

## Building Health Workforce Capacity Through Community-Based Health Professional Education: Workshop Summary

### DETAILS

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# **BUILDING HEALTH WORKFORCE CAPACITY THROUGH COMMUNITY-BASED HEALTH PROFESSIONAL EDUCATION**

WORKSHOP SUMMARY

Patricia A. Cuff, *Rapporteur*

Global Forum on Innovation in Health Professional Education

Board on Global Health

**INSTITUTE OF MEDICINE**  
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The serpent has been a symbol of long life, healing, and knowledge among almost all cultures and religions since the beginning of recorded history. The serpent adopted as a logotype by the Institute of Medicine is a relief carving from ancient Greece, now held by the Staatliche Museen in Berlin.

Cover photo © 2014 Maria Revlon De Los Reyes, courtesy of Photoshare. Two children in the Aeta communities in Subic, Zambales, Philippines, travel to collect clean water with a 5-gallon water jug because the water from their area is polluted.

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*“Knowing is not enough; we must apply.  
Willing is not enough; we must do.”*

—Goethe



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<sup>2</sup> This is the list of Forum members as of May 2, 2014.



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This workshop summary has been reviewed in draft form by individuals chosen for their diverse perspectives and technical expertise, in accordance with procedures approved by the National Research Council's Report Review Committee. The purpose of this independent review is to provide candid and critical comments that will assist the institution in making its published workshop summary as sound as possible and to ensure that the summary meets institutional standards for objectivity, evidence, and responsiveness to the study charge. The review comments and draft manuscript remain confidential to protect the integrity of the process. We wish to thank the following individuals for their review of this workshop summary:

TARA CORTES, New York University  
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Although the reviewers listed above have provided many constructive comments and suggestions, they did not see the final draft of the workshop summary before its release. The review of this workshop summary was overseen by BOBBIE BERKOWITZ, Columbia University School of Nursing. Appointed by the Institute of Medicine, she was responsible for making certain that an independent examination of this summary was carried out in accordance with institutional procedures and that all review comments were carefully considered. Responsibility for the final content of this workshop summary rests entirely with the rapporteur and the institution.



## Acknowledgments

Two landmark reports set in motion the idea for establishing a global forum to provide a neutral platform for ongoing dialogue among health professionals that could be the catalyst for needed reforms in health and educational systems around the world. Both of these reports—*Health Professionals for a New Century* (Frenk et al., 2010) and *The Future of Nursing* (IOM, 2011)—emphasized the importance of community-based health professional education. The Lancet Commission report described curricular innovations from the 1960s, 1970s, and 1980s that broadened “the continuum from classroom to clinical training through earlier student exposure to patients and an expansion of training sites from hospitals to communities” (p. 20). Likewise, the Institute of Medicine (IOM) Committee on the Future of Nursing explained that “an improved education system is necessary to ensure that the current and future generations of nurses can deliver safe, quality, patient-centered care across all settings, especially in such areas as primary care and community and public health” (p. 6).

These reports laid the foundation for the establishment of our IOM Global Forum and further confirmed for us the immense importance of learning from and with communities. It was therefore our great delight when the members of our Global Forum voted to host a workshop on this topic of community-based health professional education. Through the keen insight of the workshop planning committee, a robust agenda was developed and carried out. We thank the workshop planning committee co-chairs, Warren Newton and Susan Scrimshaw, for their leadership in this endeavor, and we thank the planning committee members, Virginia Adams, Gillian Barclay, Kathryn Kolasa, Donna Meyer, and Stephen Shannon, for

their support throughout the workshop. We also thank the consultant to the committee, Marietjie de Villiers. Such a wonderful event could not have happened without the keen dedication of the IOM staff of the Global Forum, including Patricia Cuff, forum director; Megan Perez, research associate; and Samantha Brown, senior program assistant. A special thank you goes to Patrick Kelley for envisioning and establishing the Global Forum. And most important, we must acknowledge our deep appreciation to the 45 sponsors and 61 members of the Global Forum on Innovation in Health Professional Education that make it possible for us to host events like the workshop described in this report.

Jordan Cohen, *Forum Co-Chair*

Afaf Meleis, *Forum Co-Chair*

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## Acronyms and Abbreviations

AACN	American Association of Colleges of Nursing
AAMC	Association of American Medical Colleges
ACCAHC	Academic Consortium for Complementary and Alternative Health Care
ACGME	Accreditation Council of Graduate Medical Education
ADEA	American Dental Educational Association
AFHCAN	Alaska Federal Health Care Access Network
AIDS	acquired immunodeficiency syndrome
AMA	American Medical Association
ANMC	Alaska Native Medical Center
ASCO	Association of Schools and Colleges of Optometry
ASPPH	Association of Schools and Programs of Public Health
ATSU	A.T. Still University
BCH	Brampton Civic Hospital
BNTC	Brampton Naturopathic Teaching Clinic
CAHPS	Consumer Assessment of Healthcare Providers and Systems
CARES	Community Aid, Relief, Education, and Support Clinic
CBE	community-based education
CCL	Collaborative Change Leadership Program
CDC	Centers for Disease Control and Prevention
CHANNELS	Community, Health, Access, Network, Navigate, Education, Leadership, Service

CHAP	community health aide/practitioner
CHC	community health center
CHOW	community health outreach worker
CHW	community health worker
CIHLC	Canadian Interprofessional Health Leadership Collaborative
CIO	critical incident officer
COPC	community-oriented primary care
ECU	East Carolina University
FQHC	Federally Qualified Health Center
GLLU	Gay and Lesbian Liaison Unit
GW	George Washington University
HELP	Health Education Leadership Program
HIE	health information exchange
HIV	human immunodeficiency virus
HPE	health professional education
HRSA	Health Resources and Services Administration
IDC	Interprofessional Diabetes Clinic
IHI	Institute for Healthcare Improvement
IHPE	Innovation in Health Professional Education (the Forum)
IIPHD	Indian Institute of Public Health Delhi
IMAGINE	Interprofessional Medical and Allied Groups for Improving Neighborhood Environments
IOM	Institute of Medicine
IPCP	interprofessional collaborative practice
IPE	interprofessional education
JDOH	Junior Doctors of Health
LGBT	lesbian, gay, bisexual, and transgender
LPN	licensed practical nurse
MA	medical assistant
MCA	Maternity Center Association
MEPI	Medical Education Partnership Initiative
MHDP	Municipal Health Development Plan
MHF	mental health facilitator
MOOC	massive open online course

## ACRONYMS AND ABBREVIATIONS

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NACHC	National Association of Community Health Centers
NBCC	National Board for Certified Counselors
NGO	nongovernmental organization
NHLBI	National Heart, Lung, and Blood Institute
NIH	National Institutes of Health
NOSM	Northern Ontario School of Medicine
OB/GYN	obstetrics and gynecology
OT	occupational therapy
PA	physician assistant
PACE	Program of All-Inclusive Care for the Elderly
PHFI	Public Health Foundation of India
PT	physical therapy
RCS	Rural Clinical School
RN	registered nurse
SIHA	Study of Immigrant Health and Adjustment
SIU	Southern Illinois University
SOMA	School of Osteopathic Medicine in Arizona (at A.T. Still University)
SURMEPI	Stellenbosch University Rural Medical Education Partnership Initiative
TAG	Technical Advisory Group
TeamSTEPPS	Team Strategies and Tools to Enhance Performance and Patient Safety
THEnet	Training for Health Equity Network
UBC	University of British Columbia
UCSF	University of California, San Francisco
UHN	University Health Network
UofT	University of Toronto
UP-SHS	University of the Philippines, Manila, School of Health Sciences
USUHS	Uniformed Services University of the Health Sciences
WHO	World Health Organization



## Summary: Understanding the Community Context of Health<sup>1</sup>

More than half a century ago, Benjamin Paul set forth a new concept for improving the health of communities by understanding local cultural beliefs that can perpetuate disease and illness (Paul, 1955). His tenet was that if health professionals and others want to change behavior, they must first understand the existing ethnomedical beliefs and values of the community. This is known in anthropology as the “insider” versus “outsider” perspective, and it is largely accepted in public health for the prevention, control, and management of infectious disease (Sommerfeld, 1998; Morris et al., 1999).

Terminology is critical to the insider/outsider discussion. For example, according to Hyder and Morrow (2012), *disease* in many cultures is seen as a western biomedical, outsider term, while *illness* is an insider’s subjective expression of not feeling well. The problem Hyder notes arises when the two perspectives come into conflict. In this instance, a person may be diagnosed with a disease such as HIV or hypertension without feeling sick. It is then up to the health care provider to explain why medication or behavior change is necessary when the person does not view him- or herself as sick. This is the sort of insider training that community-based health

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<sup>1</sup> The planning committee’s role was limited to planning the workshop. The workshop summary has been prepared by the rapporteur (with acknowledgment of the assistance of staff as appropriate) as a factual account of what occurred at the workshop. Statements, recommendations, and opinions expressed are those of individual presenters and participants and are not necessarily endorsed or verified by the Institute of Medicine. They should not be construed as reflecting any group consensus.

professional education is meant to provide. By exposing students to people in their home or community settings, learners gain a greater understanding of the challenges faced by those they serve.

On May 1–2, 2014, members of the Institute of Medicine’s (IOM’s) Global Forum on Innovation in Health Professional Education came together to substantively delve into issues affecting the scale-up and spread of health professional education in communities. This workshop builds upon previous workshops of the Global Forum that specifically addressed the value of interprofessional education for breaking down the siloed nature of health care and health professional education (IOM, 2013, 2014a). The financial and other cost implications of not conforming to more collaborative work that also embraces the person/patient as the key member of the team was also previously addressed (IOM, 2013, 2014b). These workshops not only were instrumental in providing context on which to build, but also set in motion dialogue around the importance of addressing communities and community health, the topic of the workshop described here.

A purpose of the workshop was to challenge the participants to think about community in new ways that could provide fertile ground for educating health professional students. Participants thus heard a wide variety of individual accounts from innovators about work they are undertaking. Some of the examples were from educational institutions working with communities; others represented potential opportunities for education in and with communities. The thinking behind presenting the variety of examples that range from student community service to computer modeling was to stimulate discussions about how educators might better integrate education with practice in communities. This report is not intended to be a comprehensive guide to implementing a community-based educational program. In fact, the report often raises more questions than it answers, as intended by the Global Forum, which was set up to provide a platform for open and creative dialogue and discussion.

The Forum is an ongoing, multinational, multidisciplinary approach to proposing and exploring promising innovations for achieving recommended reforms in the instructional and institutional spheres. Members of the Forum represent varied interests oriented toward a variety of countries, professions, and organizations. They joined forces at the IOM’s Keck Center in Washington, DC, to share personal experiences, explore new ideas, and hear about best practices in community-based health professional education from those who are currently working in this space.

The statement of task in Box S-1 provided the basis on which the workshop planning committee developed the agenda. Both community-based education (CBE) and interprofessional education (IPE) are featured prominently in the task and on the agenda; however, members of the planning committee listed on page v chose to make CBE the main thrust of

**BOX S-1**  
**Statement of Task for Community-Based  
 Health Professional Education: A Workshop**

There is growing evidence from developed and developing countries that community-based approaches are effective in improving the health of individuals and populations. This is especially true when the social determinants of health are considered in the design of the community-based approach. With an aging population and an emphasis on health promotion, the United States is increasingly focusing on community-based health and health care.

Preventing disease and promoting health calls for a holistic approach to health interventions that rely more heavily upon interprofessional collaborations. However, the financial and structural design of health professional education remains siloed and largely focused on academic health centers for training. Despite these challenges, there are good examples of interprofessional, community-based programs and curricula for educating health professionals. Some of these examples make use of new technologies for reaching rural communities while others use technology for faculty development and still others use it for curriculum delivery to train health professions students. This training can extend to the health professionals and nonprofessionals that are based in communities of need in order to create the necessary workforce that can respond to the community's identified needs. In this way, the needs of diverse communities are met by those who live in the community thereby improving health equity and decreasing disparities among typically underserved populations.

These issues will be examined in a 2-day public workshop that will be planned and organized by an ad hoc committee of the Institute of Medicine. The committee will develop a workshop agenda, select and invite speakers and discussants, and moderate the discussions. Following the workshop, an individually authored summary of the event will be prepared by a designated rapporteur.

the workshop while IPE was emphasized in many of the discussions. The two should not be conflated. Whereas IPE is often a part of CBE, it is not always part of CBE. Similarly, IPE can be experienced in academic centers and is not exclusively taught through CBE. A possible gap in the statement of task was the lack of a clear connection between service delivery models and education models (e.g., if clinicians are to work together in interprofessional teams, the inherent logic is to have at least some training in how to collaborate and in team-building skills). Similarly, if there is a need for more care to be delivered in the community, there is a logic for more education to be occurring in communities in order to prepare graduates for this work. With that understanding about the elements contained in the statement of task, the planning committee used it as a guide for developing the workshop objectives.



Warren Newton, who is the American Board of Family Medicine representative on the Forum, and Susan Scrimshaw, president of The Sage Colleges, co-chaired the workshop. In his welcoming remarks, Newton described the agenda as having four parts, reflected in each of the four sessions. The first establishes a framework so all the workshop participants have a shared understanding of what makes up a community and what are best practices for engaging community members. The second looks at the core competencies for working with communities and includes the demonstration of a pedagogical tool. The third explores tools and examples for spreading and scaling up community-based education. Lastly, the fourth involves sharing individual lessons learned through participation in this Forum activity.

In looking at the plan for the workshop, Newton emphasized the value of interacting on this topic with such a diverse group. To him, the real power of the Global Forum is in its diversity, which was a main consideration around the structure of this workshop.

## ORGANIZATION OF THE REPORT

The four chapters contained in this workshop summary report comprise accounts of the presentations that took place at the workshop. Speakers (whose remarks are noted in the report) were identified by the workshop planning committee members (see page v), who were instrumental in determining the focus of the workshop. Appendix B is composed of abstracts that are written versions of the 8-minute webcast presentations provided by some of the members of the Forum or their organizational affiliates. Each abstract is an example of community-based education as defined by the authors, who were given flexibility in defining *community-based health professional education* (HPE) and in determining the material to be presented. In a similar fashion, Appendix C contains abstracts of posters that were submitted by informed members of the public and were presented during a designated evening session of the workshop. All of the abstracts focused on some aspect of health professional education in communities. A number of them directly addressed spread and scale-up of their program, and although evaluation data and evidence on effectiveness of the community-based interventions were included in some abstracts, the level of detail varied among the abstracts.

Chapter 1 sets the stage for the workshop. In discussions led by co-chair Susan Scrimshaw, there was a constant reminder of the importance of taking health care providers out of the clinic and into the community to get to the source of a community's health issues. This was emphasized in her examples of inside versus outside perspectives, and underscored by the professionals and community workers who described their experiences

in working in and with communities. Forum members' reactions to the presenters are captured in the final section of this chapter.

In agreement with Scrimshaw's remarks that alerted the audience to the risks of a cross-cultural divide, Jusie Lydia Siega-Sur provided her evidence from the University of the Philippines for what is possible when the health providers and the health service share the same context, history, and culture as the community in Chapter 2. This chapter is an overview of competencies needed by health professional students for working with communities as explained by the moderator and reinforced by the two speakers. Each presenter described a community-based educational program. The first drew from experiences in the Philippines, where educators created a stepladder curriculum that is community and competency based. Students who enter the program are recruited and supported by the communities themselves. The second speaker leads an educational program in Maine that uses community health outreach workers who supply a bridge between health providers and their large refugee and immigrant populations. This chapter closes by looking at the structure of education within which community-based programs might exist. Forum member and workshop co-chair Warren Newton begins with a description of the value of debates as a pedagogical tool and then leads a demonstration of debates as an innovative pedagogy for educating health professionals. A global view of the issues raised during the debates is included in this chapter.

Chapter 3 contains a variety of examples that initiate a dialogue around factors that might facilitate the spread or scale-up of innovations in community-based health professional learning on the continuum of education to practice. For the purposes of this workshop, it was explained that *spread* would mean increasing the number of types of health professionals trained in community settings, and *scale-up* would mean increasing the number of sites offering opportunities for community-based learning. The moderator laid the foundation for the two presenters who each described their program in terms of spread and scale-up. One involved a global "train the trainer" model for mental health facilitation, and the other was an example of how to build and sustain leadership teams for improving communities' health systems. Also in this chapter are two examples of how groups have leveraged technology for improving care, population health outcomes, and the value of health care. The first describes the work of organizations in Camden, New Jersey, to help patients recover from harmful medical events, rehabilitate, and then reintegrate back into society. The second is a telehealth solution meeting the health care needs of rural communities in Alaska. Both presentations included the educational component to their work.

Chapter 4 looks at potential impacts and outcomes of work and education in and with communities. It begins with remarks from the Global

Forum on Innovation in Health Professional Education Co-Chair, Afaf Meleis, before going to the small group leaders' view about discussions that took place during their breakout sessions. The topics and particular models described in these groups were selected to stimulate thoughtful conversations among the meeting participants and not necessarily meant to be used as in-depth case studies. Group 1 looked at community colleges as a model for spreading and scaling up community-based interprofessional education. The example they used to base their discussions was the Lewis and Clark Family Health Clinic in the state of Illinois. Challenges to getting IPE started at community colleges was a key discussion point for this group. Group 2 considered issues around scaling up and spreading community-based, interprofessional, faculty-run and faculty-assisted student-run clinics. This group drew upon work from student-involved dental clinics, Georgetown Hoya's safety net clinic, and experience from the Nutritional Sciences/Rutgers University student-engaged community clinics. Issues around sustainability featured prominently in this group's discussions. Group 3 addressed the possibilities of establishing a new type of interprofessional education bringing law enforcement and the health professions together for experiential learning opportunities. To frame their thinking, a representative of the DC Metropolitan Police Department Gay and Lesbian Liaison Unit described the training he received to sensitize police officers to the needs of special populations. The group explored the potential of improving communication between law enforcement and the health professions through a joint interprofessional curriculum. In their report back to the large group, each of the small group leaders described their interpretation of an innovation that was discussed in their small group, along with the challenges and opportunities for spreading and scaling up the innovation.

This chapter closes with a discussion led by the co-chair that reflected upon the lessons learned throughout the course of the workshop. The lessons proposed by individual participants of the workshop included

- Broadening the definition of health,
- Looking carefully at the roles of community health workers,
- Retaining education as a key element for health impacts,
- Evaluating education's role in impacting health,
- Leveraging global accreditation and licensure, and
- Envisioning the future (the intent of this comment is to start training people for a world that currently exists and anticipate changes for the future).

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# 1

## Establishing a Framework

### **Key Messages Identified by Individual Speakers and Participants**

- More opportunities for meaningful community experiences could provide students with greater insight into the day-to-day challenges faced by the patients they serve. (Holmboe, Thibault)
- Health providers and others might improve their impact with community interventions by gaining greater understanding of the “insider views.” (Scrimshaw)
- Patient navigators play an important role in engaging communities and bridging cultural and language gaps between patients and providers. (Cooper-Smith, El-Bayoumi, Mabur)
- It is not *only* about educational designs or the kind of students admitted into health professional programs, but it is also about how the different health professions structure the entire curriculum within a framework of justice and equity for society. (Meleis)
- There is a disconnection when health professionals talk about sending students “into the community,” when in fact health care systems are of the community. (Wolf)

## SETTING THE STAGE

Workshop co-chair Susan Scrimshaw, from The Sage Colleges, set the stage for the workshop by reminding participants that the focus of this workshop is on taking health care providers out of the clinic and bringing them into the community. It is in the community where the source of a health problem can be uncovered. Scrimshaw told the story of Richard Carmona, a former surgeon general, who was at a health clinic in the Southwest United States and noticed unusually high rates of carbon monoxide poisoning in children. According to Scrimshaw, youngsters were being left in old trucks with the motor running on cold nights, while their parents dashed into the trading post. The children's exposure to high levels of carbon monoxide during those brief moments was due to the structure of the old trucks. Carmona discovered this, and so, instead of waiting for unconscious children to be brought to his clinic, he set up a Saturday clinic to fix the old trucks. That is the image of community health that Scrimshaw encouraged participants to internalize during the course of the workshop.

