promote the move to population health in the evolving health care system paradigm?**

In exploring reimbursement models that could be used to reward population health at the provider and community levels, breakout participants emphasized the need for transparency and the equitable distribution of shared savings. As in the panels, the discussion turned to promoting return on investment as a means of engaging the business community, which recognizes that population and worker health affect their competitiveness and the climate in which they operate.

Another common theme was the importance of measurement. Without a consensus on population health measures, there is no way to hold people and institutions accountable, or to reward success equitably; agreeing on measures is a precondition to building effective incentives into the system. Good measurement makes it possible to identify best practices in integrating public health and clinical care; to learn from organizations that use those models; and to promote expanded practice opportunities. Public health schools have special strength in implementation science, and are experienced with the research, analytics, pilot testing, and scaling necessary to identify and replicate success.

Messaging is a core part of advocating for reform and engaging diverse stakeholders – the link between healthier workers and productivity resonates with business, the message that healthier kids get better test results reaches schools, parents, elected officials, and policy makers. Media is a key partner in spreading branded messages that have been tested for impact, communicate outcome goals, and create a sense of urgency and possibility.

**What are the implications for health professions schools as public health and care delivery are reconnected?**

Training students for jobs that don’t yet exist represents a significant shift from “business as usual,” but it is imperative to staying relevant. Getting there demands a flexible, adaptive approach, and changes in the financial structure of health professions schools to support more population health work. Focusing on the educational environment, as much as on the content of the learning itself, is essential to drive the enterprise to the leading edge of innovation.
At the breakout sessions, participants talked about building on best practices to develop a common core curricula that promotes experimentation, maximizes efficiency, and incorporates IPE competencies into student learning. Here, too, comments tracked those of the panelists as they talked about how the needs of the community should drive the curricula, with coursework that embeds students in practice environments and support for local projects that model the system we are trying to create.

Pedagogical innovations proposed in the small groups included the creation of venues to bring together clinical and non-clinical faculty, more collaboration with business schools, and more focus on undergraduates. Academic institutions need to consider opportunities to offer additional training to stakeholders outside the traditional university setting, such as IPE to community and executive cohorts and enhanced offerings for clinical residency and Maintenance of Certification training. These and other innovative educational models should be tested, shared, and scaled where possible.

**Next Steps**

In wrapping up the meeting, co-chairs Drs. John Finnegan and Frank Cerara emphasized that the intent is to move beyond ideas into recommendations and action. The conference helped to identify the many opportunities to reconnect public health and care delivery in order to improve outcomes and control costs; the role of academic training in that process; the importance of new partnerships; and the imperative to act. The next step is to develop answers to many outstanding questions: How will payment systems work? What policies are needed to promote effective interaction? What transitions need to occur in educational institutions? How should accreditation help drive connection?

The conference co-chairs will be developing a policy paper for a peer-reviewed journal that makes specific recommendations for constructing a common platform among the health professions and how it can be achieved in health homes, accountable care organizations, and health systems. An important emphasis will be how best to provide the training in both academic and experiential settings to incorporate those commonalities into the way we think about delivering care and building health.

As well, a second *Reconnecting* conference is planned for June 2015 to continue the conversation. By then, more evidence will likely be available about the value-based purchasing models now being tested, and interest in population health will have grown. At that meeting, ASPPH and IPEC plan on further discussions about the implications of the common platform for health professions schools and programs, faculty, public health practitioners, and clinicians, and the pathways that will promote an optimal interface.
## Appendix 1: Conference Agenda

### Sunday, May 4, 2014

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>5:30 – 5:35 pm</td>
<td>Welcome on Behalf of ASPPH and IPEC and Introduction of Meeting Co-chairs – Harrison Spencer (Association of Schools and Programs of Public Health and the Interprofessional Education Collaborative)</td>
</tr>
<tr>
<td>5:35 – 5:45 pm</td>
<td>Overview of the Meeting – Frank Cerra, Meeting Co-chair (National Coordinating Center for Interprofessional Education and Collaborative Practice and the University of Minnesota)</td>
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<tr>
<td>5:45 – 6:15 pm</td>
<td>Introduction of the Keynote Speaker – John Finnegan, Meeting Co-chair (Association of Schools and Programs of Public Health and the University of Minnesota School of Public Health) Getting Serious About Population Health – Steven H. Woolf (Virginia Commonwealth University)</td>
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<tr>
<td>6:15 – 6:45 pm</td>
<td>Q&amp;A/Discussion – John Finnegan and Frank Cerra</td>
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<td>6:45 – 7:15 pm</td>
<td>Dinner</td>
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<td>7:15 – 7:45 pm</td>
<td>Presentation of Exemplars from the Environmental Scan of IPEC-Member Schools – John Finnegan</td>
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<tr>
<td>7:45 – 8:30 pm</td>
<td>Breakout Discussions at Interdisciplinary Tables</td>
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### Monday, May 5, 2014

<table>
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<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>8:15 – 8:30 am</td>
<td>Summary of Sunday Breakout Discussions – John Finnegan and Frank Cerra</td>
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| 8:30 –10:00 am | Reflections on a Common Platform: Panel Discussion and Audience Interaction – Moderated by David Goff (Colorado School of Public Health)  
- J. Lloyd Michener (Duke University Medical Center)  
- Julie Gerberding (Merck Vaccines)  
- Gillian Barclay (Aetna Foundation)  
- Polly Bednash (American Association of Colleges of Nursing and the Interprofessional Education Collaborative) |
| 10:20 – 11:20 am | Breakout Discussions at Interdisciplinary Tables                                         |
| 11:20 am–12:00 pm | Discussion                                                                               |
| 12:00 – 1:00 pm | Lunch                                                                                     |
| 1:00 – 2:15 pm | Looking Ahead Towards the Common Platform: Panel Discussion and Audience Interaction – Moderated by Rick Valachovic (American Dental Education Association)  
- Carol Aschenbrener (Association of American Medical Colleges and the Interprofessional Education Collaborative)  
- John Finnegan (ASPPH and the University of Minnesota School of Public Health)  
- Steve Shannon (American Association of Colleges of Osteopathic Medicine)  
- Frank Cerra (National Coordinating Center for Interprofessional Education and Collaborative Practice and the University of Minnesota) |
| 2:15 – 2:30 pm | Wrap-up Summary of Next Steps in Getting to the Meeting Report – John Finnegan and Frank Cerra |
Appendix 2: Conference Participants

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Concept Paper

May 1, 2014
Context and Overview

There is increasing momentum from all sectors of health to transform care delivery into an outcomes-focused system that improves population health; provides value-added services across the continuum of care; directly engages individuals, families, and communities in achieving health; and that simultaneously reduces per-capita cost. This approach has been taken up by some care delivery system leaders who have demonstrated the value of integrating staff, providers, and partners in moving toward these outcomes. There is increasing recognition by health professions schools and programs, public health practitioners, and care delivery providers that health outcomes can be improved and the cost curve flattened through a focus on population health, particularly in the context of certified primary care health homes and accountable care organizations. In addition, there is progressive integration of systems of care and interest in using an interprofessional/transprofessional approach, reconnecting public health and care delivery to better achieve the desired outcomes.