Also in setting the stage, Scrimshaw established a common understanding of some terms that would likely be used throughout the workshop. She began by saying that anthropologists, like herself, spend a lot of time studying culture. As such, there are now roughly 200 definitions of culture. Scrimshaw combined the common elements of these into what is presented in Box 1-1. Scrimshaw emphasized two main points about the elements of the definition. First, individual and group internalizations and expression of their culture are constantly being modified through lived personal experiences; second, much of a health provider's expression of him- or herself in working with communities is at the unconscious level. The key is to recognize one's biases in order to provide respect and understanding to individuals of communities in ways that improve communication between the health provider and the community.

### **BOX 1-1** **Definitions of Culture: Common Elements**

- Shared ideas, meanings, values
- Socially learned, not genetically transmitted
- Patterns of behavior guided by shared ideas, meanings, values
- Constantly being modified through lived experiences
- Often exists at an unconscious level

SOURCE: Scrimshaw, 2014.

Scrimshaw then provided a definition of *community*. At the Centers for Disease Control and Prevention (CDC), Scrimshaw and others developed the *Guide to Community Preventative Services* and spent 1 year trying to define *community*. In the end, they came up with the following definition: a group of individuals sharing one or more characteristics (place, affinity, culture, network, disease, etc.). The community could be based on geography, although that presents problems (such as individuals who worship in one geographic area and live in another), so it might be a common affinity for a place to which people return frequently. It could also be a group of individuals who are exposed to the same risks, or all have a similar disease or illness.

Another term Scrimshaw defined was *health disparities*. She did this in order to establish a shared understanding among the workshop participants of what it is. The definition she provided reads as follows: health disparities are differences in rates (likelihood) of disease, severity of disease, or disease outcomes between populations or groups. Some say that health disparities involve measurable differences, but Scrimshaw would add that they also involve preventable differences.

While at the CDC, Scrimshaw and her colleagues developed The *Community Guide's* Social Environment and Health Model (see Figure 1-1). An important aspect of its design is that only one item in the figure (“health promotion, disease and injury prevention, and health care”) relates to clinical delivery of care; everything else is in the community. Scrimshaw then pointed to a quote from *Health Culture and Community: Case Studies*, a book that was published in 1955 by Benjamin Paul, who is often referred to as a founding father of medical anthropology (see Box 1-2).

Scrimshaw then discussed what she called the “outsider view” and the “insider view.” These were first articulated in 1954 by linguist Kenneth Pike, and promoted by anthropologists Ward Goodenough and Marvin Harris. But, Scrimshaw said, it was Paul who was key to establishing the “outsider view” and the “insider view” in looking at culture and health. In her remarks, Scrimshaw described the outsider’s view as the health provider’s perspective and the insider’s view as the community’s perspective. The outsider view might be framed by a Western biomedical perspective of the world—such as that a particular disease is caused by a bacterial infection—whereas the insider view might be based on a community’s belief system. For example, in Guatemala, where Scrimshaw worked, one of the community perspectives was that *Ascaris* (worms) in children were caused by eating sweets and that because all children had worms it was normal and there was nothing one could do about it. In probing the community’s perspective a little further, it turned out that in their view, the worms were agitated by thunder and lightning because they were more common in the rainy season. To the community, this was obvious. Health providers with



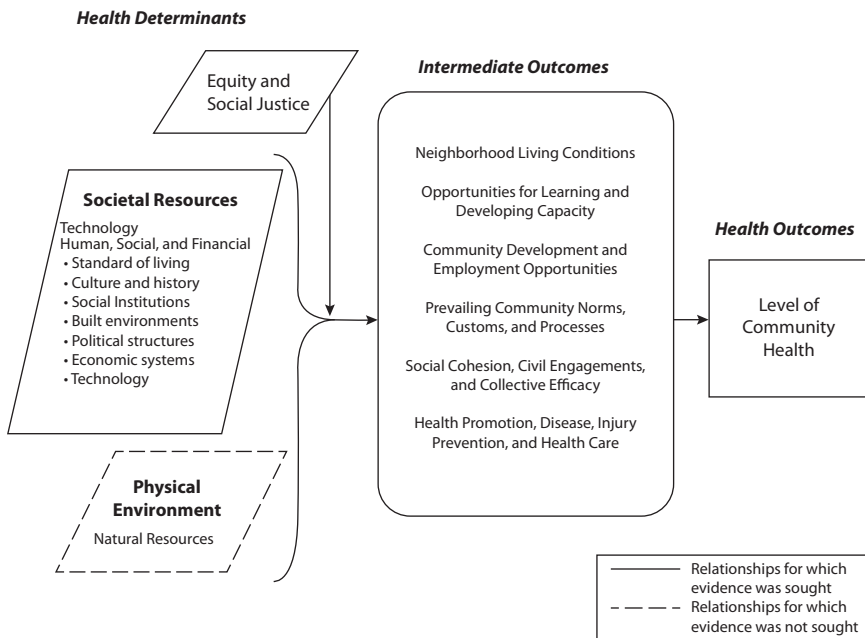


FIGURE 1-1 The *Community Guide’s* Social Environment and Health Model. SOURCE: Anderson et al., 2003, as presented by Scrimshaw on May 1, 2014.

**BOX 1-2**  
**Excerpt from *Health Culture and Community: Case Studies***

If you wish to help a community improve its health, you must learn to think like the people of that community. Before asking a group to assume new health habits, it is wise to ascertain the existing habits, how these habits are linked to one another, what functions they perform, and what they mean to those who practice them.

SOURCE: Paul, 1955, p. 1, as presented by Scrimshaw on May 1, 2014.

Western medical training understand the pathology between higher rates of *Ascaris* infections and more gastrointestinal complications during the rainy season in a Guatemalan village (Warren and Mahmoud, 1977; CDC, 2013a). The key to working with the community to eliminate *Ascaris* was to say to the parents, “Come and get your children’s worms removed before

the rainy season and the thunder and lightning come.” This is because to the parents, worms were not a problem unless they saw them, and they only saw them when their children had diarrhea and other intestinal problems (CDC, 2013b).

In closing, Scrimshaw reemphasized the concept that health providers working in a community have to always be aware of the outsider and the insider views. A provider’s task, she said, is to understand both perspectives well enough to be able to negotiate the best possible access to health (referring to Figure 1-1).

## RESPONSIBILITIES OF AND FOR THE COMMUNITY

*Jehan El-Bayoumi, Rodham Institute of  
George Washington University*

Jehan El-Bayoumi of George Washington University opened her remarks by reminiscing on her time as a clerkship director for medical students as well as her 15-year tenure as program director of the Internal Medicine residency. She expressed great dismay when she heard any disparaging comments made by her students about their patients. Their objectification of patients reflected an organizational culture that was perpetuated by the residents who passed on their own negative reflections of patients to the next generation of learners. She noted that, especially at the time, the burden of disease in Washington, DC, was very high. Patients had very complex medical cases of chronic diseases, like HIV/AIDS, diabetes, and end-stage renal disease, along with mental and/or substance use issues overlaid by poverty. She noticed that the disparaging remarks began when these more complex patients entered the hospital, and she realized that the problem was the medical institution, the health providers, and the entire medical community who unwittingly perpetuated the negative behaviors.

### Establishment of the Rodham Institute in Washington, DC

El-Bayoumi began the Rodham Institute to shine a light on the dismal health situation in the nation’s capital. El-Bayoumi pointed out that per capita, Washington, DC, is currently number one in HIV, end-stage renal disease, and cancer mortality, noting that pockets in the city have the same HIV rates as Namibia—a shocking statistic that appears to have eluded even the political leaders, she said. Although shocking, this statistic also represents a window into the communities these individuals come from and underscores what is known about the social determinants of health.

El-Bayoumi wondered how it might be possible to help learners continue to pursue the calling that drove them to enter the health professions,

and how to help preserve the enthusiasm that the vast majority of health professional students have when they enter school. El-Bayoumi believes community-based education is the solution. In this way, students become connected with the people they are serving in the environments those people come from. “It is time academic institutions take the responsibility. We need to be accountable to our communities,” she said. Health professional educational organizations need to have a bidirectional bridge so communities do not see the health professionals solely as researchers looking for subjects. Although research is important, she says, it needs to be conducted under an umbrella of trust that is gained when health professionals directly connect with the community they are serving. This is the essence of the Rodham Institute that El-Bayoumi founded in 2013 in honor of Dorothy Rodham, mother of Hillary Clinton, who believed passionately in the power of education to achieve social change.

### **The Rodham Institute and Community Health Education**

In establishing the institute, community, education, and political stakeholders came together and agreed the essence of their work would revolve around creating an action-oriented institute to reduce health disparities in Washington, DC. When asked where to concentrate the efforts of the institute, the stakeholders unanimously agreed to focus on two things: education and food. Although this was somewhat surprising to the health professional educators, it made sense in the context of the community, and it was important that the community members voiced what they would value.

In response, the institute organized a 1-week program during the DC Public Schools’ spring break entitled HELP (Health Education Leadership Program). The event included 45 children from middle and high schools in Prince George’s County that came from low-income households. The facilitators of the event were medical students, undergraduate students, public health students, residents, and faculty. As facilitators, these individuals led small group sessions where the students were asked about health disparities.

The group El-Bayoumi co-led with an undergraduate student dealt with access to green space. She described the impact this session had on the health professional student who learned from the children about the lack of facilities or space for them to exercise. There is no gym at their school, and there is no green space to run or play—they have only asphalt and concrete. El-Bayoumi’s students gained insight into the struggles of those they work with when trying to comply with medical orders to exercise more or to eat more fruits and vegetables, especially when the only stores in the neighborhood sell liquor and tobacco products. In her opinion, that is the way to do applied health disparities education. Instead of the classic

“bench to bedside” training, El-Bayoumi refers to her work as “classroom to community.” El-Bayoumi added that she uses the Association of Black Cardiologists heart health curriculum, which is made up of 12 modules created in conjunction with the National Heart, Lung, and Blood Institute (NHLBI). This curriculum forces learners to apply health literacy concepts so appropriate messages are designed for their target population.

El-Bayoumi reminded the health providers that community health education has been done for decades, especially by medical anthropologists and the international community. She acknowledged the community-focused work of Lisa Fitzpatrick, who trained in public health at the CDC, did her infectious disease training in Denver, Colorado, and is a scientific liaison at National Institutes of Health (NIH). Fitzpatrick is a practicing physician at the United Medical Center in southeast Washington, DC (Fitzpatrick’s presentation is summarized in Box 1-3). According to El-Bayoumi, Fitzpatrick single-handedly created the HIV Red Carpet Program, known as the Care Center; in this program, anyone who tests positive for HIV is immediately scheduled an appointment with Fitzpatrick, with a social worker, and with a patient navigator (the Care Center’s social worker, Marjorie Cooper-Smith, and patient navigator, Daveda Hudson, presented at the workshop). Patients also receive primary care, a dental appointment, and a mental health appointment. If a patient does not come to the follow-up appointment, the patient navigators find out what is going on. If that patient gets admitted, the patient navigators follow him or her into the hospital. This is the type of environment that El-Bayoumi wants the Rodham Institute learners to experience in hopes of counteracting the sorts of negative imprinting she mentioned earlier. El-Bayoumi finished by acknowledging the DC program called Food & Friends.<sup>1</sup> The organization runs a meal delivery program that started in 1988 for people living with HIV/AIDS, but now delivers meals to cancer patients and others who are in hospice care. Food & Friends allows learners from the Rodham Institute to accompany them for the meal deliveries. This experience is designed to give students an opportunity to see the living conditions of those for whom they care. It takes 1 day—not weeks of clinical experience—for the learners to gain an insight into the struggles people with illness and disabilities face every day.

Lisa Fitzpatrick, Daveda Hudson, and Marjorie Cooper-Smith of the Care Center then discussed with the Forum members what they wish health professionals knew (see Boxes 1-3, 1-4, and 1-5).

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<sup>1</sup> For more information, visit <http://www.foodandfriends.org>.

**BOX 1-3****What I Wish Health Professionals Knew***Lisa Fitzpatrick, Medical Director of the Care Center*

The Care Center, part of United Medical Center, is located in southeast Washington, DC (Ward 8), and is a medical home for persons with infectious diseases—mainly, HIV. The Care Center “offers clinical and social support services that include health education, psychological counseling, patient navigation and referral services, support groups, and medical case management” (United Medical Center, 2014). At the Care Center, 85 percent of its clients receive public insurance (Medicaid or Medicare); 40 percent are unemployed; the vast majority of their clients are African American; 40 percent smoke cigarettes; and many have comorbid conditions (Fitzpatrick, 2014).

Lisa Fitzpatrick, who trained in public health at the Centers for Disease Control and Prevention, began her presentation by listing four policy changes that she would like to see. First, she said that there should be a way for patients to obtain reimbursement for nontraditional providers, such as doctors of pharmacy and physician extenders. Second, she emphasized the importance of data sharing between professionals. Third, she called for the elimination of agency silos. Lastly, she asked that resource allocation be reviewed and that new projects start receiving funding.

Fitzpatrick agreed with El-Bayoumi, saying that from her experience working as a care provider in Washington, DC, the medical system and the health care system are completely disconnected from the community and the people on the ground. She listed three main points that she wish health professionals knew:

**DISCUSSION**

Individual Forum members and other workshop participants then expressed their views about how they would educate health professionals in order to develop the qualities and skills outlined by the speakers. Individual responses of the members are noted below.

**Admission Selection**

A comment by one of the speakers on the importance of student community engagement early in their health professional education resonated with Eugene Anderson from the American Dental Educational Association (ADEA). Anderson took the comment a step further; he talked about selecting individuals for health professions that already possess the types of desired experiences and commitment sought by health professions for serving diverse communities.

1. *When patients come into the medical setting, they are scared. It is up to the health professionals and health workers to welcome patients and put them at ease.* For example, one patient at the Care Center was afraid to come in to the medical setting. Fitzpatrick left the hospital and met him at an intersection a few blocks away to talk to him about his health care. He eventually came in to the medical setting, and he now has a long history with the Care Center.
2. *Though the individualized approach is very labor intensive, it is necessary—particularly for the 1 percent of patients that uses up 50 percent of the health care dollars.* Some of the cases described by Daveda Hudson and Marjorie Cooper-Smith (see Boxes 1-4 and 1-5) required a great deal of time and energy from the patient navigators. But this 1 percent of patients requires a high level of individualized care, and Fitzpatrick believes that making resources available to provide that care will ultimately result in cost savings for society through decreased health care expenditures.
3. *Many patients have low health literacy.* A patient once told her that she wanted to wait before her blood pressure was taken because she had just eaten a bag of potato chips; another patient told Fitzpatrick she heard that herpes turns into AIDS. One gentleman told Fitzpatrick that he had never heard of Obamacare or the Affordable Care Act.

She said that with these challenges, it is important to figure out how to adopt tailored approaches for each patient. “These are the realities that we have to deal with and we have to figure out how to close the gaps,” said Fitzpatrick.

In a similar vein, Susan Skochelak with the American Medical Association (AMA) brought up selection criteria that better reflected the values of the community the school seeks to serve. For example, she said, what if admissions committees were reversed so members of the community represented the vast majority of the selection committee rather than faculty? She said that would be a change that could occur in relatively short amount of time and would have the potential to have a significant impact on communities.

### Educational Design

George Thibault from the Josiah Macy Jr. Foundation discussed the importance of changing the whole model of clinical education so experiences are longitudinal and meaningful in the community. He believes that such experiences would form longer-term relationships with patients, families,

**BOX 1-4****What I Wish Health Professionals Knew***Daveda Hudson, Patient Navigator at the Care Center*

Daveda Hudson, a patient navigator at the Care Center, told the stories of two patients to illuminate the issues Lisa Fitzpatrick raised. The first involved navigating a young woman who was 19 years old and 5 months pregnant (her fourth pregnancy but third live birth). Hudson tried to get preexisting health information and demographic information from her, but she did not have all of the information needed. At the Care Center, a patient navigator can work with patients from the emergency department to the patients' homes. Hudson had the opportunity to meet with this patient at her home in order to learn what was keeping her from being actively engaged in her care.

At first, it seemed that the patient was not being medically compliant. She had a history of missed appointments and had accumulated \$275 worth of fees because of these. But she began to ask Hudson questions about health forms for her children, and then asked Hudson if she could meet her at her children's school to help her fill out paperwork for her children. Hudson discovered that her patient had difficulty reading and could not understand her appointment cards, which is why she missed appointments and did not appear to be medically compliant. No other health care providers had noticed this.

Hudson believes there is an automatic assumption that anyone coming to a health clinic can read and understand the information they are provided. However, this is not always the case, and the young woman whom Hudson described is an excellent example of this. With Hudson's assistance as a patient navigator, the woman is now medically compliant and her babies are healthy.

The second case Hudson described involved a young man she met in the emergency department. He was 22, black, and homosexual. In her role as a navigator, Hudson reaches out to patients weekly to keep them engaged in their care. It took 60 days to convince this young man to come into the hospital because he was afraid and did not want anyone to see him. Hudson would meet with him after work at a convenience store or a public park a few blocks away from the Care Center. Though it took a great deal of prompting and encouragement, Hudson eventually helped him to get ready and mentally prepared to receive health care from Lisa Fitzpatrick.

and the community and would create longer-term relationships between learners and faculty.

Eric Holmboe agreed, having studied standard rotations that occur within internal medicine. He believes they are dysfunctional, and yet many educators assume they are okay, he said. He pointed out that longitudinality is something that accreditation may have impeded because of the process requirements that monitored achievement on the basis of fulfilling a time commitment.

**BOX 1-5****What I Wish Health Professionals Knew***Marjorie Cooper-Smith, Social Worker at the Care Center*

The key message social worker Marjorie Cooper-Smith wished more health professionals understood is the importance of patient navigation services, particularly for her patients in Ward 8 of Washington, DC. Providers who understand the importance of advocacy and support of patients will connect better with their patients and have greater success with their interventions. To illustrate this point, she told the story of one patient—a 50-year-old African American female—who presented herself to the Care Center with a history of substance abuse and mental illness. She was underweight, frail, depressed, and confused. The patient expressed suicidal ideations and her plans for killing herself. Cooper-Smith and the navigation team spoke gently with the patient, who agreed to walk with them to the emergency room at United Medical Center Hospital, where the navigation team worked with emergency services to stabilize the situation and later get her admitted to the longer-term psychiatric care unit.

After their patient's release and discharge back into the community, the navigation team again met with her. They discovered she was unable to pay her bills or her rent and she was relapsing into substance abuse. Cooper-Smith believed that there was a possibility the patient was going to be evicted from her home because of her substance use, so her navigation team assisted her with finding resources in the area to help her with her housing situation. Her substance use also affected her ability to adhere to her medication regimen, so the navigation team linked her to a local treatment program. She was reluctant at first, but the navigation team encouraged her until she agreed. The team even picked her up from her home, drove her to the Addiction Prevention and Recovery Administration, waited with her until they were able to see her, and took her to the treatment center.

After being in treatment for several months, she visited the Care Center; she had gained weight, she had new glasses and new dentures, and she had a new wig. She returned as a completely new person, and she stayed in the program for some time. Cooper-Smith said that it is important for health professionals to realize that even though patients come into a health care setting for medical care, there may be additional stressors in their lives that are barriers to receiving care and being healthy.