The need for reconnecting public health and care delivery is recognized at three levels:

- Micro (health professions student, public health agency practitioner, and individual care provider performance),
- Meso (interprofessional/transprofessional team proficiency), and
- Macro (organizational – e.g., academic institution, public health agency, and health system – capabilities).

Towards this end, public health agencies are working with federal and state policy makers, health systems, health professional schools and programs, and other partners. There are also some nascent interactions among health professional schools and programs and providers working in care delivery to bolster the U.S. health system through a focus on population health outcomes. The IOM depicts the various contributors in the following diagram:

Conference Goals

This conference, while learning from all levels, is primarily focused at the micro and meso levels. It asks the questions:

How can public health effectively engage in helping to shape the transformation of the care delivery system where:

1. Accountable health organizations will have responsibility for the health of a population and for the engagement of individuals, families, and communities in health and wellness?
2. The prevailing mode of health interventions generally occurs one person at a time and via disease diagnosis and management?

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For this conference, the term “public health” is used in the broad contextual sense of the abilities of its practitioners to improve population health, including the social determinants of health; and to do so in a health outcomes-focused model.
The conference is designed to begin approaching these questions by exploring activities, research gaps, data, and methods of public health interface within the education, public health practice, and care delivery systems. We hope to help create a common platform of knowledge, practice, and an approach to decision-making that, ultimately, can lead to improved population health and the achievement of the other health outcomes. These relationships are depicted in the following graphic:

![The Health System graphic]

SOURCE: For the Public’s Health: The Role of Measurement in Action and Accountability (IOM, 2011)
Conference Deliverables

The conference brings together thought leaders from both education and practice, and from public health and the provider communities, along with other stakeholders vested in population health. This multidirectional input should provide an environment for the rich and candid discussion that will initiate and shape an ongoing process to reconnect public health and care delivery at the micro level.

While many ideas will emerge from the discussion, the intent is to move beyond ideas into action items that could advance the reconnection process. A successful process will produce the following deliverables:

Creation of a white paper that describes the common platform among the health professions (both academic and practice) and care providers, containing:
- Knowledge, methods, decision models
- The process of achieving this outcome in health homes, accountable care organizations, and health systems

Identification of the implications of this common platform for:
- Health professional schools and programs
- The content and experiences needed for student learners and worker trainees at multiple levels
- Engaging providers in helping realign interprofessional education to meet workforce and delivery system needs

Defining the pathways for the interface changes to occur:
- In health professional schools and programs
- As part of training for public health practitioners and clinical health providers
- Via inter and transprofessional teams focused on achieving improved health outcomes
- Recommendations of approaches for continuing the dialogue (next steps)
Appendix 4: Environmental Scan

Exemplars from an Environmental Scan of Six Health Professions’ Schools and Programs

Prepared for May 4-5, 2014 Reconnecting Public Health and Care Delivery to Improve the Health of Populations Conference

October 31, 2014
Background

The Association of Schools and Programs of Public Health (ASPPH) and the Interprofessional Education Collaborative (IPEC), with participation from the National Coordinating Center for Interprofessional Education and Collaborative Practice (National Center), co-sponsored an invitation-only thought leaders’ meeting, entitled Reconnecting Public Health and Care Delivery to Improve the Health of Populations, on May 4-5, 2014 in Washington, DC.

The planning committee for the meeting charged ASPPH staff in February 2014 to identify exemplars, to “help learn from groups that have worked together and who have overcome barriers at the micro and meso levels to integrate public health with care delivery.” Staff subsequently sought to highlight models of interprofessional education (IPE) and collaborative practices that link learning in both public health and care delivery among the six health professions’ schools and programs that IPEC represents. The exemplars were anticipated to help identify for the conference attendees, in light of the Affordable Care Act, efforts in professional and interprofessional education that teach students how to collaborate in improving public health and care delivery for population health.

Objective

This report aims to identify exemplary interprofessional education collaborations that link public health and care delivery for the purpose of improving population health. Schools and programs in the six disciplines represented by IPEC are the focus for this study. It is not meant as a comprehensive study, but depicts a very small sampling of schools and programs at a point in time (May 2014) that are undertaking successful and innovative activities in IPE with public health and clinical practice partners, both for integrating public health and care delivery into IPE and for improving graduates’ abilities to work in collaborative practice for purposes of advancing population health.

The focus of the study is to highlight effective programs as opposed to listing barriers and obstacles, and to outline, wherever possible, concrete results, key elements for success, and lessons learned. Additional exemplars from among these health professions’ schools and programs will be included in subsequent reports.

Methods

In trying to determine the scope of this environmental scan, staff explored recommended

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2 Planners did not distinguish “public health” from “population health” in the conference, so both terms were used without distinction. While the terms are not clearly differentiated in the literature and are often conflated, in this environmental scan:
- When speaking to the collection of disciplines and partners that undertake activities which fulfill society’s interest in assuring conditions in which people can be healthy, “public health” is most often used, and
- When speaking to the health outcomes of a group of people, “population health” is most often used.
repositories of existing exemplars in reconnecting public health and care delivery (e.g. ASTHO’s Primary Care and Public Health Integration Success Stories) and consulted with studies in progress (e.g. A Practical Playbook: Public Health & Primary Care Together), opting to focus this study on IPE exemplars in post-baccalaureate health professions schools and programs that are reconnecting public health practice and clinical care delivery. After staff received approval for this proposed approach, they developed a survey instrument that was vetted, revised, and approved by the planning committee designates and meeting co-chairs as well as sanctioned by the Association of Schools and Programs of Public Health (ASPPH) Survey Subcommittee.

The original survey was geared towards the ASPPH constituency and recommended for adaptation by the other five IPEC members:

- American Association of Colleges of Nursing (AACN)
- American Association of Colleges of Osteopathic Medicine (AACOM)
- American Association of Colleges of Pharmacy (AACP)
- American Dental Education Association (ADEA)
- Association of American Medical Colleges (AAMC)

ASPPH staff worked with staff from these five other IPEC associations on the scan of each respective profession. Each of the six associations used different methods to identify its exemplars and, consequently, submitted data in unique formats to ASPPH for inclusion in this report. Therefore, the profiles are presented in three narrative styles within this report. The methods used for each format follow:

- New data collected via surveys of memberships undertaken in March and April 2014 in response to this request for an environmental scan (ADEA and ASPPH).
- Data gathered from telephone interviews conducted with schools and programs represented by the IPEC associations as identified by association-member program staff. Prior to the telephone interviews, ASPPH conducted online research and presented a draft profile for discussion that was corrected and/or corroborated by the contacted respondents (AACOM, AACP, and AAMC).
- Data culled from an existing curriculum improvement website http://www.aacn.nche.edu/public-health-nursing/curriculum-improvement, which featured innovative educational practices among the nursing schools. ASPPH staff worked with AACN staff to identify the projects with population health-oriented approaches, which were then adapted for this report, updated using online research, and corrected and/or corroborated with the contacted respondents (AACN).