Cooper-Smith then discussed a case that involved a 45-year-old African American male who was diagnosed with diabetes and taking a number of medications when he came to the Care Center. In reviewing his medications, the navigation team quickly realized that one of the medications he was taking was for high blood pressure; the patient was not aware that he had these conditions, and thought that all of his medications were for his diabetes. This case illustrated Cooper-Smith's second point, which is that it is important for individuals to be given some sort of documentation—such as a pamphlet, a referral, or a website—from their doctor's office so patients are aware of their diagnoses and understand the medications they are taking.



Representing the Accreditation Council of Graduate Medical Education (ACGME), Holmboe described the difficult balancing act between monitoring the educational process and structure requirements, and determining whether the desired outcomes are being obtained—outcomes that might include such values as those described previously by the other Forum members. ACGME is now focusing predominantly on outcomes with the Next Accreditation System; they describe the necessary milestones a student should meet upon completion of a program, and they depend on programs to revise the process and curricular elements to help the students get to that point (ACGME, 2014).

Maria Tassone from the University of Toronto and the Canadian collaborative commented on nontraditional ways of educating health professionals that go beyond the clinical preceptorship or clinical rotation model. One example is the University of Toronto Health Mentor Program, modeled after the program at Thomas Jefferson University (University of Toronto Center for Interprofessional Education, 2011). In this model, interprofessional groups of students go out into the community without preceptors to spend time with people who are living with chronic illness and chronic conditions. The students return from these community experiences and debrief with faculty about the encounter. According to Tassone, this model alleviates the need for clinical preceptors and the challenges associated with trying to identify robust community experiences that are meaningful and interprofessional. Another nontraditional example Tassone described is the student-run clinic. In particular, the IMAGINE Clinic Toronto (Interprofessional Medical and Allied Groups for Improving Neighborhood Environments), an interprofessional student-led clinic, is an opportunity for students to engage in health education and health literacy beyond the clinical preceptorship model.<sup>2</sup>

### Role Models

Building on the discussion of longitudinality, Afaf Meleis of the University of Pennsylvania School of Nursing thought the question for faculty and other educators was how to impart a value system to all health care students—a value system about the social mission and making a difference in patients' lives. She asked, how might social justice and an equity framework be infused into health professionals' curricula and how might it be operationalized and modeled by faculty? Ideally, she said, the modeling would demonstrate team members working together in equal partnership with a full understanding of each other's perspective. According to Meleis, it is not *only* about educational designs or the kind of students admitted

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<sup>2</sup> For more information, visit <http://imagine.uoftmeds.com>.

into health professional programs, but it is also about how the different health professions structure the entire curriculum within a framework of justice and equity for society.

Carol Aschenbrener, who represents the Association of American Medical Colleges (AAMC), echoed the desire for strong role models that demonstrate social accountability and for deans and health system directors to take responsibility for instilling social accountability into their students. Unless this message comes from leadership with a passion, she said, changes in curriculum are not likely.

### Global Health Education

Malual Mabur is a health promotion specialist and community health outreach worker with the City of Portland, Maine, but is originally from Sudan. He pointed out the important role patient navigators play in engaging communities and bridging cultural and language gaps between patients and providers. For example, where he works, there is a large immigrant population. Many providers he works with have never seen an immigrant patient from Africa or Iraq, but, he said, this is the new reality; “Maine is not just a white state anymore . . . global health is coming toward your own town,” he said. The community health outreach workers help students and providers learn how to work with immigrant patients. Mabur stated that community health outreach workers like himself are helping students gain an interprofessional understanding of cultures different from their own. He is helping students to learn together about the importance of cultural literacy and cultural humility to the people and communities they serve.

Liana Orsolini with Bon Secours Health System added to Marbur’s comments, emphasizing the value of a global health education in order to better serve the populations that are increasingly making up the array of cultures in the United States. Afaf Meleis also reminded workshop participants of the importance of exposing learners to the rest of the world, and to avoid egocentrism, that is, thinking only about one’s own country for health professional education.

### Anticipating Future Needs

According to John Finnegan, representative from the Association of Schools and Programs of Public Health (ASPPH), the critical issue is how to plan for a health system that is not yet created and how to train health professionals in a rapidly changing world. In his view, tying things back to the community is an old idea that came out of the 19th century, and it deserves to be tried again in the 21st century using current principles and circumstances.

Karen Wolf, representing the National Academies of Practice, noticed a paradigm shift from health professionals talking about practicing *on communities* to now talking about practicing *in communities*. Wolf's desire is for there to be a shift to talking about practicing *of the community*. In her view, there is a disconnection when health professionals talk about sending students "into the community," when in fact health care systems are of the community. And until educators, health professionals, and policy makers start talking about health and educational institutions as being of the community, she believes the United States as a nation will continue to have problems with its health professions education.

Susan Scrimshaw highlighted some of the points of the discussion. First, she said, keep in mind the notion that health professional students are being prepared for a world that no longer exists. Second, she emphasized the importance of modeling desirable behaviors so students have positive role models to emulate. Third, she returned to the idea of insider/outsider perspectives, which she described at the beginning of the workshop (see page 11). She said that up to now at the workshop, most discussions have taken place from the outsider perspective (not as people of the community, but as people who want to do the right thing with the community). The critical component, according to Scrimshaw, is learning how to get that insider perspective. She finds that taking learners deeply into the community can provide the connection she described. This might happen through home visits with patients, or possibly by attending community meetings—not as the authority, but as somebody who is listening as a concerned member of the community. She asked how education systems (that include accreditation and licensure) could give emerging health professionals the experience of being in and with the community—learning to listen to the values expressed by members of those communities.

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## 2

# Skill Sets and Pedagogy

### **Key Messages Identified by Individual Speakers and Participants**

- Student competencies for working effectively with communities go beyond the understandably important disciplinary skills. (Velde)
- Community health and public health principles need to be threaded throughout the educational process. (Morton, Siega-Sur)
- Debates can be a pedagogical tool for stimulating critical thinking and improving communication skills of students and trainees. (Newton)

### **COMPETENCIES FOR WORK IN COMMUNITIES**

Beth Velde moderated the session looking at competencies needed by health professional students for working with communities. Although she is an occupational therapist by training, she is currently director of Public Service and Community Relations at East Carolina University (ECU). Her role in this position is to help faculty and students understand how to engage with communities in doing research that helps to solve community-identified problems. Her community experience began in 1972 with community-based learning/teaching and continues today. Fifteen years

ago, she began working with a small community in Tillery, North Carolina, as an occupational therapist, researcher, and as a faculty member at ECU. Tillery is one of the original “40 acres and a mule” communities; Velde was interested in setting up a community-built health and wellness center that was truly driven by the residents and citizens of Tillery.

In her opinion, the student competencies for working effectively with communities goes beyond disciplinary skills, although, she emphasized, disciplinary skills are most definitely important. Velde stated that another competency is for a student to understand the importance of language, for language conveys beliefs and actions. In that regard, students should also understand that names are important, and that people are not patients but rather members of the same health center. As members, the community has control and authority in terms of what happens in their community health center.

She expressed the view that students learn to use the word *we* rather than *I*. For example, “We are doing this together,” not “I am doing this for you.” She also emphasized the value of a student education in humility, and that students understand that differences are valued and that they need to be learned about. She emphasized the significance of defining the impact of one’s work not just in terms of medical care but also in terms of environmental health or social justice. She said that a health professional’s work is reciprocal and mutually beneficial, and this work includes educating students in the community.

Velde said that community members taught the students these competencies even before the health professionals began educating students on their professional competencies, because community comes first in a community-built health practice.

Velde’s work drew heavily from the interprofessional educational methodology. The learning was about, with, and from each other as health professionals from different disciplines, as students, and as community members. The interprofessional education (IPE) model was the foundation on which Velde and her colleagues ran their health services.

To set the stage for the session, Velde described that the focus was on engaging with communities and creating positive changes in health. The focus was also on health disparities and health equity. The skills that speakers would discuss in the session would be on the behaviors, techniques, and attitudes that students would likely need for work in communities, including ways of thinking and believing that drive action and influence behavior.

Velde explained the philosophy she and her colleagues modeled in their community-built health clinic, which involved doing what is right, doing it well, and doing it together to create transformational learning for everyone. Velde then introduced the speakers in her session, Jusie Lydia Siega-Sur and

Jennifer Morton, who have developed interesting ways of operationalizing the philosophy.

### University of the Philippines, Manila School of Health Sciences

*Jusie Lydia Siega-Sur, University of the Philippines,  
Manila School of Health Sciences<sup>1</sup>*

Jusie Lydia Siega-Sur is an associate professor and dean of the University of the Philippines, Manila (UP) School of Health Sciences (SHS) and an active member of Training for Health Equity Network (THEnet), where she participated in developing a framework for evaluation of social accountability and medical education (THEnet, 2011). She began her presentation by explaining that their program at UP trains health workers to stay in the country—not for export, like so many of the other programs in the country. For many years, training of health workers in the Philippines has used a Western-based, hospital-oriented model, which resulted in their graduates leaving the country. This particularly affected the University of the Philippines College of Medicine, who found that 63 percent of their medical graduates leave the country versus the national medical school average of 50 percent (Bonifacio, 1978; Estrada, 1978). Only 15 percent of the medical school graduates who stayed in the country worked in rural areas. The other remaining medical school graduates located their practices in urban centers (Estrada, 1978). In short, she said, the universities trained their health professionals to take care of the needs of other countries rather than their own people.

#### *Development and Structure of the UP-SHS Program*

The greatest challenge, according to Siega-Sur, was how to develop health workers who were not only technically competent but also—and more important—socially competent and firmly committed to serve in the rural communities where they were most needed. The challenge was also to train them with competencies that were suited to their workplace, and eventually to equitably distribute them in different areas of the country, especially in areas of greatest need for health workers. To address these, UP engaged in joint education and health systems planning with academia, the Ministry of Health, and the communities in order to develop an innovative curriculum that would develop this kind of health worker—someone who would address the country's needs.

Figure 2-1 shows the stepladder curriculum they developed; it is a

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<sup>1</sup> The University of the Philippines, Manila School of Health Sciences (UPM-SHS) in Leyte was forced to rebuild its infrastructure, restart its programs, and rebuild the communities it serves after being damaged in 2013 by Typhoon Haiyan (THEnet, 2014).



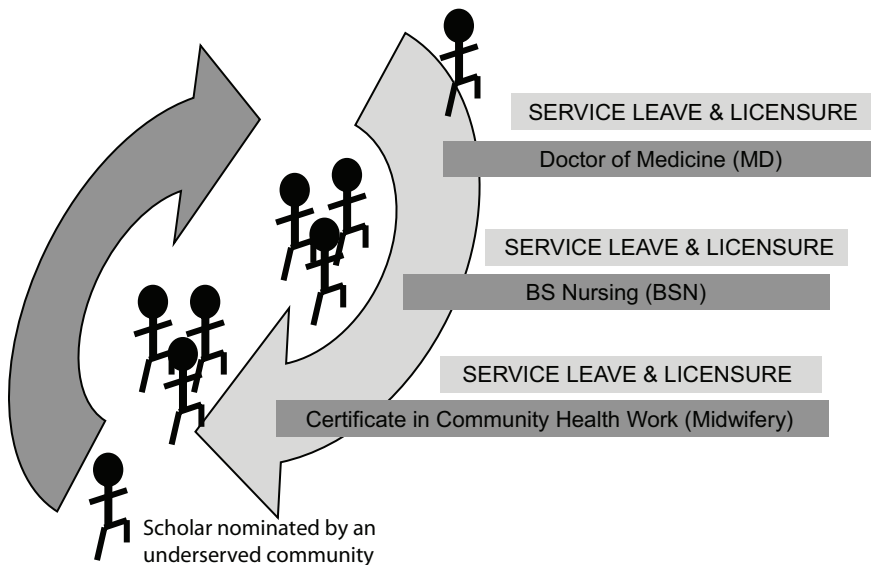


FIGURE 2-1 The stepladder curriculum.  
SOURCE: Adapted from Siega-Sur, 2014.

community-based and competency-based curriculum that trains the midwife, the nurse, and the physician in one continuous and sequential curriculum. Students are recruited from underserved communities, who nominate the scholars and support them through the program. The entry point of the curriculum is the Certificate in Community Health Work (Midwifery). Students may, however, exit the program at various levels as a functional category of health worker in the health care system. They may also likewise reenter the program at any point at a later time, depending on community's needs.

Between program levels, there is a built-in “service leave,” when students are required to return to the community that nominated and sponsored them and render health and community development services based in those areas. Service leave is also a requirement for licensure.

Siega-Sur described how the school developed the competencies based on local needs of the community. In many communities in the Philippines, she said, there is only a midwife or a nurse to provide care; therefore, when structuring their curriculum, UP felt the ability of health professionals to multitask was paramount in their education. Students would need to know how to deliver babies, assume multiple tasks, make decisions, and provide

the necessary care within their competence in the absence of other health worker categories. That was an important component that became part of the stepladder curriculum. Drafting of curriculum also had to take into consideration the rules and regulations of midwifery practice, nursing practice, and medical practice in the Philippines.

### *The Five-Star Health Professional*

Siega-Sur then described the five competency areas for what UP-SHS calls the “five-star health professional.” The five competency areas are threaded throughout the curriculum of midwifery, nursing, and medicine—each building on the previous level. The primary area is the education and training students receive as health care providers, either as midwives, nurses, or physicians. The second is training to become community organizers and mobilizers so students become competent in organizing their communities for health action. A third area involves training to be health service and program managers so students can run programs and services in their communities and can supervise health and auxiliary personnel in their communities. The fourth is skills development in research, and the fifth is learning how to be trainers and educators.

Siega-Sur gave an example of how the competencies are woven through various levels of the curriculum. Midwives are taught how to care for babies, children, and childbearing women. At the nursing level, they learn to care for clients with medical or surgical problems, psychiatric problems, and a variety of other health problems. At the medical level, they are taught the knowledge and skills of a clinician. Each element of the program builds on the other components, so graduates who complete the entire program possess the skills and knowledge of a nurse, a midwife, and a physician. Siega-Sur said that, in effect, one has the equivalent of an entire health team rolled into one person. This form of education that emphasizes the different professions learning together gives students a greater understanding and appreciation of the roles and contributions of each of the other health personnel in the team (see Table 2-1).

### *Skill Sets Taught to Students*

Siega-Sur then described the skill sets that are taught to students. As noted in Figure 2-2, the star displays the skill sets taught to students, and the small circles at the edge of the star represent the five competency areas described earlier, which are health care provider, community organizer and mobilizer, health service and program manager, researcher, and trainer/educator. Threaded into all of these competency areas are four main skill sets—communication, advocacy, cultural competence, and decision making.

**TABLE 2-1** Skills Learned and Components of the UP-SHS Program

Certificate or Degree	Skills Learned and Components
MD	<ul style="list-style-type: none"> <li>• Clinician</li> <li>• Preparation and implementation of the MHDP, project development</li> <li>• Management and supervision of programs and personnel</li> <li>• Staff development, intersectoral trainings</li> <li>• Research</li> </ul>
BS Nursing	<ul style="list-style-type: none"> <li>• Nursing care of clients with M/S, MCH, psychological, or other health issues</li> <li>• Management/supervision of the nursing component of the MHDP, programs, and personnel</li> <li>• Disease surveillance and epidemiologic investigation</li> <li>• Training</li> <li>• Research</li> </ul>
CHW (Midwifery)	<ul style="list-style-type: none"> <li>• Care of mothers and children</li> <li>• Networking, community-based planning (community health development program)</li> <li>• Management of the BHS/BHC</li> <li>• Data collection on vital statistics, survey</li> <li>• Health education to individuals and families</li> </ul>

NOTE: BHS/BHC = Barangay Health Station/Barangay Health Center; CHDP = community health development program; MCH = maternal and child health; MHDP = Municipal Health Development Plan; M/S = medical-surgical.

SOURCE: Siega-Sur, 2014.

At the university, it is believed that students should be taught how to communicate and have a dialogue with a community, and be taught advocacy skills so they can be their community's advocates. Another skill set, cultural competence, is important. One reason is that in the Philippines sometimes treatment is associated with the cause of the disease; for example, if a "supernatural cause" is perceived, then the individual would go to a traditional healer for guidance. Siega-Sur said that understanding the culture is extremely important for any health professional working with communities. Decision making and the development of values—such as equity, service orientation, compassion, commitment, and social accountability—are other key components in all of these skills.

The teaching of values is another important component of the curriculum provided at the University of Philippines. Siega-Sur emphasized that this is critical to the retention of graduates in the country, as economic values often cause graduates from the Philippines to leave the country to seek employment abroad. To get the graduates to stay in the country and serve

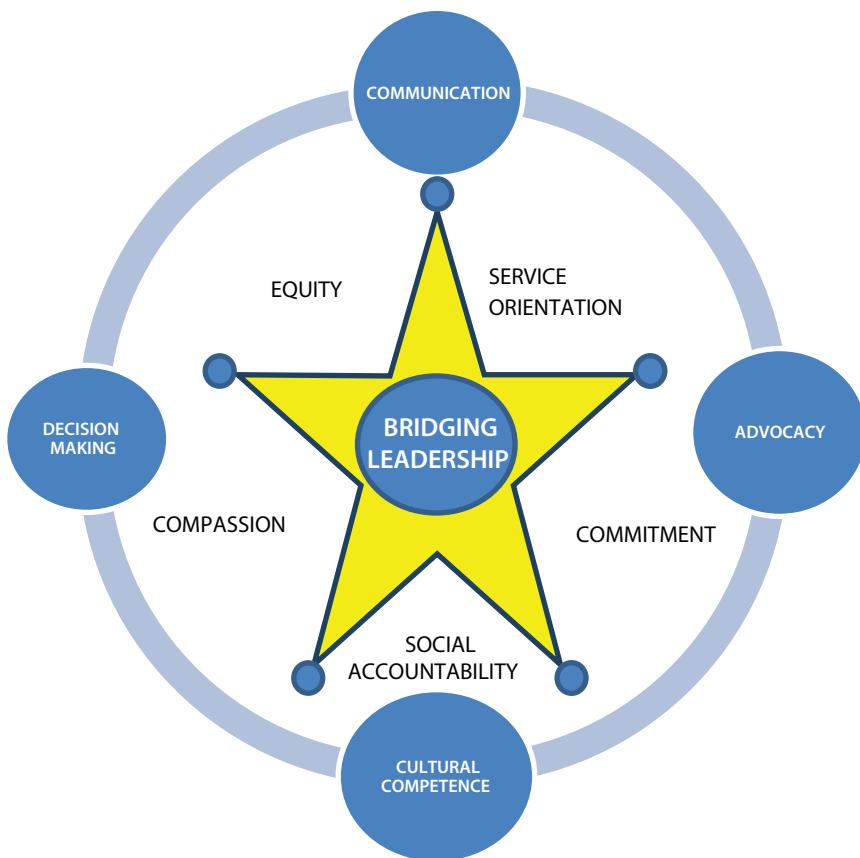


FIGURE 2-2 Skill sets taught through UP-SHS curriculum.  
SOURCE: Siega-Sur, 2014.

in the Philippines, the UP-SHS curriculum has a very strong service orientation in their students' training. There is much dialogue about compassion, equity, social accountability, and commitment to serve the communities that nominated them to train as health workers.

### *The Bridging Leadership Framework*

In recent years, the UP-SHS used the Bridging Leadership Framework as the platform for the development of leadership competencies in their students (Siega-Sur, 2014, adapted from Asian Institute of Management, n.d. See Appendix F for the original figure.). Leadership is seen by UP-SHS as a core competency that health workers must possess to achieve health out-

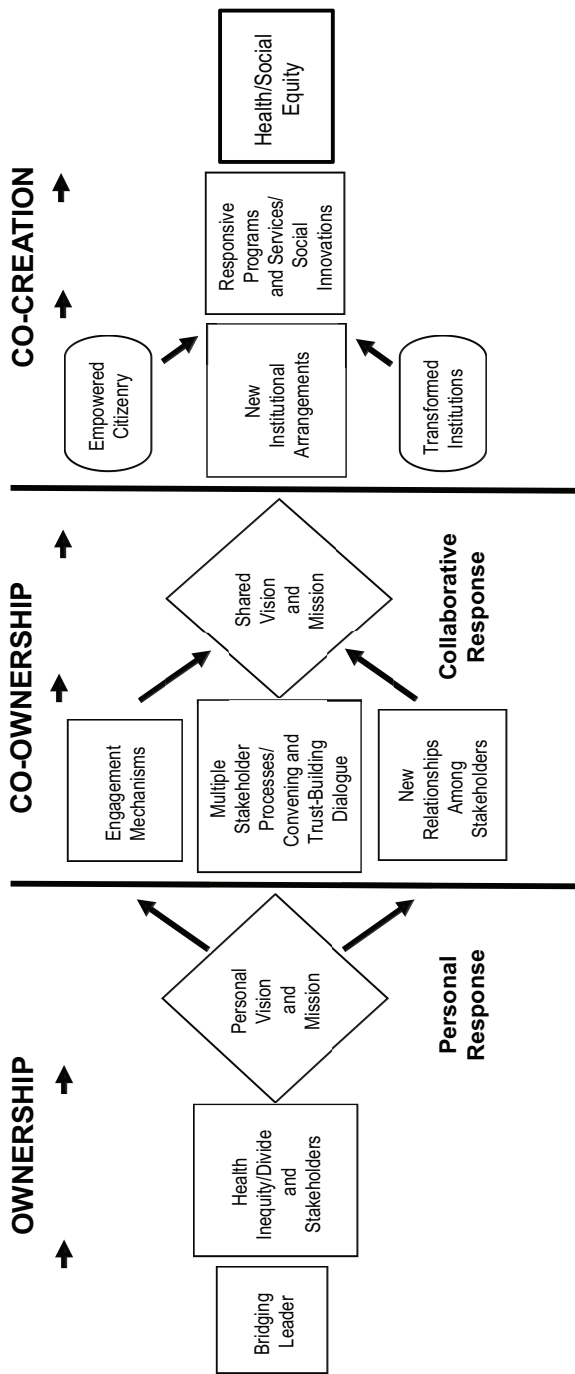
comes. The Bridging Leadership Framework draws upon the center of the six building blocks for health by the World Health Organization (WHO), which is leadership and governance. The belief is that if able to develop skills of leadership and governance then the health professional will be able to coordinate all the other four WHO building blocks of health. UP-SHS deemed the Bridging Leadership Framework as most appropriate for considering the complexity of problems that cannot be addressed by only one sector. The framework has three components: ownership, co-ownership, and co-creation (see Figure 2-3). Siega-Sur then described the qualities of a bridging leader within each of these three components.

**Ownership** Siega-Sur said that the first phase involves students developing self-awareness of their values, purpose in life, and leadership capital. They should also have a strong sense of purpose, which is to help their communities. After developing self-awareness, the goal is to develop awareness of the health and societal divides in their communities. This process helps students create a personal vision for themselves.

**Co-ownership** This personal vision is brought into the next phase, co-ownership. In co-ownership, each of the students develop an ability to engage all the stakeholders from different sectors in creating a shared vision as their collaborative response. They are taught how to do work using processes such as dialogue, multi-stakeholder analysis, and systems thinking to bring the stakeholders together and create a space of trust that promotes discussion and team development. During the community experience, they are given opportunities to engage the stakeholders in the communities they are assigned.

**Co-creation** When it becomes a shared and common vision of the community, the students are able to move into the last phase of the framework, co-creation. This phase involves developing an empowered citizenry, a transformation of institutions, and a creation of new institutional arrangements to improve health outcomes. In essence, Siega-Sur said, the goal is to train students to think creatively and to network and collaborate with health or nonhealth stakeholders in the community who are in a position to improve health outcomes. For several of their cohorts, Siega-Sur reported successfully bringing down maternal mortality rates as well as infant mortality rates (Zuellig Family Foundation, 2013a,b). She attributes much of this success to training of the local chief executives, most of whom are not doctors.

**Required competencies for each phase** Competencies required for the first phase of ownership include self-mastery, understanding health challenges,



**FIGURE 2-3** Bridging leadership framework and process.  
 NOTE: This figure was adapted from Asian Institute of Management, n.d. See Appendix F for the original figure and description.  
 SOURCE: Siega-Sur, 2014. Adapted from Asian Institute of Management, n.d.

visioning, change mastery, and resilience mastery. For the co-ownership phase, competencies include visioning, teamwork, clear communication, coaching, and conflict management among health professionals and community members. Co-creation competencies involve creativity, innovation, networking partnership, and resource mobilization.

### *Community Involvement*

The community is very involved with the educational process. To begin, Siega-Sur turns to the Ministry of Health and local government units for input as to which communities should be targeted for student recruitment. Identified community members then participate in selecting their scholar. For their entire community experience, students live with foster families in the community, who are selected by the community members, specifically, the rural health staff and the local leaders. The students' activities that cover the five competency areas noted in the Five-Star Health Professional diagram (see Figure 2-2) are also decided within the community and carried out with their participation.

The community is also involved with the evaluation of programs and projects that take place in their community. And although students facilitate the evaluation process, communities participate in conducting the actual evaluations of the projects that were implemented while the students resided in each community.

### *Evaluation*

Siega-Sur reported that evaluation is done at two levels. One level assesses student learning, and the second evaluates the effect students have on community health indicators, as established by the Department of Health. Such indicators might include studying whether student placement in the community increased facility-based childbirth or increased the number of deliveries handled by skilled birth attendants.

In addition to those indicators, there are also community-identified indicators that are part of the community health development plan. This plan is a joint effort between the student and the village council, and it includes evaluation indicators the community wants to see achieved by the time the student finishes his or her learning experience in their community.

At the end of their community-based experiential learning opportunity, students conduct a municipal exit assembly. During this event, different sectors of the community, as well as the students and the community representatives, are invited to present the output of the joint efforts of the students and the community that made up the entire community experience.

*Key Messages*

Siega-Sur shared four key messages from her perspective about the program:

1. There is a need to train more health professionals with unique skills to meet the workforce shortage.
2. Education of health professionals in the Philippines is best if it is community-based, competency-driven, and interprofessional. While students learn midwifery and nursing separately in the classroom, the training in the communities is interprofessional. Together, medical students, nursing, and midwifery students learn to work as teams in addressing community problems. They are also able to practice supervision. The entire education is community engaged from the beginning; students start in the community much earlier than they do in other schools. According to Siega-Sur, medical students spend 18 months in a community internship, in addition to their community experiences in the midwifery and nursing levels.
3. The UP-SHS program emphasizes quality and relevance. The intent is to train the right type of health worker with the right skills for future work in the place where the student will ultimately be employed.
4. The interaction and joint planning between academia, the health system, and local governments are necessary to improve health outcomes.

**CHANNELS Project**

*Jennifer Morton, University of New England*

Jennifer Morton is Program Director for the Department of Nursing at the University of New England. She is also a core faculty member for the Interprofessional Education Collaborative at the university, which is located in Maine. With campuses in three separate locations, Morton pointed out her university educates the largest number of health professional students in the State of Maine without the benefit of an academic health center. Because of this, she and her colleagues rely on clinical partnerships to educate their students in their clerkships, preceptorships, and clinical experiences. Although these partnerships pose significant challenges, this setup is actually beneficial for community-based learning.

A cornerstone of the university, according to Morton, is its robust IPE infrastructure and its community-based educational focus that is guided by a public mission. Box 2-1 includes the list of health professions and



**BOX 2-1**  
**Health Professions Within the**  
**Westbrook College of Health Professions Campus**

- Applied exercise science
- Athletic training
- Dental hygiene
- Nurse anesthesia
- Nursing
- Occupational therapy
- Physical therapy
- Physician assistant
- Social work

Other Colleges: College of Dental Medicine, College of Osteopathic Medicine, College of Pharmacy.

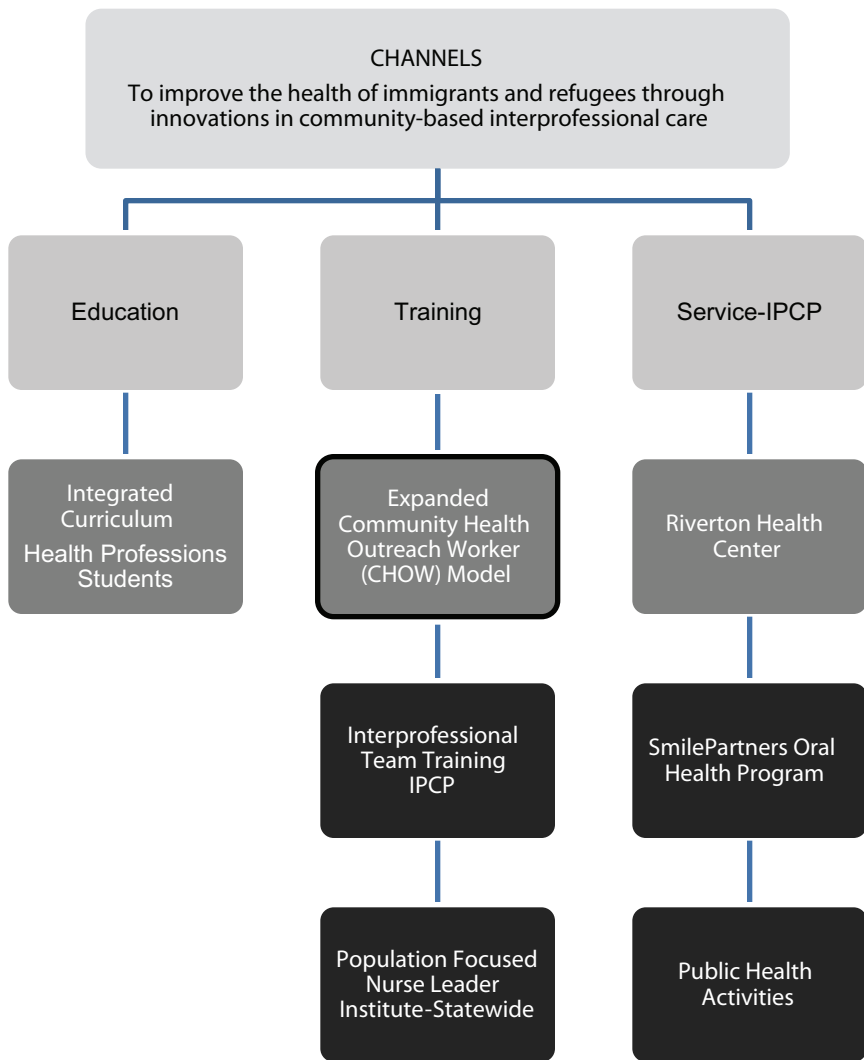
other colleges within the University of New England Westbrook College of Health Professions campus.

In describing how she and her colleagues at the university think about competencies for good work in communities, Morton referred to a project that her university was awarded through the Health Resources and Services Administration (HRSA) 2 years ago. To frame her comments, Morton explained that most residents of Maine are Caucasian, but Maine is also a resettlement area for immigrants and refugees. There are also other vulnerable populations including rural, low-income residents.

The HRSA award was to create an innovative, interprofessional program that would improve health outcomes for immigrant and refugee communities in the Portland, Maine, area.

The resettlement area is a new home to 400 to 450 primary or secondary refugees annually. Also, about 13 percent of the City of Portland, Maine, where Morton has rolled out this initiative, is foreign-born, with English as a second language. The fact that Maine is also a non-Medicaid expansion state, Morton says, causes great confusion among the most vulnerable members of the community.

The program, called CHANNELS (Community, Health, Access, Network, Navigate, Education, Leadership, Service), is based on a model of *education* for students, *training* of health professionals, and *service* to the community (see Figure 2-4 for the program model). Morton provided the context surrounding her fundamental and targeted approach to working



**FIGURE 2-4** CHANNELS program model.  
 NOTE: IPCP = interprofessional collaborative practice.  
 SOURCE: Adapted from Morton, 2014.

with communities, which uses the best available evidence to inform education and practice. Figure 2-4 shows that the ultimate goal of the project is to improve the health of immigrants and refugees through innovations and community-based interprofessional care.

*Educating Students*

Morton expressed her dismay that in her experience and historically, universities educate students in community and population health during the final semester of their fourth year. To her, that was too late in the curriculum. She believes that community health and public health principles need to be threaded throughout the educational process and not presented as a stand-alone course. Therefore, in designing their program, Morton and her colleagues elected to integrate population health throughout the students' education and to teach the more advanced skills for community and population health during the final semester.

In addition to being longitudinal and interprofessional, the program is bicultural and participatory with the community. It is also grounded in cultural sensitivity. Although there are many theories about how to teach it, Morton views cultural sensitivity as an area that is continuously changing and evolving; she said that because of this, no one can ever truly reach full cultural competence, and it is a process that one learns over a lifetime.

The other component of their program integrates what Morton referred to as the 3 Ds, which draws from ideas presented in the nursing literature. The 3 Ds include diversity, health disparities, and social determinants of health. In commenting on diversity, Morton expressed her view that health professions education has a long way to go in creating academic environments that are rich with diversity. This is because academic diversity translates to workforce diversity, and there is a huge deficit in workforce diversity, said Morton. She went on to say that workforce diversity helps to eliminate health disparities (Cohen et al., 2002; LaVeist and Pierre, 2014).

The full interprofessional curriculum that will be implemented in late 2014 is intended to be 6 hours long; the number of hours, like all the pieces of the curriculum, is the result of a compromise among the health professional educators. It includes educational and community-specific competencies, as well as education in cultural humility. The cultural humility education begins with self-reflection and works toward self-awareness, sensitivity, and knowledge as the student matures personally and professionally.

The curriculum is supported by an environment and culture that has multiple opportunities for the students to engage in extracurricular activities. For example, the project runs an event series with invited speakers as well as team-based activities for students that are related to health disparities and social determinants of health. At one event, the program's community health outreach workers (CHOWs) ran a world café where students from different professions could learn about and from each other. Students learned what the other professions do and how the CHOW is an essential part of the health professional team. The intent of the exercise, according to Morton and her colleagues, was to broaden students' thinking from in-

terprofessional teams to teams that might include nonhealth professionals, like religious leaders or law enforcement.

There are also interprofessional service learning projects and small grants to support interprofessional research by students. One popular service learning project is run at the community jail. The CHANNELS project (presented in more detail in abstract C.8 on page 140) has been the inspiration for other creative opportunities for this kind of innovative, interprofessional learning.

### *Training of Health Professionals*

The training arm of the program includes the CHOW model and interprofessional team-based training for interprofessional clinical practice environments. To be sure health professionals are receiving training that draws upon the latest and best available evidence, Morton and her colleagues are reaching out to their community-based partners to help them better understand the principles of a robust interprofessional practice, as their educational competencies dictate.

Morton discovered that much larger investments in resources were required for improving the training side than were required on the educational side of her program. In fact, a relatively small amount of their HRSA grant resources went to the education side. Because many of her community-based partners work in low-resource settings that involve medical homes and Federally Qualified Health Centers (FQHCs), the false belief was that these partners were already proficient in working interprofessionally. Morton realized that understanding how to work effectively as a team or in a collaboration is something that requires active learning of those in practice.

The other piece of information that Morton discovered through the training of health professionals is that public health nursing around the world is very poorly resourced. Maine's state public health nursing agencies are so underresourced that capacity building was not possible. So, Morton and her colleagues developed a public health nursing institute that provides public health nurses in the field with advanced public health nursing skills, as well as leadership development.

### *Service to the Community*

The interprofessional clinical practice environments of Morton's program included the rollout of a new health center that was part of an FQHC, an oral health program, and roughly 50 public health activities that have been critical to the work of their program.

One example of a project within the service delivery arm is the Riverton Health Center, a clinic implemented at a housing authority site in the City of Portland that is home to 650 immigrant and refugee families. One of the problems with that housing authority site is that it is on the outskirts of Portland, and so access to health care was very difficult. Therefore, Morton and her colleagues built a community-based clinic that is a satellite of the local community health center. In building the community-based clinic, Morton's group conducted a formal needs assessment and asked the community members what services they wanted, and even how the clinic should be decorated. They initiated public health activities requested by the communities. For example, many immigrant and refugee female patients were suffering from frequent back pain; therefore, Morton implemented back pain clinics by involving the university's physical therapy department (both students and community members). Other community requests that were implemented at the clinic included Zumba classes, wellness activities, and cooking classes.

### *CHANNELS CHOW Model*

CHANNELS uses an expanded CHOW model, which Morton believes could translate to any vulnerable population. In this expanded CHOW model, the CHOWs and patient navigators not only educate vulnerable communities in Maine but also educate the university's students and others at the training sites. They educate about what navigation means and about the importance of understanding culture. Two of the CHOWs who work with Morton, Siyad Ahmed and Malual Mabur, were present at the workshop.

In the expanded model, CHOWs include cultural brokers, patient advocates, medical interpreters, and educators (community, students, providers). The model uses the Institute for Healthcare Improvement's (IHI's) Triple Aim not only as a guiding framework but also as an evaluation framework that emphasizes the importance of population outcomes, patient centeredness, and an awareness of costs.<sup>2</sup> By instilling these principles into her students early in their academic education, Morton hopes that students will have a sense of systems thinking and a overarching sense of resources and costs.

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<sup>2</sup> The Institute for Healthcare Improvement (IHI) Triple Aim is a framework for health system performance involving (1) better patient care, (2) improved population health, and (3) reduced health care costs (IHI, 2014).

*Measuring Success*

As mentioned previously, CHANNELS uses the IHI's Triple Aim for their evaluation framework. Morton also reported using both formative and summative assessments to measure progress under the education arm of her program. She and her colleagues are measuring cultural sensitivity as well as attitudes and behaviors across the continuum of interprofessional education to practice. CHANNELS uses Team Strategies and Tools to Enhance Performance and Patient Safety (TeamSTEPPS) for their education and training model for communication, quality, and safety and to measure progress toward and attainment of important interprofessional skills among her students and community health professionals.

For the service side of Morton's program, she relies heavily upon usage reports, electronic medical records, and satisfaction measured through Consumer Assessment of Healthcare Providers and Systems (CAHPS). Morton noted that one of the difficulties with the CAHPS form is its length, which makes it burdensome for people who speak languages other than English and results in survey fatigue. To avoid this difficulty, the CHANNELS project is also using another tool, the Outcome Rating Scale developed by Miller and colleagues (2003), which is a visual analog scale that contains five items. It has been translated into multiple languages and offers another lens for measuring patient satisfaction.

### COMMUNITY-BASED HPE PEDAGOGY: FRAMING FOUNDATIONAL ISSUES THROUGH DEBATE

In keeping with the principle of active learning, Forum member and workshop planning committee co-chair Warren Newton from the American Board of Family Medicine described the pedagogical technique of debating and the benefits of debates as a teaching tool. If done well, debates can stimulate critical thinking and improve communication skills while reinforcing the value of evidence-based reasoning (Hall, 2011; Shaw, 2012). The prior sessions, said Newton, started the discussion about competencies needed for innovation in community-based education. What the debate session is designed to accomplish is to talk about fundamental pedagogical issues, many of which have already come up in previous discussions, and to begin to process how the discussions might get beyond individual innovations or programs possibly within a single profession, and move toward considering how particular innovations might be spread and scaled up in the future. But before one can talk about theoretical spread and scale-up of programs, Newton felt it was important to talk some about the structure of education, which was addressed through the pedagogical technique of debates.

### Demonstrating Innovative Pedagogy

Newton has used debates for about 20 years to actively engage his students. He adapted the technique for the workshop to demonstrate how he uses this tool with his students. At the workshop, Newton refereed three 20-minute debates. Each began with a brief introduction of the topic by Newton followed by a vote of all the participants. Box 2-2 shows the topics each debater argued.