Each of the 21 profiles is tagged with an identifying logo to indicate its membership in a particular association represented by IPEC. The profiles are organized alphabetically for two reasons: to decrease the distinction among the schools and programs of each particular health profession, and to focus on IPE with public health and clinical practice partners, both for integrating public health and care delivery into IPE and for improving graduates’ abilities to work in collaborative practice for purposes of advancing population health.
Limitations

This study depicts data gathered using varied methods and, therefore, has yielded information in dissimilar formats and categories. The resulting lack of uniformity does not permit standard comparisons across the profiles.

Preliminary Observations of the Scan Results, by Professional Affiliation

The dental school exemplars represent institutions located in academic health centers that demonstrate an array of both on-campus and off-campus IPE activities.

The allopathic medical school exemplars highlight interprofessional partnerships and strategies that move students beyond learning how to handle individual patient encounters to more population-based approaches.

The nursing school exemplars represent institutions that are located on campuses lacking academic health centers. They have undertaken creative solutions to engaging interprofessional partners for population health improvement primarily from among working professionals and community institutions surrounding their schools.

The osteopathic medical school exemplars demonstrate a range of curricular and clinical models of team-based learning and population health-oriented practices.

The pharmacy school exemplars are rooted in extensive and deeply embedded population health outreach and clinical service to communities of need surrounding their schools.

The public health schools and program exemplars exhibit linkages with a number of non-health professional schools, with social work as a common partner across all the listings.

Preliminary Identification of Themes Indicating Successful Practices and Results

Staff used pattern coding to characterize information on exemplars provided by respondents in the following three profile sections:

- Results
- Key Elements for Success
- Lessons Learned

Next, staff reviewed responses to identify the most prevalent themes among responses, and then coded and sorted the topics. After analyzing the data, staff combined Key Elements for Success and Lessons Learned.
Review of the profiles indicates the following common themes among the 21 academic exemplars in this report:

**Successful IPE and collaboration, in general, are enabled by:**
- Champions among the leadership (e.g. president, provost, deans, and senior academic leadership)
- Embedding full-time faculty in the community and/or dedicating them to IPE
- Vesting and developing faculty in IPE
- Establishing an IPE committee/collaborative to guide the work
- Inviting community members into the school as adjunct instructors or guest lecturers
- Requiring IPE for faculty and/or students
- Using needs assessments to match community concerns with university expertise/student interests
- Tapping partners who are "there"
- Starting small and paring down ambitions
- Embedding the learning when opportunities arise and wherever possible

**When public health and clinical practice partners used an interprofessional approach to integrate public health and care delivery to improve population health, positive results included:**
- Documented increases in student preparation for collaborative, clinical, and/or community practice
- Quantifiable improvements in outcomes in which students have been involved (e.g. enhanced patient outcomes, dollars saved resulting from clinical and/or population-based activities)
- Leveraging of resources, such as grant funding that had not otherwise been available to individual entities

A few interesting comments on IPE in general warrant mention, as well. One was that in effective IPE, students return and become "teachers of others at the home university." Another respondent indicated that instead of flipping the classroom, this model “flips the student.” Another noted that IPE can serve as a vehicle not only for raising awareness of population health, but increasing institutional expertise in this area. Lastly, one respondent stated that IPE has increased enrollment at the school.
## Table of Contents

A.T. Still University of Health Science Schools of Osteopathic Medicine  
Duke University School of Medicine  
East Tennessee State University College of Public Health  
Florida International University College of Medicine  
NYU College of Dentistry  
Philadelphia College of Medicine – Georgia Campus  
Samford University McWhorter School of Pharmacy  
Touro University Nevada College of Osteopathic Medicine  
Thomas Jefferson University, School of Population Health – MPH Program  
Tufts University School of Dental Medicine  
Tulane University School of Medicine  
University of Hartford College of Education, Nursing and Health Professions  
University of Hawaii School of Nursing and Dental Hygiene (SONDH)  
The University of Illinois at Chicago College of Nursing (CON)  
University of Iowa College of Dentistry and Dental Clinics  
University of Kentucky College of Dentistry  
University of North Carolina Gillings School of Global Public Health  
University of Pennsylvania Master of Public Health Program  
University of South Florida College of Public Health  
University of Southern California (USC) School of Pharmacy  
Western Univ. of Health Sciences College of Osteopathic Medicine of the Pacific
A.T. Still University of Health Science Schools of Osteopathic Medicine

(Kirksville College of Osteopathic Medicine and School of Osteopathic Medicine in Arizona or SOMA)

Location: Kirksville, MO and Mesa, AZ

While prior IPE work was classroom-based, the current model across A.T. Still is to embed IPE across curricula and engage students in activities “where it makes sense to learn together.” The prior six-month period boasts 36 IPE activities, both small and big. Some highlights follow:

- Collaboration with: Arizona School of Health Sciences; Arizona School of Dental and Oral Health; Truman State University (athletic training, communication disorders, health science, and nursing); Grand Canyon University (nursing); and, Argosy University (clinical psychology). These collaborations stretch the number and kind of interprofessional experiences for students beyond the professions available at ATSU (PT, OT, PA, audiology, DO, dental, athletic training).
- The Clinical Presentation Curriculum (CPC), a problem-based learning approach
- Health Partners Program includes time spent exposing students to interprofessional elder care.
- Dental students and physician assistant students reach out to communities via mobile units.
- The annual Interprofessional Collaborative Case Competition provides health professions students with a 6 week IPE teamwork experience that builds collaborative practice competencies.
- Community partner, Clinic Adelante, hosts physical therapy, audiology, and soon occupational therapy faculty, together with DO and dental, the plan is to build a community IPE experience.

Results:

- Adjunct faculty members report satisfaction with the CPC model and students claim to be more prepared for their clinical rotations than students taught in a traditional curriculum with deductive reasoning.
- Interprofessional teams deliver fall prevention education with seniors, an initiative recognized by the governor to reduce falls.
- Students working together at the Banner Heart Hospital participating in efforts to mitigate heart failure admission rates play a role in the documented reduction of readmissions at the hospital.

Key Elements for Success:

- A collaborative of IPE stakeholders including faculty and caregiver/patient advocates, which was built initially to form the case competition, has matured and now advises on IPE more broadly.
- Use of the “people in our neighborhood, whoever is on campus and nearby” expands the professions involved and increases learning opportunities.