After tallying the votes, the two debaters were each given 4 minutes to state their case. One debater was given the task of arguing for a particular position, and the other was given the responsibility of arguing against the position. Neither side was allowed to use PowerPoint slides. Following the two arguments, Newton opened the floor for 8 minutes of discussion to allow the workshop participants an opportunity to comment on either side of the debate. This led to a recount of the votes to see whether the debate and the subsequent discussion had changed any of the participants' positions. The last step was to allow each debater an opportunity to express their true opinion of the topic.

Newton pointed out that the three selected debate topics do not have a clear right or wrong answer. However, for the purposes of the debate, the debaters and the participants are asked to commit to one side when debating and when voting, respectively. Newton likened this to most academic and leadership roles, in which hard decisions have to be made even though there is no one obviously right answer.

He further noted that this debate is not about winning. There was no rebuttal, and there were no judges. What he looked forward to was see-

#### **BOX 2-2**

##### **Debate Topics and Forum Member Debaters**

Admission Versus Training:

Rick Kellerman, American Academy of Family Physicians

Sarita Verma, University of Toronto

Longitudinal Versus Block:

Lucinda Maine, American Association of Colleges of Pharmacy

Holly Wise, American Council of Academic Physical Therapy

Virtual Versus Real:

Pam Jeffries, Johns Hopkins University School of Nursing

Eric Holmboe, Accreditation Council for Graduate Medical Education

ing how the group thinking might shift as the discussion over the topic unfolded. In essence, said Newton, the point is enlightenment, not victory.

### Debate Number 1: Admission Versus Training

In framing the first debate, Newton expressed the opinion that social accountability of health professional education involves placing health professionals in rural and underserved communities. However, this has been a challenge throughout the world. Newton asked whether it is better to recruit people who want to serve in these settings or whether it is better to educate students to obtain specific competencies that will enable them to practice in low-resource settings. He stated the question to vote on as a proposition noted in Box 2-3.

Below is a summary of the final remarks made by the two debaters, Forum members Rick Kellerman (admissions) and Sarita Verma (training). These comments reflect their feelings about the topic and not the side each was asked to support in the debate.

In the end, Verma and Kellerman agreed that an integrative approach that combines admitting the right students and training them for specific competencies is necessary. Kellerman felt that admissions committees he has worked with do a fairly good job of selecting the right candidates for his medical school, but by the time those same students enter their third year clerkship they do not have the same idealism they entered medical school with. Kellerman reflected upon a comment made during the discussion period when Patricia Hinton Walker from the Uniformed Services University of the Health Sciences brought up the negative, implicit training students receive from the “hidden curriculum.” Kellerman still sees idealism at the end of the second year, but by the third year, much of the hope has been extinguished as the students become acculturated in what can be described as a “toxic environment.”

#### BOX 2-3

#### Admission Versus Training Proposition

Health profession and educational institutions should place more emphasis on admissions than in training specific competencies during the educational program.

Vote 1: Those in favor of admissions

Vote 2: Those in favor of training on specific competencies



In her remarks, Verma cautioned against the desire to use admissions for solving all the attitudinal and workforce problems faced by health professions educators. Although important, admissions are not the panacea, she said. This is a complex problem created in part by the complexity of the systems students train under and ultimately must work within.

### **Debate Number 2: Longitudinal Rotations Versus Block Rotations**

Newton set the stage for the second debate by saying that block rotations have frequently been used by health professions educators for clinical training. However, there is a movement for educating health professional students through more longitudinal, integrated curricula. Most of the critics of longitudinal curricula cite practical reasons for not moving forward. With that brief introduction, Newton presented the question as a proposition in Box 2-4.

Following Newton's introduction, Forum members Lucinda Maine (longitudinal rotations) and Holly Wise (block rotations) presented their arguments before opening the floor up to the workshop participants for comments. After the discussion, Newton gave each of the debaters an opportunity to state how they really felt about the topic.

Lucinda Maine felt that both methods are necessary for educating health professional students. She then reflected on the point made by Mattie Schmidt from the American Academy of Nursing that longitudinal rotations help to provide a more meaningful, continuous, and mutually valuable experience for the student and the educator. She also acknowledged that students often do not know what area of expertise they want to pursue and therefore benefit from the wider range of options offered in the block rotations.

#### **BOX 2-4**

#### **Longitudinal Rotations Versus Block Rotations Proposition**

Should health professions education of the future promote the use of longitudinal clinical educational experiences to the advantage of patients, learners, sites, and academic programs?

Vote 1: Those in favor of longitudinal education

Vote 2: Those in favor of block rotations

Like Maine, Holly Wise thought a hybrid model was the best way to educate toward the competencies she hoped to see attained by her students and trainees. She also admitted that preparing for this debate was a challenge because in reviewing and collating the literature, she was again reminded of the different vocabularies and terms used across all the professions. This presents challenges for communication as well as comparison of the literature.

### Debate Number 3: Virtual Versus Real

The final debate Newton moderated looked at the virtues of simulation and various forms of virtual education compared with an education that uses real-life experiences with patients for educating their health professionals. In setting the stage for the debate, Newton explained that the last decade has seen an explosion of both quantity and complexity of simulations. He asked the participants to consider whether they would put their resources toward simulations or toward real patients. Participants voted on the proposition in Box 2-5.

Again Newton asked the debaters, Forum members Pam Jeffries (virtual education) and Eric Holmboe (real patients), to explain how they really feel about the issue. Like the presenters before them, Jeffries and Holmboe viewed the issue from both sides. For Jeffries, the big question is when to introduce simulations and when the ideal time is to move learners into the clinical setting using real clients. Jeffries firmly believes in providing as many virtual experiences as possible before students are sent to take care of real patients. In her experience, if students are not educated in how to deal with people, especially when children are involved, families want the students to leave because their presence creates an awkward situation.

Jeffries then reiterated her view that first should be mastery of the competency using virtual or simulated experiences, and next should be the

#### BOX 2-5

##### Virtual Versus Real Proposition

Should a priority of health professions education be the development of robust simulations that can be used to train and assess the variety and complexity of behaviors necessary to implement the Triple Aim?

Vote 1: Those in favor of virtual education

Vote 2: Those in favor of educating with real patients

opportunity to train with patients and families in real-life situations. Eric Holmboe agreed, saying that the evidence is growing that initial health professional training should start in the simulation lab and work up to practice delivery training. A good example of this is the study by Barsuk et al. (2009) from Northwestern University in Chicago, he said. In this study, researchers found that simulated learning of central venous catheter insertion increased residents' skills with the procedure and later showed a decrease in complications when the students placed catheters in actual patients.

Despite the benefits of virtual and simulated education, Holmboe does worry when simulation becomes a substitution for real work where training in a clinical environment is too difficult to set up and monitor. But he also cautioned against what was brought up previously in the workshop about the objectification of patients and people. With simulation, patients become the object instead of the subject, he said. Simulation is just not the same as a longitudinal relationship with people and patients.

This is something Holmboe struggled with while researching his position for the debate. It is difficult to argue against technology in today's educational environment, said Holmboe. Simulated training for certain skills have great potential to benefiting patients; if the goal is a competency-based education where skills are mastered, that is an excellent structure. However, if the goal is to produce health workers with experience in working with people, educators may want to rethink the structure.

His final remark involved the cost of high-fidelity simulation. There are a lot of things that can be done using low technology that can be very effective. For example, said Holmboe, learning to use a snare on the end of a colonoscope can be done with rubber rings on pegs.

Jeffries built on Holmboe's remark, reminding the audience that although simulations have exploded in roughly the past 5 years, they have been around since Resusci Anne, a training manikin developed by Laerdal in 1960. Also, she said, simulations are not about the mannequin or the technology, but rather about the pedagogy; the key is faculty development. Faculty need training on how to teach and assess learning using simulations, which in turn will improve the quality of the education.

### Global View

In addition to the individual views expressed by the debaters on the three debate topics, a number of the Global Forum members and workshop participants also contributed their personal perspectives. These were part of an open dialogue about the various points made by the debaters. They are found in Tables 2-2, 2-3, and 2-4, and are separated by the debate topic.

**TABLE 2-2** Perspectives of Individual Participants: Debate on Admission Versus Training

Name	Country of Origin	Viewpoint
Jan De Maeseneer	Belgium	My idea is that although both admissions and training are important, the most critical element for producing graduates who are competent to work with and in communities is the way the health care system is structured. If the system supports family physicians earning 8 times—or in some countries 15 times—less than a cardiac surgeon, then all the positive attributes at the time of admission or transferred during the training will be overruled by the economic incentives.
Marietjie de Villiers	South Africa	We have changed our admission criteria in South Africa to allow for a broader representative sample of students. When students graduate, it does not matter where they come from or what color they are. They are the same. In this regard, it is the training that is the essential element, so the admissions can be flexible in bringing in a diverse student body with less regard to strict academic achievement as an admission criterion.
Bjorg Palsdottir	Belgium	I would not want to choose between the two. Around the world, the pool of health professional students in higher education tends to be drawn from similar economic and social backgrounds. By setting admission criteria throughout the world that is based primarily on academic standards, there is a loss of richness and learning that can be brought from other cultures and communities. I think this begins with establishing admission criteria that look at the whole person and take other criteria than academic scoring into perspective.

**TABLE 2-3** Perspectives of Individual Participants: Debate on Longitudinal Versus Block

Name	Country of Origin	Viewpoint
Jusie Lydia Siega-Sur	Philippines	In my opinion, deciding whether an experience should be block or longitudinal depends on the objectives of the student learning. The block system would probably be more appropriate for learning clinical skills, but for community-based education, perhaps the longitudinal approach would be better. Doing block rotations in the community could result in making the community fit into the university's academic objectives rather than fitting students into the dynamics of the community.
Maria Tassone	Canada	We in Canada are experimenting with what has been traditionally longitudinal and moving more toward a rotational design, but within the same system, within the same site. I am wondering if the best curricular design for community-based education is both longitudinal and rotational and not one or the other.

**TABLE 2-4** Perspectives of Individual Participants: Debate on Simulated Versus Real

Name	Country of Origin	Viewpoint
Jan De Maeseneer	Belgium	From a Western perspective, we can afford simulation technology, which can be quite expensive. When working in Africa, simulation is often not an option because those universities cannot afford the equipment. I think that on a world scale, such differences in economic status might shift one's thinking about the value of high-technology simulations.
John Finnegan	United States-Australia	I would very much disagree that one cannot bring the community into simulation. In fact, we have seen quite the opposite with numerous efforts bringing the conditions of a community into a simulated program ( <a href="http://www.cdc.gov/flu/pandemic-resources/tools/communityflu.htm">http://www.cdc.gov/flu/pandemic-resources/tools/communityflu.htm</a> [accessed July 30, 2014]; <a href="http://3dqld.org/background">http://3dqld.org/background</a> [accessed July 30, 2014]; <a href="http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2431099">http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2431099</a> [accessed July 30, 2014]). One example is the Island that is run by the University of Queensland in Australia ( <a href="https://escholarship.org/uc/item/2q0740hv">https://escholarship.org/uc/item/2q0740hv</a> [accessed July 30, 2014]).
Dirk Hagemester	South Africa	I think we need to balance simulation with real-life experiential learning. While I want students to learn procedures not on another human being but on a plastic body, I fear greater depersonalization of people and patients as health workers mentally remove themselves from situations. In my opinion, the very ontological experience of dealing with another human body is something that a simulation will not be able to reproduce. That experience takes place in many different forms and shapes within the context of human conversation.
Bjorg Palsdottir	Belgium	I want to emphasize the need for partnering with communities throughout the entire educational process so communities co-own the education of their health professionals. In this way, communities will guide educators through pedagogical decisions like whether a curriculum should be virtual or real.

*continued*

TABLE 2-4 Continued

Name	Country of Origin	Viewpoint
Frederic Schwartz	United States	My feeling is that virtual education is easy to undertake poorly and difficult to do well. As the associate dean of osteopathic medicine in Arizona, [I know that] our group has the advantage of training at community health centers around the country; however, such training is inherently uneven with regard to student experiences. The use of simulation technology to be able to bridge some of those gaps is important if done in a way that does not dehumanize. Our hope is that our students will not remember whether their learning was on a simulated patient or a real patient because the experience is the same.
Zohray Talib	United States-Africa	Thinking more globally, if low-fidelity simulation is included in the discussion, then I think it is possible to improve the quality and the quantity of graduates. For example, in Ethiopia many of the health professional class sizes have doubled, tripled, or quadrupled in size, so it is not uncommon for 20 students to gather around one patient bed. If training takes place at only one center, it is possible for students to graduate without having ever laid hands on a patient. Low-technology simulation skills labs provide hands-on training opportunities in order to scale up the number of health workers produced.
Maria Tassone	Canada	I would agree with the important role for simulation, but I think there is an opportunity to be more thoughtful about the role that simulation plays. Despite huge investments in simulated technologies, many of the simulation centers are not fully used in part because of the time required for technical training of facilitators to support the simulations.  I think there is much to be learned from simulation, particularly for briefing and debriefing that brings simulated experiences into real environments rather than restricting such briefings to simulated environments. As such, I would promote greater strategic thinking about how simulation is used and how it can be leveraged to transform the curriculum, and make the hidden curriculum much more explicit through the best practices of simulation.

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### 3

## Factors for Spreading/Scaling Up Innovations in Community-Based Health Professional Education to Practice

#### Key Messages Identified by Individual Speakers and Participants

- When, how, and by whom an innovation is introduced and promoted could ultimately determine the fate of that innovation. (Newton)
- For an innovation to be spread and scaled, it is important to work with the partner to contextualize the innovation to the local environment and population; however, financial constraints can impede scale-up and spread of programs and models regardless of their value to a community. (Hinkle)
- Engagement of leadership can facilitate the spread and scale-up of interventions. (Hinkle, Wageman)
- Technology cannot be a substitute for the simple foundation of engaging people and asking them what they need and what works for them. (Barclay)
- A way to fix broken health systems in cities around the United States is to align engagement with data and systems redesign. (Brenner)

In setting the stage for more in-depth discussions on spreading and scaling up models of community-based health professional education, Forum member and workshop planning committee co-chair Warren Newton from the American Board of Family Medicine first noted that different disciplines

use different terminology for community-based health professional education (HPE). For the purposes of the workshop, Newton requested that *spread* be considered “expansion across professions” and *scale-up* would be considered “geographic spread” or “increasing the numbers and size of a previously formed program or model.” He admitted there would be overlap in terminology depending on one’s discipline, but he requested the participants to think about all the multiple dimensions of spread and scale-up as he defined the terms.

Newton then commented on the classic article by Kerr White and colleagues (1961) titled *The Ecology of Medical Care* (see Figure 3-1), repeated by Larry Green and colleagues in 2001. In it, White described the best available empirical evidence about what happens to individuals who experience illness. Of the 1,000 persons who get ill, 750 will have a symptom, 250 will see a physician, 9 will go into the hospital, and 1 will go into a tertiary care center. The question White raised is why so much of health professional education is located in tertiary care settings, which is the smallest box seen in the lower-right corner of Figure 3-1. The patients who get to these academic settings are systematically very different—demographically, socially,

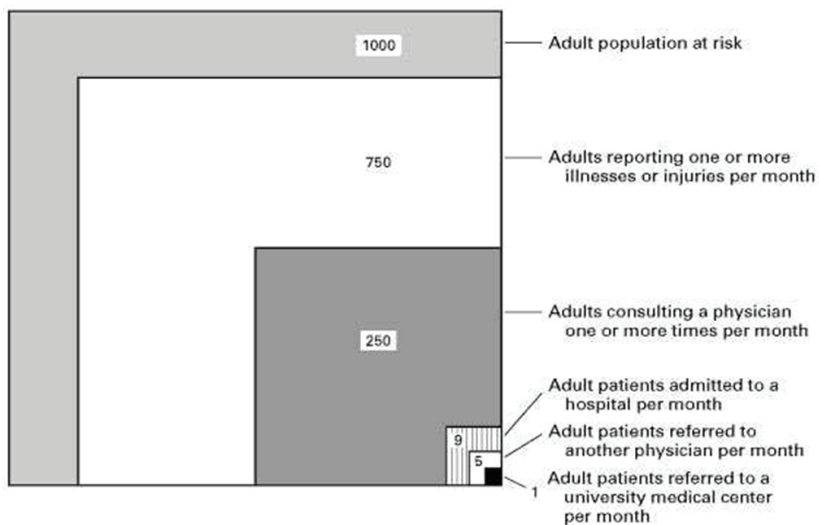


FIGURE 3-1 Monthly prevalence estimates of illness in the community and the roles of physicians, hospitals, and university medical centers in the provision of medical care (adults 16 years of age and over).

SOURCE: White et al., 1961, as presented by Newton on May 1, 2014.

and clinically—from those who stay in community settings—and students' experience of health care can become skewed.

There have been many changes in both society and health care since the early 1960s. Newton stated that the data are still relevant today in the United States. He stated that Larry Green and others found virtually no change in the numbers in 2001. Fifty years after the original report, health professions education is still heavily weighted toward university hospitals.

Newton then asked the workshop participants—who represent multiple professions and educational associations from around the world—how to move the health professional educational system out of the lower-right boxes of Figure 3-1 into the larger boxes, where students will work with patients in the community and professional settings in which the vast majority of the population experiences health care.

The third point Newton made addressed the application of research on the dissemination of innovation to new educational models. For this, he drew upon the classic work of Rogers in 1962 from his book *Diffusion of Innovations*. In it, Rogers described the natural history of adoption as a normal bell-shaped curve with innovators representing about 3 percent of the population in the left tail, the majority of the adopters (68 percent) in the center of the curve, and the 16 percent who are slow to adopt are in the right tail (Rogers, 1962). To Newton, most of the health professions' and educators' model curricula the Forum members have discussed represents the outstanding innovators and early adopters. Therefore, a key question for this workshop for him was how to spread adoption beyond the innovators and early adopters. To him, this means explicitly addressing how to spread across professions, within institutions, and across geographic regions. In addition, this would mean addressing the various levers that can support this change—starting with education and institutional initiatives, but including licensure/accreditation, incentives, changes in payment for clinical and educational work, and public policy.

Newton then asked: What determines the rate of adoption? There is rich literature on the science of dissemination, he said, but a first step is considering the characteristics of a specific innovation. First, he noted that the more complex the innovation, the slower its diffusion. IPE, for example, is quite complex. Second, he explained that all innovations come with benefits and costs that can have positive or negative impacts on the innovators, the learners, the institutions, and the wider health system—in the short and long term. This complexity means that making the case for educational innovation, both operationally and fiscally, is often challenging. Third, Newton stated that the key issue is the adopters' perception of the innovation. With respect to innovations in education, what do stakeholders—the payers, the institutions, the accrediting organizations, and the public—think about these innovations? Fourth, he mentioned the importance of timing.

When, how, and by whom an innovation is introduced and promoted could ultimately determine the fate of that innovation. Marketers have been thinking about this for a long time, and Newton believes this thinking would benefit the workshop as participants considered the conditions and interventions necessary to help spread and scale up innovations in health professional education. He believes the time is right for major innovations in education. With careful attention to the design, promotion/incentives, timing of (re)introduction of tools and models for the education of health professionals, and changes in licensure/accreditation processes, more educators may adopt innovations. This adoption, described in the workshop as the spread and scale-up of health professional educational innovations, was the focus of the remaining presentations at the workshop.

## INNOVATIONS

Zohray Talib, who is an assistant professor of medicine and of health policy at George Washington University, moderated the session on spreading and scaling up innovations in community-based HPE. The objective of the session, said Talib, was to discuss methods of improving population health outcomes by identifying and addressing gaps, and by scaling up best practices in community-based experiential learning. She said that the session would also address where along the pipeline from education to practice might efforts be concentrated. To underscore the value of shared learning for scaling up best practices, Talib described the Medical Education Partnership Initiative (MEPI) and her role in the initiative.