Lessons Learned:

- “Hugh Barr had it right: IPE is not about what is similar between us, but about the unique and specific contributions from each profession.”
- You don’t need to “lose something” to incorporate patient-centered and population-focused IPE into the curriculum.
Interprofessional education at Duke University is extensive, varied, and inclusive of the:

- **Primary Care Leadership Track (PCLT):** to train medical students, working with community teams, to provide care and gain an understanding of health disparities, community health, and healthcare system design.
- **Duke Family Medicine Residency Program:** to train physician leaders who partner with health care and community leaders to meet the health needs of patients and populations.
- **Master of Health Sciences in Clinical Leadership Program,** which is offered through the School of Medicine in collaboration with the following Duke partners: School of Nursing, the Fuqua School of Business, the School of Law, and the Terry Sanford Institute for Public Policy, to produce graduates who anticipate and respond to change, set new directions, build partnerships, and solve day-to-day problems in clinical care.
- **Creation of a formal Community Health Activity (CHA) approval process to:**
  - Ensure that providers are ready and capable of working with the local community
  - Guarantee that community health activities are appropriate and follow state and national standards
  - Strengthen risk management of health related activities
- **Required Introduction to Prevention course for medical doctor, physician assistant, doctor of physical therapy students, with optional participation of accelerated bachelor of science in nursing students.**

In addition to the academic partners listed above, practice partners include one Federally Qualified Health Center (FQHC), two rural health centers, three hospitals, six health departments, and 120 primary care practices.

**Results:**

- The family medicine residency and the PCLT are both extremely popular and competitive with the prior program receiving 579 applications for four positions and the latter receiving 249 for seven positions (both for 2013).
- CHA approval process in place and used as a formal means of guiding community work.

**Key Elements for Success:**

- Vision, having a sense of where we want to go
- Patience
- Starting small and growing, rather than going after a big early win

**Lessons Learned:**

- Can be joined by partners, not all of whom were anticipated – other educational programs, foundations, excited learners, etc.
East Tennessee State University College of Public Health

Location: Johnson City, TN
Website: https://www.etsu.edu/cph/

Academic Partners:
Health Professions: Allied Health, Allopathic Medicine, Nursing, Nutrition/Dietetics, Pharmacy, Physical Therapy, Psychology, Respiration Therapy, Speech Therapy
Other Disciplines/Professions: Social Work

Public Health Practice Partners:
Local Health Agency

Clinical Care Partners:
Academic Health Center, Rural Health Clinic, Community Health Center

On-campus IPE offerings:
Prologue Project
Formative Experiences
Case-based Discussions
Required and Elective Courses
Online Activities
Research Projects
Simulation Labs

Off-campus IPE offerings:
Training in Community-based Clinical Offices
Simulation Labs
Capstone Project

Results:
The East Tennessee State University (ETSU) IPE Pilot (IPEP) Program is currently in its second year. A randomly selected cohort of graduate and professional students from the five colleges of the ETSU Academic Health Sciences Center (Medicine, Nursing, Pharmacy, Public Health, Clinical & Rehabilitative Health Sciences) and the Department of Psychology have engaged in a two-year series of courses and extracurricular activities as well as Prologue and Capstone events with the goal of engaging in IPE and interprofessional training. The IPEP Program will run through spring 2015, after which researchers will evaluate changes in student faculty and student perceptions of IPE as well as students’ mastery of the four core IPE competencies.

Key Elements for Success:
An Interprofessional Education Committee (IPEC) made up of faculty representatives from across the Academic Health Sciences Center and the departments of Psychology and Social Work as well as longstanding, existing community-based IPE courses.

Lessons Learned:
The need for institutional (i.e., academic calendar alignment; faculty incentives; graduation requirement), infrastructure (i.e., IPE building), and curricular changes.
Florida International University College of Medicine

Location: Miami, FL
Website: http://medicine.fiu.edu/

FIU requires experiential IPE of its medical school, College of Nursing and Health Sciences, Robert Stempel College of Public Health and Social Work, and College of Law students. The FIU medical school curriculum, for example, is divided into five strands: human biology; disease, illness, and injury; clinical medicine; professional development; and medicine and society, with interprofessional learning in the fifth strand.

The centerpiece IPE requirement, known as the Green Family Foundation NeighborhoodHELP program, places students into interprofessional teams assigned to neighborhoods to monitor and improve the health of uninsured and underinsured families. The core team is composed of a nursing, medical, and social work student. Each team provides home visits from groups of students. The medical students stay with the same family for their four years with both nursing and medical students acting initially as advocates, facilitators, and patient educators, and eventually evolving into health care providers themselves. The students are expected to witness, firsthand, nonmedical impediments to care (e.g., lack of transportation, lack of household assistance) among the households in their catchment area. Community-based research questions are addressed, with results presented in a fourth-year capstone course, the culmination of the strand.

Results:
- For every dollar invested by the state on this outreach, eight dollars are returned in economic savings (e.g. through reducing emergency room visits).
- Intervention group households proved more likely than control households to have undergone physical examinations, blood pressure monitoring, and cervical cytology screenings.

Key Elements for Success:
- Two years before starting the program, FIU staff and faculty went into four neighborhoods, meeting with faith-based groups, K-12 school leaders, and members of the political infrastructure, to build trust and learn about the health needs.
- A data team conducted a door-to-door survey to understand social determinants of health and assess the health of the community.
- A full-time staff member coordinates the student-faculty teams and helps organize the program.
- The FIU president views the university as a community-urban coalition in which academe is engaged in providing solutions to community health problems.

Lessons Learned:
- Home visitation by interprofessional student teams is an effective way to increase the use of preventive health measures by underserved populations.
- Service-learning via home visitation programs is an effective methodology for medical students to learn about primary prevention and primary care.
NYU College of Dentistry

Location: New York, NY
Website: https://www.nyu.edu/dental/

Academic Partners:
Health Professions: Allied Health, Dental Hygiene, Allopathic Medicine, Nursing, Occupational Therapy, Psychology

Practice Partners:
Local Health Agency, Non-Profit Organization

Clinical Care Partners:
Academic Health Center, Community Health Center, Hospital, Nursing Faculty Practice

On-campus IPE Offerings:
- Advocacy for Health-related Laws and/or Regulations
- Behavioral Health Assessments
- Community Health Assessments
- Risk Assessments
- Student-run Clinics
- Community Health
- Global Education/Promotion
- Disease/Injury Prevention
- Program and Outcomes
- Evaluations
- Participation in Community Health Campaigns/Fairs
- Health Programs/Services Planning
- Training in Community-based Clinical Offices
- Capstone Projects in other countries (Peru, Granada, WHO, etc.)

Results:
Interprofessional education efforts have resulted in one oral-systemic health practice model, three global outreach programs, seven jointly-funded grants, nine clinical IPE initiatives, 13 IPE presentations at national forums/panels, 25 IPE service learning programs, and 29 joint publications.

Key Elements for Success:
Strong support from cross-disciplinary leadership, especially the deans of dentistry and nursing.

Lessons Learned:
It all depends on three things: faculty, faculty, faculty!

Potential Interest or Future Plans:
This ADEA-member institution is expanding its IPE portfolio with other health professions on campus and outside the campus. These will include more interactions with nursing, medicine, public health, speech therapy, psychiatry, nutrition, social work, etc.
Philadelphia College of Medicine – Georgia Campus

Location: Suwanee, GA
Website: http://www.pcom.edu/General_Information/georgia/DegreePrograms/ga_degree_programs.php

Interprofessional academic partners include pharmacy at the Philadelphia College of Medicine (PCOM) –Georgia Campus and community physicians of geriatrics and family medicine. A particularly comprehensive range of ancillary health professions at Georgia State University and other university partners: nursing, occupational therapy, physical therapy, communication disorders, respiratory disorders, nutrition participated the first year. Community partners’ residency programs, such as Gwinnett Medical Center, enables pharmacy and DO student teams to learn the importance of health promotion, education, and service to the community.

Lessons Learned:
- In the first year of our IPE, trying to cover the gamut of teaching around quality and safety, PCOM Georgia had more scenarios than the students could absorb. In their second year, the school pared down the scope of the IPE experience and also aiming to “sprinkle” IPE throughout the curriculum and to reach more students through scenario-based learning.
- When an opportunity arises, insert the learning.

Key Elements for Success:
- In working with community partners, inviting them in to demonstrate how actual teams work together has proved effective.
- Use of an active standardized patient and accompanying case as taught by local clinical practitioners, such as a geriatrician and a community physician, helps link student learning to the reality and complexity of collaborative practice.
While Samford University is located in Birmingham, AL, it was originally located 80 miles southwest in Marion, AL, an extremely impoverished area known as the “Black Belt,” named for the richness of its soil. Pharmacy students work in Marion with other health professions’ faculty and students to help reconnect Samford with its roots in Marion by providing much needed health services to this community. They also address population health interprofessionally with other partners, such as the Jefferson County Health Department, the Perry County Department of Health, Viva Health, and York Pharmacy – the only health care facility in York, AL.

Pharmacy students are required to complete at least one experiential course in an underserved community. In addition, during Pharmacy Month in October, P3 students participate in an Introductory Pharmacy Practice Experience, “Public Health Emphasis Week,” which focuses on immunization, health promotion, and disease prevention through community pharmacies.

Results:
Working with communities of as part of the HRSA-funded Patient Safety and Clinical Pharmacy Services Collaborative (PSPC), students participate in programs that have documented:
- Decrease of medication misadventures
- Increase of access to medication
- Smoking reduction
- Health improvements for diabetic patients (e.g. lower A1Cs)

Key Elements for Success:
- Embedding a full-time PharmD faculty member in the community of interest establishes a strong point person for the interprofessional service work (Samford has four FTE faculty working in community health/public health centers and several others volunteer in these settings).
- Assigning a faculty member to support not only students of his/her school but all health professions students connects the learning at the site and improves communication, planning, implementation, and evaluation.

Lessons Learned:
- Faculty commitment and dedicated resources are necessary to creating interprofessional learning opportunities for students.
- Look at the needs in the community first and permit at least six months for the faculty member to practice at the community site/engage with the population in order to get to know the people before beginning a project.
Touro University Nevada College of Osteopathic Medicine

**Location:** Henderson, NV  
**Website:** [http://tun.touro.edu/programs/college-of-osteopathic-medicine/](http://tun.touro.edu/programs/college-of-osteopathic-medicine/)

The school requires two annual team-based learning exercises for all their health professional students (osteopathic medicine, nursing, physician assistant, occupational therapy, and physical therapy). Both events last a half-day and are ungraded.

The fall semester event is for newly-minted students who are placed onto teams, each consisting of about six students from three to four health care disciplines. A case-based discussion exercise kicks off from brief video case scenarios portraying various ethical, professional, and legal aspects of patient care.

The spring semester event involves more advanced students nearing their clinical training (e.g. late second year medical students). Participants are assigned to five-to-six person teams comprised of students from the various healthcare disciplines. On the day of the exercise, students are first presented a clinical case discussion among interdisciplinary faculty in order to observe the interaction among the health care professionals. In a flipped-classroom model, students read the assignment prior to the exercise. They then take individual and group readiness assessment tests (IRAT and GRAT, respectively) after the clinical case discussion. Subsequently, student interdisciplinary groups hear clinical vignettes of various stroke cases with six-to-seven questions for each case, with at least one contributed by each of the five represented health care disciplines. Students work within their groups to answer the questions wrapping up with a facilitator-led discussion of the cases among all the groups.

**Results:**  
Student participation is enthusiastic and feedback from both student and facilitator evaluations has been positive.

**Key Elements for Success:**  
- Faculty development seminars/workshops that are put on by physiologists who are experienced in team-based learning help involve and engage faculty.  
- Target faculty who are vested in IPE and don’t worry about the naysayers.  
- The IPE events are low pressure and fun, designed as enjoyable opportunities to think about ethical aspects of health care and get to know colleagues in the process.  
- Clear learning objectives help focus the experience.

**Lessons Learned:**  
- It is feasible to schedule bi-annual IPE events across all five health programs and has proven an effective mechanism to get all the health professional students involved.
Thomas Jefferson University, School of Population Health – MPH Program

Location: Philadelphia, PA
Website: http://www.jefferson.edu/university/population_health/academic_programs/public_health.html

Academic Partners:
Health Professions: Medicine (Allopathic and Osteopathic), Nursing, Occupational Therapy, Physical Therapy, Pharmacy, Physician Assistant Studies, Radiologic Sciences, Bioscience Technologies, Couple and Family Therapy, Biomedical Sciences
Other Disciplines/Professions: Law, Social Work

Public Health Practice Partners:
Coalition/Association, Foundation, Federal, State, and Local Health Agencies, Institute, Nonprofit Organization

Clinical Care Partners:
Academic Health Center, Hospital

On-campus IPE Offerings:
Required and Elective Course(s)
Grand Rounds/Colloquia/Seminars
Lectures
Research Projects
Service Learning
Health Literacy
Cultural Humility and Competency
Health Communication & Social Marketing

Off-campus IPE Offerings:
Advocacy for Health-related Laws and/or Regulations
Community Health Assessments
Community Health Education/Promotion
Disease/Injury Prevention, Cross-sector Research
Health Literacy

Results:
Interprofessional education has led to the sharing of courses across schools of the university; collaborative research with the medical school; and MPH student community projects with students of other university schools (e.g. medical, health professions, pharmacy, nursing) as well as students in law, social work, and osteopathic medicine at other academic institutions.