MEPI is a \$150 million program of the U.S. government that is designed to strengthen the health workforce in Africa. It is completing its 4th year of a 5-year grant. Almost two dozen medical schools in Africa were given funding to achieve three aims: to improve the quality and quantity of health workers, to address the retention of workers in underserved areas, and to improve locally driven research and the research capacity of these institutions.

George Washington University, along with an African counterpart, is part of the MEPI coordinating center that observes and provides assistance and support to the MEPI network. What Talib has observed through her work with the network is that among the MEPI-funded and supported schools all are investing in community-based education to achieve their goals of quality, quantity, and research.

Talib convenes a technical working group on community-based education, whose leaders and members are from the MEPI schools. They discuss what community-based education looks like in different countries and what methodologies, programs, and interventions are successful. These conversations allow the members to determine what community-based education

innovations work and what could be scaled up and spread. Talib stated that the conversation about spreading and scaling up community-based education is a global conversation.

Talib then introduced the two panelists in her session: Scott Hinkle, from the National Board for Certified Counselors, and Ruth Wageman, from ReThink Health.

### Mental Health Facilitator Program

*Scott Hinkle, National Board for Certified Counselors*

Scott Hinkle, from the National Board for Certified Counselors (NBCC), is a nationally certified counselor in clinical mental health and an approved clinical supervisor. He has been a practitioner for 35 years in the areas of community and school mental health. Hinkle currently consults with universities on issues concerning distance education and clinical training, and he is the coauthor of the mental health facilitator program.

#### *Mental Health Facilitator Program*

The NBCC Mental Health Facilitator (MHF) Program was started in 2007 and has been taught in 22 countries around the globe. It is administered by NBCC International, a division of NBCC. It was brought to the United States in January 2013. The program expands mental health service capacity, and it complements existing resources to improve services for communities.

Hinkle used the pyramid in Figure 3-2 to explain the MHF Program. Self-care, the largest slice, is at the bottom of the pyramid. This is followed by mental health services via primary care and informal community care. The next level of the pyramid contains (1) community mental health services, and (2) psychiatric services and general hospitals. The top of the pyramid is long-stay facilities and specialized psychiatric mental health services.

An important part of mental health facilitation is to teach individuals in the community self-care and to train community workers so they can prevent their fellow community members from entering areas higher up on the pyramid. To accomplish this, Hinkle avoids technical terms and sophisticated terminology so the students can understand the teachers. For example, the MHF program uses common terms such as *stress*, *distress*, and *disorder* and being *balanced*, *less-balanced*, and *off-balanced*. The MHF program has also been translated into 10 languages, including Arabic and Swahili. Hinkle noted that the program was taught in Arabic on the Syrian–Jordan border in 2012 to train workers going into refugee camps with high rates of domestic violence and child maltreatment.

Another item Hinkle pointed to in Figure 3-2 is that the program uses a

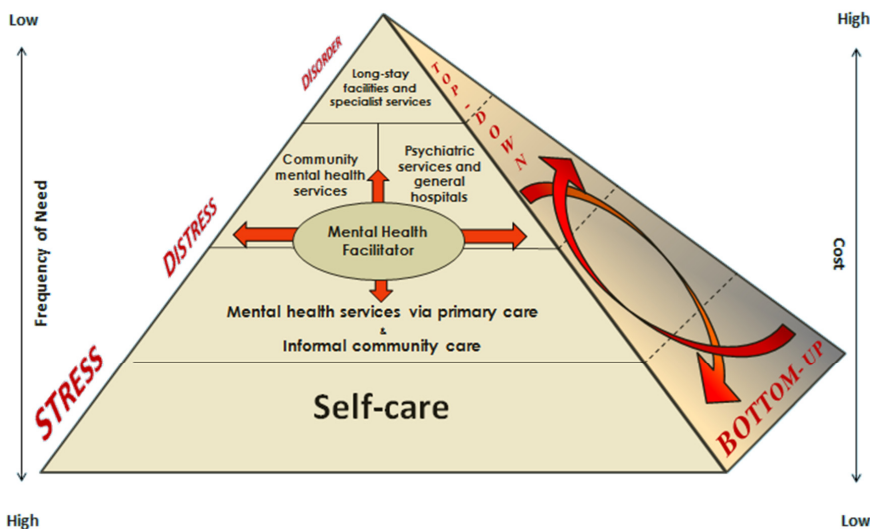


FIGURE 3-2 Modified WHO pyramid framework: mental health facilitator (MHF). SOURCE: Hinkle, 2014.

bottom-up and a top-down approach to training (or “inside” and “outside” approach, referred to by workshop co-chair Susan Scrimshaw in her opening remarks). Though the work happens in a bottom-up model, Hinkle said that without the country’s top leaders giving sanction and credibility to the program, it will not be successful. Therefore, Hinkle often works with ministers of health and deputy ministers of health to get the program initiated.

Hinkle then addressed the “frequency of need” that is shown on the left side of Figure 3-2. As one moves up the pyramid, interventions change from brief encounters to long-term care placement that would be in the form of asylum care in many developing countries. Though the frequency of need diminishes as one moves up the pyramid, the cost increases (see the right side of Figure 3-2). This means that with more long-term care placements there is less funding available for the other interventions noted lower down in the pyramid.

### *New Curricula*

**Educator’s Edition of the MHF program** The Educator’s Edition of the MHF program is a new addition to the program that was first piloted in a school district in North Carolina and is being brought to the state of

Montana for the second piloting. Hinkle stated that this program aims to teach all school staff—including teachers, administrators, cafeteria workers, transportation, bus drivers, security, and safety officers—about basic mental health care. It provides training in how to identify people with mental health issues, how to support them, and how to get them referred.

The curriculum also includes information about child abuse, how to recognize it, what to do about it, and whom to contact within the school's mental health system. Suicide is another topic covered in the training because in the United States the data on suicide among young people are extensive and disturbing. Bullying is also included in the training. The program provides information on classroom management, because as many as 75 percent of schoolteachers indicate that they do not know how to manage behavioral problems and emotional difficulties in their classroom. The course also includes training to help teachers make referrals for appropriate consultation and follow-up. Like the MHF program, the 18 to 20 modules can be covered in 24 hours. It can be split into two weekends because, said Hinkle, the material does not need to be given in 4 straight days.

**MHF-ASAP!** Following his meetings recently with the National Alliance on Mental Illness in Washington, DC, Hinkle and his colleagues condensed their training modules into a 1-day training. Called MHF-ASAP! (as soon as possible), this training educates people in the community about basic information on mental health. This is based on the notion that about 9 out of 10 people can identify someone having a heart attack, but only 3 out of 10 people know when someone is in mental distress, he said. The condensed training modules include an introduction to concepts and skills from the original curriculum. It is for community members who are interested in mental health education but lack time. This is something NBCC would like to see incorporated into more workplaces.

### *About the MHF Program*

Hinkle described the MHF program as using a train-the-trainer model. The program has also been split into three phases: developing the program, implementing the program, and evaluating the program. The MHF program is past the implementation stage of their train-the-trainer stage; it is currently in the evaluation stage and doing outcomes research. A Syracuse University counseling professor is serving as an outside evaluator doing an outcomes study for the MHF program in Malawi and Mexico. The Educator's Edition evaluation for the state of Montana took place in summer of 2014.

Another characteristic of the MHF Program is “delivery flexibility,” which allows for the information to be applied to low- and middle-income



countries as well as low-resource areas of developed countries such as the United States. It is an independent, stand-alone training. It is also being infused in academic curricula. Recently, the MHF program was introduced into the academic curriculum at the University of Phoenix. NBCC partnered with the university to bring the MHF program into the human services bachelor's degree program, which has 10,000 enrollees. These students are being trained in mental health facilitation with the hope of creating a large cohort of facilitators that could serve their local communities now and in the future.

### *Challenges*

Hinkle discussed the challenges he faces in scaling up their MHF program. One is the financial constraints. Most of the work is funded through grants that are brought in to support the work of the MHF program. Given the small staff, there is also a human resource capacity constraint, especially since some of the programs, like that in Malawi, have grown very large and now include such innovations as school clubs and plays related to the MHF training. A second challenge is time constraints; Hinkle pointed out that the curriculum took 2 years to develop, in part because of the large number of consulting partners they involved from all areas of mental health. They included experts in psychiatry, psychology, social work, counseling, and psychiatric nursing. Before rolling the project out, Hinkle and his group piloted it twice in Mexico City.

One reason the program is time-consuming for staff is that it is completely contextualized with the local partner. This is a very important step for Hinkle. For example, Hinkle said that in Bhutan, where there are only two psychiatrists (WHO and Ministry of Health Bhutan, 2006), NBCC has established a very robust program. All of the contextualized details must be worked out before NBCC arrives onsite for the actual training. In this way, the first day of the training is directly applicable to the local situations where the education would be applied. On the last day of the training, the students are asked to apply the information they learned.

Another challenge Hinkle faces is striking a balance between maintaining high-quality control while providing flexibility. Hinkle emphasized that NBCC does not want anyone excluded from their program. Based on the tracking of their trainees—the master trainers, the trainers, and the mental health facilitators—on average, the people who get trained do a lot of good in their communities. Given their proven track record, Hinkle believes he and his colleagues have struck the right balance despite many challenges faced in running such a multifaceted mental health training program.

Hinkle stated that the greatest barrier for mental health treatment and education is stigma and discrimination. For example, in the United States,

40 percent of people who have serious, severe mental health conditions do not get treatment, and the main reason for this is stigma (Narrow et al., 2000). Hinkle says that he deals with this barrier in every country where he works.

### *Enablers to Success*

Hinkle stated that the MHF program does not solicit communities to use their program; rather, the communities seek out the program and make the request for the training. In fact, many community partners hear about the MHF program through word of mouth. The training is also flexible and can be applied to a variety of different communities.

In addition, Hinkle said that having the MHF program sanctioned and promoted by the leaders in the country helps their success. He also mentioned that the partner on the ground has an important role of ramping up the program and encouraging members of their community to attend the training.

## **ReThinking Community Health Workers: Building Stewardship and Systems Thinking**

*Ruth Wageman, ReThink Health and Harvard University*

Ruth Wageman specializes in the field of organizational behavior, studying and teaching the design and leadership of task-performing teams. Her work at ReThink Health focuses on creating effective multi-stakeholder leadership teams that work in concert to transform regional health systems.

### *Leadership Teams*

A stewardship team is composed of stakeholders in a regional health system who come together to take responsibility for transforming that system to meet the aspirations of its residents. Some groups, working with members of the ReThink Health team, use a computer simulation of a regional health system to test the impact and implications of policies or interventions they could consider implementing. Developers of the model drew from a host of different studies and scenarios when designing the program in an effort to cover the full array of potential outcomes that could result from a given intervention, among them IHI's Triple Aim (population health, cost of care, quality of care), as well as outcomes such as productivity, access to primary care, and other measures of community well-being

that stakeholders value.<sup>1</sup> Using the simulation, stewardship teams can test the effect of many different suites of interventions before committing any public or private funds toward implementation, as well as reach agreement on a shared set of priorities for the system.

Wageman stated that among the benefits of working together in this way are that stewardship teams and other participants in a region gain more understanding of their local health systems and the roles played by others in the community, and they can ask what it would take to be informed agents of change. Wageman sees an important role in the health system for developing the capacity for change leadership among the community professionals who can actually bring about system change.

### *Stewardship Teams and Systems Thinking*

According to Wageman, an increasing number of groups are convening across different institutions to take responsibility not just for their own institutions but for the management of shared resources across the system and leading on behalf of the whole. Wageman calls these leadership clusters “stewardship groups.”

In describing her work with the stewardship groups, Wageman referred to an underlying system diagram map shown in Figure 3-3. She said that this figure can be thought of as a giant meta-analysis of the research literature about the interconnections among a regional health system. Loosely speaking, the upstream drivers of health are at the top left of Figure 3-3, while elements of the health care system are shown to the right.

The schematic diagram of a regional health system illustrates the many interconnections that produce the set of outcomes that the stewardship groups might care about in a health system. No single person could possibly retain all this information or truly understand all of the interrelations, said Wageman. However, by bringing different institutional leaders together who have knowledge of different parts of the system, it is possible to explore a range of ideas.

### *ReThink Health’s Computer Simulation*

ReThink Health uses computer simulation to help groups to explore a range of ideas to transform their health system. For example, a stewardship group might have a set amount of money to invest in transforming their system but very different views about which initiatives would best

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<sup>1</sup> The Institute for Healthcare Improvement (IHI) Triple Aim is a framework for health system performance involving (1) better patient care, (2) improved population health, and (3) reduced health care costs (IHI, 2014).

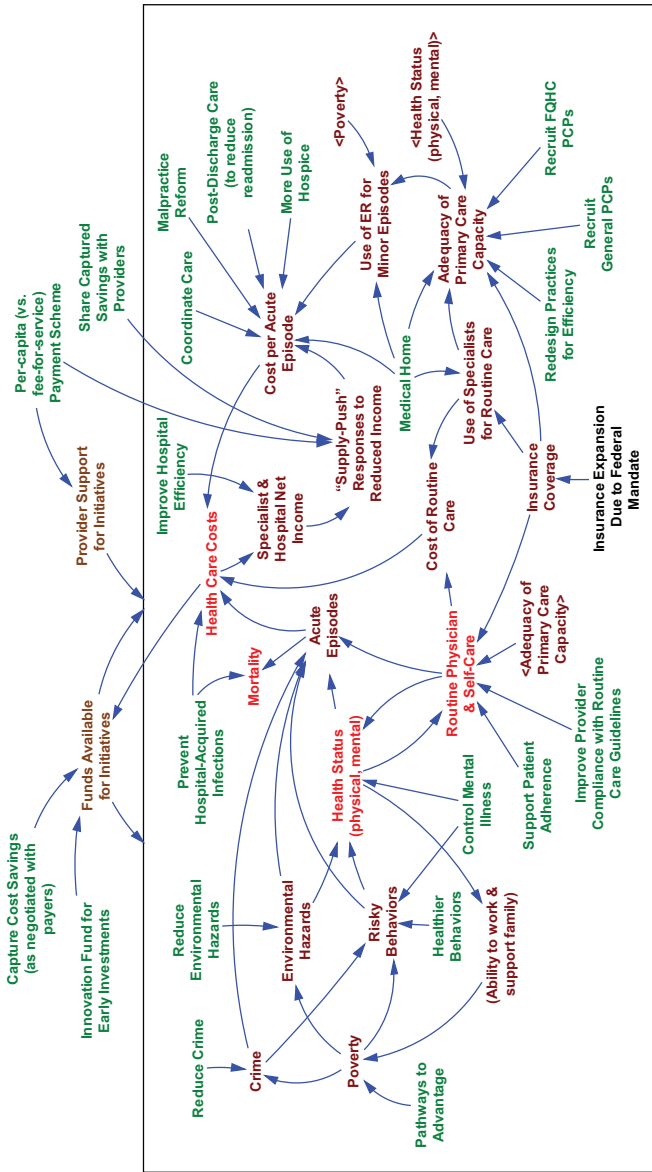


FIGURE 3-3 Schematic diagram of a regional health system.

NOTES: FQHC = federally qualified health center; PCP = primary care provider.

In this diagram, the outcomes are in red text, the interventions are in green text, and the key processes are in brown text. The upstream drivers are generally to the left of the diagram, and the downstream initiatives and process are to the right of the document. The different ways of funding initiatives are at the top of the diagram.

SOURCE: Wageman, 2014. Material original to ReThink Health.

accomplish their goals. The simulation allows the group to test what the effect would be over the course of the next several decades to see what scenarios would enable them to work toward the goals they care about. Some groups that ReThink Health has worked with have tested hundreds of different scenarios, learning from their simulations how different strategies for health system change produce different strengths and weaknesses over time, said Wageman.

For example, one possible challenge that Wageman identified in these theoretical scenarios is that the community runs out of money before producing any significant health improvement outcomes because of the long time lags between project initiation and demonstration of an effect, and because of the need to sustain expensive initiatives for long periods. A stewardship group can then look at investments that might improve the quality of care and reduce some costs in the health system, producing potential savings that might be invested in the program initiatives. Stewardship teams learn and explore by testing suites of initiatives with different timing, sequencing, and degrees of investments. This allows the group to start developing scenarios they might actually be able to accomplish within their local or regional health system.

This exercise engenders a deeper understanding of the various elements of a health system. As the group explores different scenarios, they question why one scenario produced a significant reduction in cost while a fundamentally similar scenario did not. In this way—supporting dialogue with data—Wageman and her colleagues enable stewardship teams to come to agreement on a shared strategy for strengthening their local health system through the suite of tested interventions.

### *Examples of ReThink Health Stewardship Teams*

Wageman provided two examples of groups with whom ReThink Health has worked. The first was located in the upper Connecticut River Valley of Vermont and New Hampshire. That group included leaders from regional businesses, the university, the hospital, the community, and social services. The intent of this group was to invest in community-based population health strategies that would transform their region and become a health system model for the rest of the country.

The other example was the Pueblo Triple Aim Coalition in Pueblo, Colorado. They hoped to simultaneously improve care and population health while lowering costs. They worked with ReThink Health to build a model that would radically improve the state of their health system by better combining and aligning the many different initiatives and programs that were already under way (see Box 3-1).

**BOX 3-1****Compelling Scenario for the Future of Pueblo, Colorado**

Temporary Innovation Fund = 1 percent of health care spending  
(i.e., \$10M/year for 5 years = \$50M)

1. Invest in cost-saving initiatives with a stewardship structure for the community to reinvest savings and share a significant fraction of savings with providers.  
(invest in coordination of care; invest in postdischarge planning; capture these savings; share these with providers)
2. Support self-care and safety net capacity.  
(adherence support, safety net recruitment)
3. Invest in upstream drivers.  
(healthier behaviors, pathways to advantage)

SOURCE: ReThink Health, n.d., as presented by Wageman on May 1, 2014.

*Challenges of Spread and Scale-Up*

From Wageman's perspective, one of the challenges to spreading this kind of work to include more leaders is getting leaders in health system organizations to view their role in health system change as one part of their core job responsibilities. Another challenge involves collaborative work. Wageman called for developing the capacity of leaders in the system to establish true system vision, shared stewardship values, and a collective strategy for system transformation.

Wageman also described some of the barriers to scaling up this kind of work to more locations. First, scale-up is extremely labor-intensive work for those engaged in leading change in their own systems. Second, it is relatively difficult to entice leaders to work outside of their own home regions where their constituencies are located. When leaders do share their lessons learned, there is often a view that such lessons are not applicable to other contexts. Wageman admits some truth to that view that context-specific lessons are valuable and that lessons learned from one location would have to be applied in extremely context-sensitive ways to the new location. But despite this perspective, the most frequently asked questions by these leadership groups are "Who else has gone through this before us?" and "Can we talk to them?" In her opinion, a lot of learning happens when leaders

from different regions are connected directly. This connection provides new stewardship teams the opportunity to ask specific questions to those who have faced similar challenges. Wageman believes that such learning networks can be formed by using virtual connections. These networks will enable the development of stewardship capacities and enhance the work that regional leaders are doing to draw upon the power of shared leadership for overcoming challenges to building stronger, community-based health systems.

### *Enablers of Success*

Wageman identified what in her opinion are the key approaches to developing stewardship capacities. These include

- Innovative action-research (systematic learning from theory-guided interventions) and place-based experiments;
- Evidence-based frameworks and guides for action;
- Real-time ongoing coaching and support of stewardship activities;
- A learning community of groups tackling the presented challenges that is convened across contexts for mutual challenge, support, and learning; and
- A learning community of people who teach, support, and coach these groups.

She also stated that a critical factor to success is a shared sense that the moment is now. There is a sense of urgency, and leaders are committed to finding solutions together, she said.