Key Elements for Success:
Effective leadership and provost and dean-level support, strong collaboration with other disciplines and public health.

Lessons Learned:
Strong commitment to IPE based on synergy of health and social service professions and public health, as well as sufficient resources and funding; strong commitment from leadership (deans/provost) is absolutely essential.
Tufts University School of Dental Medicine

Location: Boston, MA
Website: http://dental.tufts.edu/

Academic Partners:
Health Professions: Allied Health, Dental Hygiene, Allopathic Medicine, Nursing, Nutrition/Dietetcs, Occupational Therapy, Public Health

Clinical Care Partners:
Academic Health Center, Student-run Clinic, Community Health Center, Hospital, low income housing

On-campus IPE Offerings:
Journal Clubs
Service Learning

Off-campus IPE Offerings:
Community Health Education/Promotion
Participation in Community Health Campaigns/Fairs

Results:
Pilot IPE program with dental hygiene and dental students from different schools.

Key Elements for Success:
Cooperation between schools for scheduling and importance of the project, collaboration, and co-teaching between schools.

Lessons Learned:
Interprofessional education cannot be voluntary, and must be integral to the required curriculum.

Potential Interest or Future Plans:
Currently working with several local schools to develop con-joint programs.
Tulane University School of Medicine

Location: New Orleans, LA
Website: http://tulane.edu/som/ and http://www.sph.tulane.edu/mdmph/

Tulane University has the largest MD/MPH program in the nation with a 40-year tradition of formally training physicians in public health. The program is unique in permitting students to complete the MD and MPH simultaneously and within four years (a five-year option is also offered). An agreement between the medical school and the school of public health and tropical medicine enables dedicated time for completion of public health classes within the medical school curriculum. MD/MPH program participants are required to work in the community and the MD/MPH students have a special rotation that satisfies the MPH practicum. Examples:

- Practice placements at a variety of sites, for example, at the Daughters of Charity Clinic, permit medical students to address population health issues in the context of delivering health care.
- Student placements with the Ochsner Health System enable population-based study on chronic disease medication adherence and other topics.
- Medical students work alongside public health and social work students from Tulane and students from Xavier University in community-based clinics and learn interprofessionally while addressing the health challenges of the underserved. Students also work in the Goldring Center for Culinary Medicine at Tulane University, the first dedicated teaching kitchen implemented at a medical school, where they learn how to incorporate diet into their training.

Results:
Published programmatic evaluation research findings indicate that physicians with formal public health training are more engaged in two key mechanisms – primary care and public health practice and dissemination of research findings that informs the health care community – both of which are demonstrated in long-term professional activities that strengthen the health care workforce.

Key Elements for Success:

- External partners representing hospitals, health departments, and others, such as the Louisiana Public Health Institute, who serve as adjunct faculty provide real-world perspectives and insights that broaden the curricula.
- Tulane works with community and health organizations to develop a portfolio of potential student projects designed to meet the community and patients’ needs and the organization’s goals. This approach both fosters student engagement in projects that are meaningful to the organization and permits the school to more effectively serve the community.
- Students are required to collect data, integrate their experience, write up projects, and present their findings from these practica experiences, which fosters their understanding of how public health and medicine interface – some students publish their work.

Lessons Learned:

- Actively engage community partners as key contributors.
- Provide students with real world opportunities to apply public health and medical skills.
- Continually foster ongoing support from the schools of medicine and public health.
For over twenty-five years, RN to BSN and MSN students participate in Project Horizon, a service learning experience, for one day a week during their senior year in the Hartford community, one of the poorest urban areas in the United States. Students offer their services (e.g., health and education) in schools and with neighborhood agencies. In 1988, these services were expanded to include Hartford’s homeless population.

Project Horizon uses community-based participatory research (CBPR) methods that include active community participation in the research process and fosters communication among community members and researchers to reduce health risks. By ensuring that projects are community-driven, by promoting active collaboration and participation at every stage of research, and by disseminating results in useful terms for populations at risk, Project Horizon uses CBPR to advance outcomes in health, care, and well-being.

Today, Project Horizon nurse-students volunteer four to six hours a week in homeless shelters, soup kitchens, neighborhood centers, transitional living centers, and schools. Nurse-students provide nursing care, health education, wellness promotion, support, advocacy, and referral advice. In turn, this work provides nurse-students the opportunity to learn firsthand about local health and social concerns. Besides their volunteer work, nurse-students attend a class where they explore diversity, family values and cultural, racial, and class issues.

Results:
This preparation positively impacts students’ stereotypes and reduces related cultural barriers. Over 2,000 community contacts per year through the Project Horizon project

Key Elements for Success:
Continuous community involvement between students and the target community are essential.

Lessons Learned:
The level of clinical supervision that is offered during the service learning and carefully selected adjunct clinical instructors who visit the clinical facilities weekly during the first semester and biweekly during the second semester provide a solid basis of support for both the facility and the student.
The University of Hawaii at Manoa (UHM) School of Nursing and Dental Hygiene participates in the annual United States Navy-sponsored Pacific Partnership humanitarian mission. During Pacific Partnership, a multinational, interdisciplinary team of professionals from various sectors, including public health, acute care services, dentistry, veterinarian services, engineering, and others, partner with host nations (Samoa, Tonga, and the Republic of the Marshall Islands in 2013 and Indonesia in 2014) for subject matter expert exchange endeavors and provision of services to individuals and communities. Topics covered a wide variety of topics, including disaster preparedness, community health, environmental health, prevention and management of communicable and non-communicable diseases.

This program provides nursing students and faculty with valuable skills in community/public health nursing, and strengthens interest and awareness in global health. They learn how to work in multinational, interdisciplinary teams; collaborate with and learn from other cultures; and function in low resource settings. The program also strengthens the school’s relationship with nursing colleagues in the Asia-Pacific region.

**Results:**
Evaluation findings indicate that students increase their knowledge, skills, abilities, and confidence for multidisciplinary collaboration with international partners, gain an understanding of different cultures, including the host nation and military cultures, and increase their own capabilities for providing nursing care in low resource environments.

**Key Elements for Success:**
Association with a well-organized and established outreach program was invaluable to enhance program effectiveness.

**Lessons Learned:**
- Support for the project from senior academic administration is essential.
- Faculty should always accompany students, as the environment is austere and students must be monitored for ability to adapt to lesser resources settings.
- Having students conduct research about the health status, endemic diseases, social, political, and physical environment and healthcare system of the host nation serves to better prepare each participant.
- This is a complex undertaking, with high rewards, but requires significant planning and lead time for preparation. Participants who complete a tour become tutors for others upon their return, thus through their experiences they become teachers of others at the home university.
Since 2001, the University of Illinois at College of Nursing (CON) has engaged with partners in a series of programs targeted to focus public health nurses (PHN) more effectively toward population-focused services. Founding partners include UIC’s College of Nursing at Peoria, Chicago’s Library of the Health Sciences at Peoria, UIC’s School of Public Health, and Illinois Public Health Nursing Administrators Association. All but the School of Public Health remain as active collaborators to this day.

UIC’s CON continues to arm public health nursing leaders with specific teaching and learning strategies that respond to current public health nursing models and competencies. Recent work focuses on the incorporation of evidence-based practice at local health departments and revision of the PHN Toolbox. The Toolbox was originally designed and piloted by a consortium of Illinois PHN practice and education partners; it provides a population-focused orientation package for public health nursing staff. The Toolbox contains both a Manual for Facilitators and a Student Guide. Evaluation data from the original use of the Toolbox as well as recent pilot data on the revised Toolbox have informed the final product.

Results:
Results from the 2012-2013 NLM grant demonstrated increases in PHN’s ability to navigate the professional literature to find evidence-based practice guidelines and original research, but also to use that literature in writing grant proposals and practice changes. Partnerships were able to garner resources, such as grant funding (e.g. HRSA, NLM, Pfizer), that would have been unavailable to individual entities. Increases in admissions and self-reported competence of students and practicing PHN’s resulted from the partnership.

Lessons Learned:
This partnerships among the college of nursing, school of public health, library staff, and leaders in public health nursing was particularly well-suited to improving both public health nursing education and public health practice.

Throughout 2013 and 2014, and as a result of evaluations, the partnership has made many revisions to the original PHN Toolbox, including:

- Greater emphasis on the public health core functions – particularly policy development and analysis
- Practical applications of the Quad Council Competencies and their relationship to state nurse practice acts and the ANA’s PHN Scopes and Standards
- Basic information on evidence-based public health nursing practice and how to access, evaluate, and use this information
- A wealth of suggested teaching-learning activities
- Target audience beyond Illinois
- Conferment of continuing education credit. Activities found in the Toolbox have also proven useful both to undergraduate and graduate level PHN educators.
University of Iowa College of Dentistry and Dental Clinics

Location: Iowa City, IA
Website: http://www.dentistry.uiowa.edu/

Academic Partners:
Health Professions: Allopathic Medicine, Nursing, Nutrition/Dietetics, Pharmacy, Physical Therapy, Physician Assistants, Public Health
Other Disciplines/Professions: Social Work

Clinical Care Partners:
Academic Health Center

On-campus IPE Offerings:
Case-based Discussions
Required course(s)
Online Activities
Service Learning
Students for Interprofessional Education group (SIPE)

Results:
Through course evaluations and reflective assignments that students complete, this ADEA-member institution has found a more inclusive attitude with students who have learned more about the roles, responsibilities, and strengths of other disciplines, how to work in teams for a single patient, and professional communication skills as well as ethics.

Key Elements for Success:
Lunch provided with a purpose to learn about and introduce their colleagues, small interprofessional group case projects, simulated patients, and electronic updates on simulated patients followed long-term.

Potential Interest or Future Plans:
This institution has considered inviting students or residents from psychology, counseling services, education, and business on our campus.
University of Kentucky College of Dentistry

Location: Lexington, KY
Website: http://www.mc.uky.edu/Dentistry/

Academic Partners:
Health Professions: Allied Health, Allopathic Medicine, Nursing, Pharmacy, Physical Therapy, Physician Assistants, Public Health, Speech Therapy
Other Disciplines/Professions: Communications, Law, Social Work

Clinical Care Partners:
Academic Health Center, Student-run Clinic, Hospital

On-campus IPE Offerings:
Case-based Discussions
Competitions/Contests
Elective courses
Grand Rounds/Colloquia/Seminars
Longitudinal Curricula
Online Activities
Research Projects
Service Learning
Simulation Labs

Results:
This ADEA-member institution has experienced significant changes in student self-reported attitudes toward working in teams and readiness for IPE/CP as well as evidence of competency attainment in Team/Teamwork, Roles and Responsibilities, Values/Ethics, IP Communication domains.

Key Elements for Success:
Application-based interprofessional education and facilitator readiness and preparation for IPE.

Lessons Learned:
An ever-changing target requires constant vigilance toward equity across programs and top-down/bottom-up leadership as well as continuous capacity building of champions.

Potential Interest or Future Plans:
Working across five institutions now in the Southeast Consortium for Interprofessional Education - soon to add a sixth.
University of North Carolina Gillings School of Global Public Health

Location: Chapel Hill, NC
Website: http://sph.unc.edu/

Academic Partners:
Health Professions: Allied Health, Dentistry, Medicine, Nursing, Pharmacy
Other Disciplines/Professions: Social Work, Information and Library Sciences, Journalism

Clinical Care Partners:
Area Health Education Center (AHEC), UNC Health Care, Hospitals across NC for dietetics training

On-campus IPE Offerings:
• Elective Course(s)
• Lectures
• Service Learning

Results:
Students in the five health affairs schools listed above work with public health students in a very successful, long-running service project called SHAC that provides health care services to individuals who otherwise might not have access to care. Additionally, the health affairs schools held a movie showing of "Escape Fire" that was very successful in creating discussions around health access.

The associate deans for academic affairs of the six schools meet quarterly and have initiated some new IPE events. We now have multiple joint and dual degree options with different schools. For example, an interdisciplinary health communication certificate and plans for degree programs have created opportunities to enhance the skills of public health students in communication and have educated journalism students about public health. Beginning in fall, 2014, the Gillings School will be offering an IPE course on the foundations of race and poverty: eliminating health disparities, that is taught by three professors (SPH, Arts and Sciences, Business). This class already has a substantial waiting list. Similarly, a cross-university partnership in health informatics have leveraged relationships across several schools and has resulted in a certificate, degrees, and research collaborations.

For many years, we also have had strong integration with the School of Dentistry and recently received support for a distinguished professor who will cross both schools.

Key Elements for Success:
Going beyond patient care to view health from the population perspective, the physical proximity of the schools to one another (easy access makes collaboration something that occurs without geographic boundaries), and a strong tradition of collaboration and collegiality as part of the Carolina culture.