## TECHNOLOGY AND INNOVATIONS IN COMMUNITY-BASED HPE

Forum and workshop planning committee member Gillian Barclay started the session by challenging the notion of technology as the driver for better care, improved population health outcomes, and better value for care. It is about people, she said. Technology cannot be a substitute for the simple foundation of engaging people and asking them what they need and what works for them. That is what a system of health and health care can be built upon to meet the needs of the people based on what they themselves say works for them.

After health system players understand the needs of the people, then it is appropriate to look at the usefulness of technology for improving the practice of health care—including how professions practice and interact—and how to improve health outcomes. With those few introductory comments,

Barclay then introduced the two speakers whose remarks are summarized below.

### Camden Coalition of Healthcare Providers

*Jeffery Brenner, Camden Coalition of Healthcare Providers*

Jeffery Brenner is a family physician who has worked in Camden, New Jersey, for the past 15 years. He began his work in Camden by opening a practice that provided full-spectrum family health services to a largely Hispanic Medicaid population. After recognizing the need for a new way for hospital providers and community residents to collaborate, he founded the Camden Coalition of Healthcare Providers and has served as its executive director since 2003.

#### *The City of Camden, New Jersey, and Its Health System*

Brenner described the city of Camden in his opening comments. It is a densely packed urban environment with rampant poverty and high crime, making it one of the most dangerous cities in the United States. And despite taking up only 9 square miles, it is home to three emergency rooms and two hospitals—one of which is a large academic health center.

After 4 years as a solo practitioner in Camden, Brenner put in motion a membership nonprofit that was the start of the Camden Coalition of Healthcare Providers. The vision for the coalition was to be the first city in the country to bend the cost curve and improve quality. To accomplish this, Brenner and his colleagues set up a board involving community voices from three local hospitals, federally qualified health centers, a variety of specialty and primary care practices, and patient representatives. An advantage to this membership structure is the strong sense of ownership by its members, but, as Brenner soon discovered, it also creates a somewhat chaotic organization and a tremendous amount of work.

Soon after incorporating, the coalition had to operationalize their vision; over time, they came to the realization that they would not focus on public health or primary prevention (keeping healthy people healthy). They would also not address secondary prevention (keeping people with mild versions of chronic illnesses healthy). Instead, the Camden Coalition elected to focus exclusively on tertiary prevention that would help patients recover from harmful medical events, rehabilitate, and then reintegrate back into society. This group, Brenner said, had the greatest potential for savings; with constrained public budgets, this represented the best way for the group to improve the system in a sustainable way.

According to Brenner, the health systems in Camden and other cities around the United States are broken, and a way to fix them is to align en-



gagement with data and systems redesign. He then addressed each of these three pieces for fixing the system individually. Engagement, he said, would not be looked at using conventional health professional educational tools and jargon but would include such unconventional elements as motivational interviewing, harm reduction, change management, community organizing, and coalition building. From Brenner's perspective, these methods also help to break down hierarchies, owing to their facilitative framework. The data piece would similarly be unconventional, looking more at the outliers than the averages and more at segmentation than stratification and using more real-time surveillance data than predictive modeling. For the last piece, redesign, Brenner expressed the view that it is a systems engineering concept that looks more like a flow chart. Each box in the chart redefines who does what and how they do it within the context of the health care system. Brenner thinks of redesign as moving from "craft and guild operations" to "assembly lines." This often involves task-shifting delegation.

Brenner reiterated his three necessary elements for fixing the health care problems in Camden as engagement, data, and redesign. According to him, it is easy to accomplish one of these things, and sometimes two, but achieving all three is extraordinarily difficult. This is what the Camden Coalition set out to do.

### *Understanding System Costs*

Much of their work at the Camden Coalition was driven from what Brenner calls a homegrown database that was built with claims data from the three local hospitals. When Brenner and his colleagues assembled the database, they ended up with roughly 12 years of claims data from the hospitals. These included all the identifiers, such as name, address, date of birth, date of admission, and charge receipts. These were downloaded into two \$50 hard drives with open source encryption and password protection, and the data were analyzed with a desktop computer and Microsoft Access.

Through analysis of the data, Brenner was able to see the majority of the costs of patients being admitted to the hospitals for a given length of hospital stay. But instead of focusing on the center of the bell-shaped curve, Brenner was interested in the outliers—what he called the "long messy tail of data." According to Brenner, it is the nonlinear segment of the data that, if carefully analyzed, could provide valuable information about what is right and wrong within the Camden health system. In describing the "long tail," Brenner described one patient who visited every city emergency department hospital for a total of 113 visits in 1 year and another patient who went 324 times in 5 years. In addition, 1 percent of the patients, said Brenner, represented 30 percent of the community's health costs that came

to a total of \$650 million over 5 years, mostly drawn from public funds (Brenner and Highsmith, 2011).

In an attempt to better understand the systems dynamics, Brenner and his colleagues sought out these high users of the health system to hear from them where the system was failing them. What they at the coalition realized is that by providing better, more coordinated care to the small number of “superusers,” it was possible to improve the quality of care while simultaneously decreasing costs by reducing the number of emergency room visits and inpatient stays.

### *Health Information Exchange (HIE)*

Brenner said that much of this health system coordination was and is accomplished through collaborative data sharing known as the Camden Health Information Exchange (HIE). This is a database that provides real-time information about patients to the 50 coalition staff as well as the patients’ providers. The information includes

- Admissions, discharge, and transfer transactions;
- Laboratory results;
- Radiology reports;
- Medication reconciliation; and
- Discharge summaries (Camden Coalition of Healthcare Providers, 2014a).

He said that the HIE is used to identify patients with complex medical and often social conditions who could benefit from focused interventions provided by the coalition’s care management teams. Brenner said that patients enrolled in the care management program often have difficulty in navigating the health system and become the overusers of the hospital and its emergency care. Criteria for admission into the program involve diagnosis of two or more chronic conditions and treatments involving at least five different medications. Once identified, these patients are registered in the program coordinated by the care management team that assists the patient in navigating the complex health care system. The teams include registered nurses, licensed practical nurses, and health coaches, as well as social work support and/or case workers. Patients are kept in the program until they are medically and socially stable. The patient is then transitioned to the health coach, who provides ongoing support (Camden Coalition of Healthcare Providers, 2014b).

The program, said Brenner, reduces health care costs by avoiding preventable readmissions to the hospital for those patients who are socially stable but medically complex and at risk for overuse of the emergency

department. Patients in this program learn to properly use available medical services, despite possible language barriers and/or low literacy, which are frequent causes for difficulty in navigating health systems and the inappropriate use of services. After learning how to manage their own care, patients are then directed to their primary care physicians for management of their chronic medical conditions. (Camden Coalition of Healthcare Providers, 2014c).

### *Camden Coalition Workforce*

**Health coaches** Brenner describes the workforce at the coalition as “homegrown,” just like his data system. The coalition currently uses 10 AmeriCorps volunteers each year. These are college-educated young people, all of whom will be going to medical school, nursing school, or social work schools following their experience in Camden. The volunteers are trained to become health coaches. Following their training, volunteers are paired with the coalition’s nurses and social workers and are sent into the community as the frontline of the coalition’s intervention. Brenner emphasized the value of delegation in this and other instances throughout their care coordination process.

**Population health fellows** Also on the coalition’s team are two population health fellows that have been supported by the Aetna Foundation for 2 years. These are board-certified family doctors who spend a year with the Camden Coalition to analyze data related to the superuser group. Brenner described it as a “hot spotting” fellowship, in which fellows are presented with an ambiguous problem to figure out by using data and other available resources. They gradually learn to align engagement, data, and redesign to solve the problem. Brenner enjoys watching as the fellows’ knowledge of health systems redesign and unconventional data mining grow and develop. In his opinion, there are not enough clinical champions for population health that have the sorts of creative problem solving that are developed during this fellowship. It is going to be an important, new category of people to expand, he said.

### *Workforce Challenges*

Brenner closed by sharing with the participants some of the enormous workforce challenges he faces in Camden. For example, the community health worker (CHW) model that is built for primary prevention and secondary prevention would not fit with the highly complicated, often end-stage patients with whom they work. Because CHWs are not accustomed

to dealing with or seeing terminally ill patients, their first reaction is to send the patient to the emergency room—which brings the sickest patients back in to the hospital.

To avoid this scenario, Brenner and his colleagues have instead re-trained and retasked medical assistants (MAs) and licensed practical nurses (LPNs) for this work. What he has found is that people who have spent many years in medical offices as an MA or an LPN are not shocked by the look or condition of terminally ill people. Also, they are not intimidated by doctors or the overall health care system, so they can carefully and appropriately navigate the best care for their patient.

The other workforce challenge Brenner expressed was a lack of informaticists—people who work creatively with data—in health care. Biostatistics and epidemiology are inadequate training for the sorts of skills required for the creative problem solving they do at the coalition. This sort of work, said Brenner, requires more data generalists than data specialists. He needs people who can use multiple different tools, such as Microsoft Access and visualization software, and who can then be capable of explaining what was uncovered in the data set orally or using a self-developed slide presentation. These skills are better suited to a generalist, said Brenner—not a specialist.

### *Cross-Site Learning*

Brenner and his colleagues spent considerable time working through how to implement a superuser program and build financial sustainability. With funding through the Robert Wood Johnson Foundation and the Center for Medicare & Medicaid Innovations, Brenner and his colleagues are able to provide technical assistance to roughly 15 sites across the country that are attempting to emulate the success of the Camden Coalition. And although Brenner is most committed to helping the City of Camden, he recognizes the importance of state and national work. What he and many others have discovered is that you cannot fix health care without reaching outside of your local community.

### **Telemedicine in Rural Alaska**

*Sarah Freeman, Alaska Native Tribal Health Consortium*

Sarah Freeman is the Telehealth Program Development Director for the Alaska Federal Health Care Access Network (AFHCAN) department at the Alaska Native Tribal Health Consortium. Her role is to help develop the clinical programs and processes to deliver health care to rural areas via telehealth technologies. Freeman is a pharmacist by training and

had a diverse health care background prior to settling into telemedicine. She has worked in tribal and private sectors as well as in university and rural settings.

### *The Need for Telemedicine*

In 1999, the AFHCAN was created to improve health care access across the state of Alaska. The program was developed because patients are not physically located near their health providers. Freeman showed Figure 3-4 to illustrate the relative size of Alaska, which is often depicted on maps as being much smaller than its actual dimensions. In the Alaska Tribal System, there are six regional hospitals that serve various regions across the state, said Freeman, and most of these are very small, sometimes with only 5 to 10 beds.

The largest tribal hospital is in Anchorage, but given Alaska's enormous size, its harsh weather conditions, and the lack of road systems in the majority of the state, travel into Anchorage for health care is extremely time-consuming, expensive, and challenging. According to Freeman, flights to Anchorage are expensive and cumbersome (often involving multiple stops on small planes with intermittent flight schedules or boat rides), and the trip is disruptive to patients' lives.

The Alaska Tribal Health System is a voluntary association serving

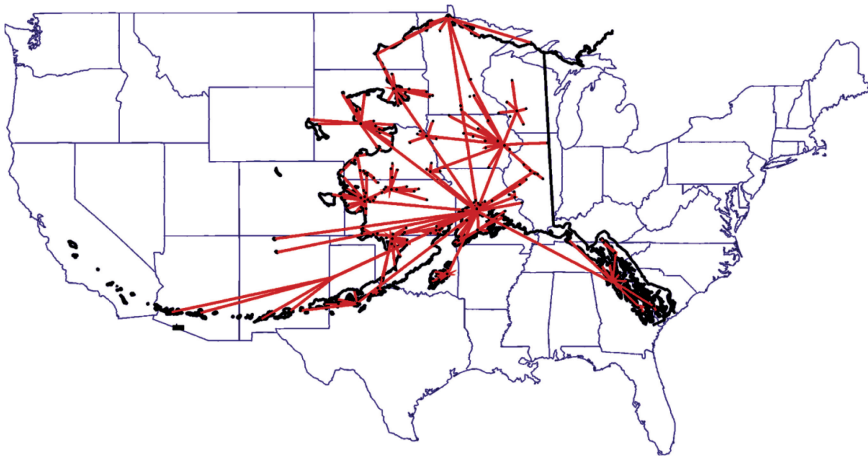


FIGURE 3-4 The Alaska Native Health Care System referral pattern. Same scale comparison: Alaska area to lower 48 states.

SOURCE: Freeman, 2014.

roughly 130,000 Alaska Native American Indian patients from more than 30 tribes across the state. Seventy percent of those patients live in small rural villages with an average size of 350 residents.

### *The Alaska Tribal Health System*

According to Freeman, most of these communities have no on-site primary care physician or midlevel provider, and 59 percent of the entire state's residents reside in medically underserved areas (Ferguson et al., 2009).

**Local level** At the village level, there are 180 small village health centers that employ about 550 community health aide/practitioners (CHAPs). The health aides are typically residents of the community and are hired by their specific tribal health organization to be the hands-on caregivers for their area. This helps foster trust and cultural understanding between the community members and the health worker. The CHAPs are physician extenders, they work out of very small clinics, and they have access to fairly extensive technological tools. The health aides go through a series of four 4-week courses where they are trained in Anchorage in basic health care delivery. They also receive an electronic health care manual, accessible through iPads, that is a guide for triaging patients and providing care. Freeman stated that the Alaska Tribal Health System also has behavioral health aides and dental health aides that work with community members. These individuals are typically stationed in the Alaska Tribal Health System hubs of their spoke-and-hub model.

**Alaska referral system** The Alaska Native Medical Center (ANMC), located in Anchorage, is the tertiary care and the specialty care provider for the entire state. They use a hub-and-spoke system for referrals. Each of the black dots in Figure 3-4 identifies one of the villages served by the ANMC where the referrals originate. Referrals are first sent to a primary care hub. If the patient requires care beyond what the primary hub can provide, then the patient is referred to ANMC for care. On average, this costs \$900 for one plane ticket, which does not include lodging or the price of an escort. Not uncommonly, this is a 3-day journey for a 20-minute visit. As Freeman pointed out, this is an inefficient system creating huge barriers to access care for the patients.

### *Telemedicine and the Alaska Federal Health Care Access Network*

About 13 years ago, AFHCAN was tasked with creating a means of providing access to care for patients living in rural Alaska. Owing to the

poor telecommunications connectivity in Alaska at that time, said Freeman, video teleconferencing with real-time interactions between patients and providers was not a viable option (videoconferencing on a larger scale is now possible because of bandwidth expansion in Alaska within the past couple of years). Instead, the group developed a store-and-forward telemedicine software and hardware system that required less stable connections.

This store-and-forward telemedicine system is still widely used today. The technology involves capturing patient data through various peripheral medical equipment—such as an electrocardiogram, an otoscope, or a stethoscope—and securely transmitting the information to a primary care provider or one of the specialty providers for review. CHAPs are trained to capture clinical data using this equipment. The primary care provider evaluates the patient based on the clinical data received from the community health aide. Based on the data, the provider then decides whether to treat the patient or refer the patient to a specialist. Either way, the patient does not have to travel to Anchorage to physically see the provider. It is what Freeman called asynchronous telemedicine care.

Using the example of a child requiring a cochlear implant, Freeman remarked that in the past the child and his or her family may have had to physically move to Anchorage because of the frequency of the follow-up needed with the ear, nose, and throat specialist. But with the store-and-forward system, an image of the ear can be quickly taken and sent to the specialist in Anchorage without having to remove the child from his or her community. Freeman explained that ear infections and other auditory complications are common in the Alaskan population, so this technology has significantly improved the quality of life of Alaskan families. The technology is used well beyond ear, nose, and throat cases; according to Freeman, there are more than 35,000 cases sent per year through their telemedicine system across Alaska. Both primary care and specialty care services are delivered through this model of care.

### *Training the Health Workforce*

Freeman stated that training community health aides on how to use store-and-forward equipment is essential for the system to function properly. The equipment was designed to be very user-friendly; for example, it has a touch screen that is color coded for simplicity. Health aides are trained on how to use the equipment, and information technology staff are trained on how to service their own equipment.

The technology that the consulting providers in Anchorage use for receiving information from health aides is also designed for simplicity. The Web-based software has the feel of Microsoft Outlook, so it is familiar to the provider and is easy to use to access and respond to cases.

According to Freeman, the Alaska Tribal Health System tends to have a large turnover rate in staff. With more than 1,500 users of the telemedicine system, this represents a significant effort by Freeman and her colleagues to keep up with the large number of new trainees. But despite the high turnover, Freeman feels this model has been working well in Alaska. The evidence is that it is now deployed in 13 different countries around the world, and domestically it is used in at least 17 states besides Alaska.

### *Challenges*

One of the challenges that Freeman noted is working with multiple health organizations to provide consistent care across the state. The consortium works with more than 30 different tribal health organizations, and Freeman believes the collaboration between these sites has been improving significantly over the 8.5 years she has been with Alaska Native Tribal Health Consortium. She believes that part of this improvement is driven by a culture shift of organizations thinking more as a health system rather than as single entities.

Another challenge that AFHCAN faces is that many community health aides leave their jobs because of burnout. They are the only persons in their communities who are seeing all of the health care issues of the community, including serious traumas. They essentially need to be available 24 hours per day, 7 days per week. Health aide work can be very difficult at times as the community health aide may be treating a family member or friend. Freeman also noted that with increased telehealth resources to assist the community health aides remotely, it is easier for them to provide services to their community and burnout may be mitigated.

Occasionally, community health aides may choose to live in more urban areas; after experiencing training there, they elect to stay instead of returning to their communities. However, Freeman stated that this is a rare problem and that the community health aides in training make a commitment to their communities to return after training.

### *Distance Learning*

Freeman's final remarks involved leveraging technology for advancing the education and skills of the health aides as well as the providers. Freeman commented that with the expanded bandwidth, it is now possible to offer live videoconferences not only for patient visits but also for training. This is an active area of engagement for Freeman and her colleagues because it is a way of educating and updating Alaskan providers residing in more rural areas.

One method they use to facilitate knowledge transfer between provid-



ers is to link physicians on a video teleconference. In one model being used today, an HIV physician specialist can conference with the primary care doctor during the virtual patient visit. This helps provide real-time guidance in how to manage the patient's care, which is particularly important because HIV is not a common disease to treat in rural Alaska. In this same visit, a pharmacist and health educator or nurse can be part of a conference call to help support all the needs of the patient in one visit. This is an excellent way to communicate the care plan across the multidisciplinary team.

Freeman said that this model is effective for a number of different specialties, including pain management, pediatric subspecialties, and other services.

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## 4

## Community-Based, Interprofessional, Educational Innovations

### Key Messages Identified by Individual Speakers and Participants

- The growing popularity of community colleges for education—both in the United States and globally—represents an opportunity for introducing interprofessional education (IPE) to students, health workers, and health professionals. (Meyer)
- It is a responsibility of faculty who are working in student-engaged volunteer clinics to publish research and outcome data so others can learn from their successes and failures. (Kolasa)
- Improving communication between law enforcement and health providers through a common curriculum could benefit the health and welfare of communities. (Adams)
- Meeting the needs of people and communities might be considered a primary goal of health professional education. (Cox, Palsdottir)

The second day of the workshop focused on outcomes of interprofessional education (IPE) in and with communities with the ultimate goal, as Newton put it, of improving outcomes in communities. He then introduced Afaf Meleis, Co-Chair of the Global Forum on Innovation in Health Professional Education, who would be making some personal observations about how to improve community outcomes. In his introduction, Newton recollected asking Meleis how she became interested in IPE. And while

she admitted there are many routes for one to be engaged in IPE, for her, a major influence was work she did at Linköping University in Sweden, where she assisted in developing a new health discipline called the *caring sciences*. With almost 3 decades of experience in IPE, Linköping University's Faculty of Health Sciences employs a problem-based learning curriculum that integrates theory and practice and makes community orientation and health promotion key concepts for learning (Linköping University, 2011). Their integration of future doctors, nurses, and caring science professionals is what helped Meleis to really understand the potential and excitement of a new way of thinking about care.