Lessons Learned:
Not everyone will be on the same page.
University of Pennsylvania Master of Public Health Program

Location: Philadelphia, PA
Website: http://www.publichealth.med.upenn.edu/

Academic Partners:
Health Professions: Dentistry, Allopathic Medicine, Nursing, Clinical Epidemiology and Biostatistics
Other Disciplines/Professions: Architecture and Design, Communications, Education, Engineering, Law, Social Sciences, Social Work

Public Health Practice Partners:
Local Health Agency, Non-Profit Organization

Clinical Care Partners:
Academic Health Center, Student-run Clinic, Community Health Center, Hospital

On-campus IPE Offerings:
Case-based Discussions
Competitions/Contests
Required and Elective Courses
Grand Rounds/Colloquia/ Seminars
Journal Clubs
Lectures
Research Projects
Service Learning
Workshops

Off-campus IPE Offerings:
Community Health Assessments
Social Services Assessments
Student-run Clinics
Community Health Education/Promotion
Disease/Injury Prevention
Program and Outcomes Evaluations
Joint Publishing
Community Health Campaigns/Fairs
Cross-sector Health Programs/Services Planning Research
Social Marketing and Health Communication Training in Community-based Clinical Offices

Results:
By participating in, and developing, interprofessional education opportunities, students are exposed to the "real world" of public health, which brings many disciplines and people to the table. IPE has served as a mechanism for generating excitement about public health across the campus. This has yielded external graduate students (and employees) in public health classes as well as applications to the MPH program.

Key Elements for Success:
A willingness across different programs within Penn and in Philadelphia to partner and an understanding of how collaboration can be mutually beneficial.

Lessons Learned:
Being flexible and creative is essential.
University of South Florida College of Public Health

Location: Tampa, FL
Website: http://health.usf.edu/publichealth/index.htm

Academic Partners:
Health Professions: Medicine, Nursing, Pharmacy, Physical Therapy, Physician Assistants
Other Disciplines/Professions: Architecture and Urban Planning, Law, Business, Social Sciences, Social Work, the Arts

Public Health Practice Partners:
Coalition/Association, Local Health Agency

Clinical Care Partners:
Academic Health Center, Student-run Clinic, Community Health Centers, Neighborhood Associations

On-campus IPE Offerings:
Competitions/Contests,
Elective Course(s)
Grand Rounds/Colloquia/Seminars
Lectures
Research Projects
Service Learning
Professional Development Workshops
Volunteer Opportunities
USF Health Shared Student Services

Off-campus IPE Offerings:
Advocacy for Health-related Laws and/or Regulations
Community Health Assessments
Risk Assessments
Outcomes Evaluation
Joint Publishing
Participation in Community Health Campaigns/Fairs
Cross-sector Research
Social Marketing and Health Communication

Results:
Efforts to increase interprofessional education opportunities have resulted in the creation of entry-level workshops for students from all health schools and programs. IPE courses for public health and pharmacy, public health and physical therapy, and all health professions and fine arts have been developed and delivered, and USF Health is currently building IPE courses with the new physician assistant program.

Key Elements for Success:
Strong, aligned, and committed leadership.

Lessons Learned:
To develop and implement IPE in a deliberative and effective manner across an academic health center, there must be a true commitment from leadership, adequate funding, and a collaborative spirit amongst all involved schools and programs.
University of Southern California (USC) School of Pharmacy

Location: Los Angeles, CA  
Website: https://pharmacyschool.usc.edu/

The USC Student Run Clinic, designed on the patient-centered medical home model, enables medical, pharmacy, occupational therapy, physical therapy, and physician assistant students to provide services in interprofessional teams at Federally Qualified Health Centers (FQHCs) and community-based, safety-net clinics in downtown Los Angeles, including Skid Row.

The Medical and Pharmacy Student Collaboration (MAPSC) is a student-run organization dedicated to creating opportunities for collaboration between the pharmacy and medical schools as well as creating awareness of all of the health professions represented on the USC Health Sciences Campus. This group hosts a speakers’ series, supports collaboration in health fairs, and builds understanding and relationships among the students.

Numerous forums are ongoing at USC to promote IPE, including an IPE committee attended by faculty members from all health profession schools. In addition, all health profession schools at USC collaborate to host an annual IPE event on a Saturday attended by 700 to 800 students, where they learn about the roles of different disciplines and engage in case discussions highlighting the important contributions of each healthcare profession. The USC School of Pharmacy has also become the home for the monthly Right Care Initiative Los Angeles University of Best Practices meetings, which promote best practices and interprofessional collaboration to improve heart health and reduce strokes.

Results:
92 patients received care from the Student-Run Clinic in the 2013-2014 academic year.  
127 medication-related problems were identified and resolved, the majority of which were problems with appropriateness of drug therapy (43%) followed by a medication safety problems (28%) and nonadherence (15%).

Key Elements for Success:
Need to align schedules from all schools in order to support collaboration  
Having faculty work together, for example in IPE committees  
Getting deans not only to understand the value of IPE, but to mandate participation

Lessons Learned:
The mandate for IPE training among all health care professional schools has helped increase engagement of faculty and senior leadership.
Western University of Health Sciences College of Osteopathic Medicine of the Pacific (COMP)

Location: Pomona, CA and Lebanon, OR
Website: http://www.westernu.edu/osteopathy/

Western University of Health Sciences (WesternU) is preparing its campus to function interprofessionally. Four colleges share a curriculum with optometry, podiatric, osteopathic medicine, and dentistry students organized into small groups to solve clinical dilemmas. Faculty push students to look upstream at health determinants to maximize their problem-solving with patients and populations beyond the four walls of health care. This interprofessional culture also emerged from the student body with an interprofessional health fair sponsored annually by the student government association.

WesternU is undertaking a three-phased approach to interprofessional education including the nine health professional programs on campus that end in terminal clinical degrees. The IPE curriculum utilizes self-regulation learning theory as a conceptual framework and includes:

Phase 1: Learners meet in small teams and explore clinical cases using problem-based learning approaches. At least one of the five cases presented in the academic year is population-based.
Phase 2: Learners continue to meet in small teams, however mostly asynchronously.
Phase 3: This pilot, non-credit opportunity is offered to volunteer students who participate in interprofessional case conferences.

WesternU has a satellite osteopathic medicine program at a campus in Lebanon, OR, which includes both phase 1 and phase 2 of the IPE curriculum. The IPE curriculum involves Oregon State University (Pharmacy and Public Health) and Linn Benton Community College (Nursing and Medical Assistant).

Results:
While each college and academic program within the university has different faculty structures and governance, each program is encouraged by university administration to count faculty effort in IPE as teaching time. The IPE program requires the participation of approximately 103 faculty members on days when phase 1 cases are delivered. There are 10 days in the academic year that require faculty participation at this scale. Therefore, nearly all faculty at WesternU participate at least once per academic year in IPE.

Lessons Learned:
- Because students and faculty like the idea of IPE, but generally dislike the curricular activities, especially the asynchronous online activities, continuously promoting IPE activities to students and faculty requires diligence and a conviction to collaborative principles.
- Faculty development is crucial to effective implementation of the curriculum.
- Continuously maintaining relevancy of curricular activities is challenging, but also achievable. By carefully designing curricular content the school has been able to engage learners from professions that do not necessarily work closely together. The key is to focus on patient-centered care and population outcomes. One Health has served as a strong tie in uniting efforts by IPE learners.