## WAYS TO IMPROVE COMMUNITY OUTCOMES

*Afaf Meleis, Co-Chair, Global Forum on Innovation  
in Health Professional Education*

According to Meleis, outcomes and effects of community-based involvement come in many forms, and her remarks were an attempt to broaden the workshop participants' thinking about outcomes. Meleis acknowledged the importance of community-based involvement of learners, educators, and health professionals for obtaining improvements, but she added that outcomes and effects of community-based involvement influence and impact research as well as health professionals' practices. To explain her thinking about how research affects community outcomes, Meleis cited two examples from her own experiences.

### University of California, San Francisco

The first example involved her work at the University of California, San Francisco (UCSF) that started in the 1970s. At that time, she and others were beginning to recognize the lack of culturally competent care at health facilities. Having been born in Egypt and educated in various schools in Egypt and the United States, Meleis was singled out as the consultant for health care professionals caring for Middle Eastern immigrants. She and her colleagues quickly realized the lack of culturally competent care given to immigrants in the United States. According to Meleis, one cannot discuss community-based education/practice outcomes without also discussing culture.

Through her consultancy, Meleis came to realize that immigrant populations from the Middle East have not been identified as a group needing special kinds of care and culturally competent care, and that little knowledge existed about this group. To address the gap, Meleis and her UCSF colleagues developed the Study of Immigrant Health and Adjustment (SIHA).

SIHA means *health* in Farsi and Arabic, which resonated well with their target community who spoke these languages.

Meleis began by inviting students and faculty to participate in developing a framework for culturally competent care. One outcome that came from this effort was that immigrants from Middle Eastern countries became defined as a minority group. By designating them as minorities, they became eligible for special funding for care through the mayor's office and then by the governor's office. Another outcome was that care for this immigrant population became sustainable. To create sustainability, Meleis's office took on new roles as a referral office, as a health assessment office, and as an advocacy office that helped Middle Eastern immigrants navigate the health care system. Much of this work was undertaken by students, so another outcome Meleis acknowledged was the experiential learning of students whose introduction into community education actually involved providing care. In addition, this work provided a variety of research opportunities for Ph.D. candidates on such topics as pain management, hypertension, exercise, and sociological activities and behaviors of this unique population. In total, 33 dissertations came from the office Meleis and her colleagues set up at UCSF. The final outcome Meleis noted was to increase the published literature about the population.

### University of Pennsylvania

The second example was from her work at the University of Pennsylvania (Penn) School of Nursing. In setting up her remarks, Meleis noted there was an aging population in West Philadelphia that required intervention to keep them at home as long as possible for social and financial reasons. She described developing a program called LIFE (Living Independently for Elders), based on the Program of All-Inclusive Care for the Elderly (PACE) program from California, which was taking care of Chinese immigrants. Meleis pointed out that, again, the product drew from work with immigrant populations.

The LIFE program in Philadelphia is owned by the Penn School of Nursing (<http://www.lifeupenn.org>). In that program, 430 elderly people in West Philadelphia receive care to prevent them from being institutionalized. The program staff administers to all their clients' health care needs, including their nutritional and cognitive requirements, as well as their transportation to and from the center in 1 of the 22 center-owned microbuses.

Outcomes in this example focus on training and research. The center provides opportunities for multidisciplinary and interprofessional training for 400 students. Additionally, there are multiple research projects going on simultaneously at the center that, once published, are translated by the

**BOX 4-1****Ruth Lubic: Nurse Midwife, Educator, Administrator, Crusader, and Advocate**

Ruth Lubic stated that the Developing Families Center in Northeast, Washington, DC, is the third freestanding birth center in which she has been involved. The first one, sponsored by the not-for-profit Maternity Center Association (MCA), was located on 92nd Street in the Carnegie Hill section of Manhattan.



According to Lubic, that center did not attract low-income people, so she and her MCA colleagues opened the Morris Heights center in the Southwest Bronx. After receiving the MacArthur Fellowship award, Lubic took what she learned in the Bronx and decided to try to open a clinic in the city with poorest birth outcomes in the country at that time, as well as a poor education system—Washington, DC. She wanted the clinic to provide not only birthing services but also social supports and early childhood education to the members of the community.

Lubic networked for 6 years before opening the DC Developing Families Center in a building and on land donated by a local businessman, John Hechinger, Sr., through Hechinger Enterprises in Ward 5 (Northeast DC). After opening

faculty researchers into practice. In this way, the published faculty research does not sit on shelves but is translated for use out into the community, which connects education to care to communities.

Meleis closed by reminding the participants of the broader focus of outcomes stemming from work and education with, from, and within communities. This led to her introduction of Ruth Lubic, who at the age of 87 continues her life's work on improving women's health outcomes through midwifery care. According to WHO (2014), roughly 800 women die every day from preventable causes related to pregnancy and childbirth. Meleis pointed out that the estimate includes not only developing countries in Africa and Southeast Asia but also developed countries where pockets of poverty and poor access to health care exist today.

That is why Lubic—a nurse midwife, educator, administrator, crusader, and advocate—has spent decades working tirelessly to find ways to help low-income pregnant women connect to the prenatal care they might oth-

the clinic in 2000, Lubic began collecting data that showed that between 2003 and 2005 rates for Cesarean sections, preterm birth, and low birth weight all decreased in the African-American population served by her birthing center (RWJF, 2010). She estimated that the clinic saved the health system more than \$1 million.

Lubic's goal was to prove that through good midwifery practice, such centers could improve outcomes and strengthen families in poverty-stricken neighborhoods. The DC Developing Families Center demonstrated that this was in fact possible. But the true outcome of success for Lubic was that although the clinic was in one of the most dangerous areas of Washington, DC, the clinic remained without graffiti and was never broken into. The reason is that members and leaders of this DC community viewed the clinic as their own and made sure no harm came to the building where the work took place.

Lubic explained that because of the community connection at the DC Developing Families Center, the center has had success in recruiting members of the community into the health professions, specifically nursing and midwifery. Lubic has seen several women who came to them as clients continue on to get their GEDs and go into nursing. Because of their positive experience at the birthing center, women modeled what they wanted to do for their careers on what they saw and how they were treated at the center.

Although the clinic does provide education to some students who seek to learn in Lubic's community-based midwifery clinic, there are too few, according to Lubic, who would welcome the opportunity to establish a more formal academic connection. When asked to provide advice to learners seeking to better engage communities, her response was simple; she said, "I think you need to take the time to do it, and when you do, make the community your friend."

erwise not have received. This is where Lubic has had the greatest impact. In 1983, she cofounded the National Association of Child-Bearing Centers. From there, Dr. Lubic ignited a movement and established more than 200 freestanding birth centers across the nation and the world, serving families at all social and economic levels. Lubic was honored for her work by the membership of the Forum at this workshop (see Box 4-1 for a summary of some of Lubic's remarks).

### OPPORTUNITIES FOR IPE IN COMMUNITY SETTINGS

Also on day 2 of the workshop, members of the Forum and other workshop participants gathered in one of three rooms to hold focused discussions on increasing the number of available interprofessional, community-based learning experiences, which for the purposes of the workshop was called "scale-up." They also considered how interprofessional experiential learn-

ing might be “spread” to include more professions interested in serving and helping marginalized or vulnerable communities.

The first two groups looked at spread and scale-up of successful community-based, IPE programs, while the third group considered a new opportunity for community-based, experiential, interprofessional learning. Each group had a leader who was assisted by at least one person who could provide greater context around the innovation. The three groups were

- Community colleges: A model for spreading community-based IPE
- Scaling up community-based, interprofessional, faculty-run and faculty-assisted student-run clinics
- IPE: Preparing law enforcement and health professions together

For each of these innovations, workshop co-chair Warren Newton from the American Board of Family Medicine asked the leader of the group to present one innovation within their prescribed area of community education to the larger audience. He was most interested in learning what each leader felt was important to spreading and scaling up of their innovation.

Next, Newton asked the group leaders to explain (1) how their innovation works; (2) when possible, what might drive a successful spread and scale-up of the innovation; and most important (3) how the innovation might be sustained. For the third question, he requested that the leaders address the opportunities and challenges of each innovation. The following are the reports from each of the group leaders to the participants of the workshop. These comments are a summary of the group discussions presented by the group leaders, and they should not be viewed as consensus.

### **Community Colleges: A Model for Spreading Community-Based IPE**

*Leader: Donna Meyer,  
National Organization for Associate Degree Nursing  
Assisted by: Poonam Jain,  
Southern Illinois University School of Dental Medicine*

#### *Background*

Forum and workshop planning committee member Donna Meyer is the Dean of Health Sciences at Lewis and Clark Community College and the president of the National Organization for Associate Degree Nursing, which represents roughly 945 community college nursing programs in the United States. She led the breakout group on community colleges and their

untapped potential for spreading and scaling up interprofessional health education. Her views about the discussions that took place were then presented to the workshop participants and began with Meyer describing the value of community colleges.

### *Value of Community Colleges*

Meyer explained that almost half of all undergraduate students in the United States are enrolled in a community college (AACC, 2014). Often considered the gateway to higher education for low-income and minority students, community colleges are deeply rooted in many communities through tax dollar support. In fact, health professions often rely upon community colleges for continuing education and for training of the health workforce. This is particularly relevant for nurses, for 60 percent of the nursing workforce begin their education through 2-year community colleges (RWJF, 2014).

### *A Model for Community College IPE*

The growing popularity of community colleges for education—both in the United States and globally—represents an opportunity for introducing IPE to students, health workers, and health professionals. However, as Meyer pointed out, few community colleges take advantage of this opportunity. The Lewis and Clark Family Health Clinic is one exception. Since the clinic's inception in 2006, the Lewis and Clark Community College's School of Nursing has been pursuing IPE within its on-campus, community health clinic. The clinic has been steadily growing in size and scope and now includes students and providers from nursing, occupational therapy, exercise physiology, dentistry, and mental health. In her breakout session, Meyer drew upon lessons learned from this robust model of IPE—at a community-based clinic on the campus of a community college—to consider how IPE in this setting might be spread to more professions and scaled up to more geographical locations.

### *Getting Started*

Meyer began by describing her desire in 2006 to establish an interprofessional community-based clinic and her concerns over the lack of clinical sites for placing her nursing students. At that time, Lewis and Clark had a health services clinic, staffed by two registered nurses, that was somewhat limited in health issues it could address. Meyer approached the president of the college with an idea for transitioning the health services clinic into



a nurse-managed center. The president became a strong ally and supported Meyer in her attempts to get such a clinic funded.

Meyer secured a grant from Health Resources and Services Administration (HRSA) to start what is now a robust, nurse-managed center providing health care and supervised student experiences to a variety of different learners for experiential, interprofessional education at a community college.

### *Lewis and Clark Family Health Clinic*

The clinic is open to the community and serves between 10,000 and 12,000 patients each year. It is operated by three nurse practitioners, two of whom have faculty practice arrangements that allow them to teach while maintaining their clinical skills. One nurse practitioner works full-time in the clinic along with two registered nurses and two administrative staff people. The state of Illinois requires that its clinics have a collaborating physician, although the physician does not have to be on-site and does not monitor their patient records. It is structured so that if one of the nurse practitioners has questions regarding the management of a difficult case, the physician will be consulted.

In keeping with the mentality of accessibility of community colleges, Meyer wanted to ensure that services at the Lewis and Clark Family Health Clinic were accessible to the community. In this way, the clinic accepts public and private insurance and keeps out-of-pocket costs for services very low.

According to Meyer, 285 nursing students rotate through the clinic, but all of their students work collaboratively. Learners from dental hygiene, nursing, occupational therapy, exercise science, and on certain occasions (like health fairs) emergency medical technician students join the collaboration.

### *Lewis and Clark Mobile Health Unit*

Like the health clinic, the Lewis and Clark Mobile Health Unit serves the communities of Southern Illinois. Meyer was assisted in her small group session by Poonam Jain from the Southern Illinois University (SIU) School of Dental Medicine, who explained the interprofessional work of the mobile clinic to their breakout group participants. The mobile unit has two private rooms, a reception area, and space for patient education. It is staffed by dental hygienists and nurse practitioners and provides interprofessional experiential learning to nursing and dental students from the Lewis and Clark Nurse Managed Center and College of Nursing. It is set up to pro-

vide a variety of preventive dental and health services like blood pressure screening and routine cholesterol or glucose monitoring (Lewis and Clark Community College, n.d.).

### *Educational Innovation*

The community-based educational innovation Meyer reported on was community colleges. Her reasoning was simple: community colleges are embedded in the community, are taxpayer supported, and draw their board of trustees from the community. More specifically, her innovation leverages community college–based health clinics for IPE. As far as Meyer knows, the Lewis and Clark Family Health Clinic is the only one of its kind offering experiential IPE at a community college.

### *Opportunities and Challenges*

Meyer identified a number of challenges to scaling up the model she presented. These include collaborations with universities, understanding IPE, economic viability, turf battles, leadership support, and accreditation.

**Collaborations with universities** Improving collaborations between universities and community colleges was cited by Meyer as a challenge and an opportunity. Her very positive experience with SIU may be an exception to what can be major barriers owing to the physical separation between campuses and the academic “cultural” divides between the two educational systems.

**Understanding IPE** Faculty who truly understand IPE are better equipped to provide educational experiences that are not simply putting different health professional students in a classroom together for lectures.<sup>1</sup> Meyer believed this could be facilitated through faculty development efforts.

**Economic viability** Meyer said that often administrators are looking for a monetary profit or demonstration that an intervention saved money, which can be difficult for clinics such as hers that are open to the community. One advantage Meyer pointed out about nurse-managed centers is that, from her experience, they are less expensive and therefore more economically viable than other more expensive models, and thus more sustainable. In

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<sup>1</sup> See the Institute of Medicine workshop summary *Interprofessional Education for Collaboration: Learning How to Improve Health from Interprofessional Models Across the Continuum of Education to Practice* for information about interprofessional education (IOM, 2013).

this regard, her nurse-managed clinic may be particularly attractive when considering scale-up.

**Turf battles** At a previous workshop addressing professionalism, the workshop participants identified turf battles as struggles over who gets paid or reimbursed for their work (IOM, 2014). Meyer pointed out that such battles still exist.

**Leadership support** Meyer felt strongly that buy-in from the presidents of the universities and community colleges is extremely important and was key to the success of her program. In addition, faculty development and getting faculty support are also important.

**Accreditation** Meyer noted the extensive discussion that ensued in her breakout group over the issue of accreditation. Accreditation is a process that, in the case of The Joint Commission, aims to assist organizations in identifying and resolving safety, quality of care, treatment, and service issues (The Joint Commission, n.d.). To maintain their accreditation status, organizations must comply with the standards. For example, the Accreditation Council for Pharmacy Education is now including IPE as one of their educational outcome standards (ACPE, 2014). However, as was brought up by a participant in the breakout group, even if IPE is part of an accreditation standard, such a requirement does not necessarily translate into an institutional culture of collaboration.

### *Closing*

In closing, Meyer repeated that as far as she knows, Lewis and Clark is the only community college in the United States to offer an interprofessional, community-based educational experience. Her students learn clinical skills while truly engaging with other professions in the clinic.

Knowing the extraordinary skill and commitment Meyer and the community college's leadership have put toward its success, Jain questioned whether such a model would be replicable at other community colleges. For Meyer, the question was not *if* but *how*. How might this model of IPE training at a community college be scaled up to other locations? And how might universities and community colleges take advantage of opportunities to work together? After all, said Meyer, so many of the health programs begin at the community colleges that it makes sense to build the workforce together.

## Scaling Up Community-Based, Interprofessional, Faculty-Run and Faculty-Assisted Clinics and Student-Run Clinics

*Leader: Kathy Kolasa, Academy of Nutrition and Dietetics  
Assisted by: Eileen Moore, Georgetown University;  
Riva Touger-Decker, Nutritional Sciences/Rutgers University; and  
Rick Valachovic, American Dental Education Association*

### *Background*

In laying the foundation for discussions in her breakout group, Forum and workshop planning committee member Kathy Kolasa described looking at IPE in faculty-run clinics and faculty-assisted, student-run clinics. These are excellent opportunities for health professional students and trainees to learn about the unique needs of special populations while engaging in real and rewarding work in community settings, she said. These clinics typically provide care to those most in need of assistance (i.e., homeless and uninsured). They can also provide opportunities for different health professional students to learn from and with other professions.

Participants who attended this breakout session heard perspectives from those who are knowledgeable about and actively engaged in health clinics that use the expertise and enthusiasm of health professional students. This led to a variety of discussions about the value of volunteer health clinics and required health clinics, how more professions might be included in them, and how they might be scaled up to more geographical locations.

### *Educational Innovation*

The innovation Kolasa described included IPE in volunteer clinics that directly involve students in the running and management of the clinic. Initially, she believed there were only two types of these clinics that were either faculty run and student operated or faculty assisted and student run. The first would offer students credit toward graduation, while the other might be strictly voluntary and occur after regular business hours. Although this may be indicated by the literature, discussions with her breakout group uncovered a much wider variety of clinics that engage students and a wider array of interprofessional pairings than were noted in the literature. However, the true depth of interprofessional training may vary from one clinic to another.

### *IPE in Student-Assisted or Student-Run Clinics*

Based on her small group discussions, Kolasa made the observation that many student clinics do not engage in purposeful IPE. Although it

might occur in some instances, students from differing health professions are often placed in the same space without necessarily working together as a truly interprofessional team. Kolasa also noted that in settings where the IPE is effectively implemented, students report tremendous value in the experience. This is because in their view, it is the only setting where they train interprofessionally, because it is not routinely part of their clinical rotation experience. Students mentioned learning about IPE in a classroom but not seeing it in action outside of their clinic. Without a properly trained faculty, the likelihood of experiential IPE becomes ever more remote, said Kolasa, adding that experiential IPE in volunteer clinics may be an area where faculty might want to focus their energy. Identifying clinics where purposeful IPE is working may be a source of information for scaling up IPE in volunteer clinics.

### *Variety of Student-Engaged Voluntary Clinics*

Kolasa's background research for this session uncovered a fairly large number of medical and dental student-run and student-assisted clinics; however, through the discussions with her group, she realized the number of professions engaging with students in volunteer clinic settings is much larger than just medicine and dentistry. It includes nursing, dietetics, social services, physical and occupational therapy, speech language and hearing, ophthalmology, pharmacy, and probably others who were not represented in the room. This discussion led to conversations about other health and nonhealth professions that could be engaged in volunteer clinics, like the veterinarians who were represented in the breakout session. Providing free animal care may be a way to bring patients into a medical clinic who possibly care more about their pets' health than their own. Kolasa used the veterinarians as an example of how the student clinics might spread to new areas of expertise such as informatics, administration, law, or engineering.

One model that was mentioned in the breakout session was the nurse-led clinic that engages students in interprofessional work. Another model, presented by a pharmacy representative, involved the students administering the clinic by seeking funding for the clinic, running the services, developing the formulary, and dispensing the medications. They are also responsible for setting up the policies and procedures for the work they undertake. This was similar to one model described by a representative from medicine, which also included an application process to screen students before they become the leaders who would undertake the components for creating a system of community-based patient care for vulnerable and marginalized populations. A faculty-driven, student-engaged model was described by the representative from dentistry. The person representing nutrition and dietetics also used a faculty-driven, student-assisted model.

Their clinic was revitalized by funding from HRSA and with space on the medical school campus to bring different health professional students together in a community-based clinic.

### *Opportunities and Challenges*

**Published data** Through discussions with her small group, Kolasa came to realize why her literature search did not reveal the true depth of work involving students in volunteer health clinics. Often, the clinics are written about in informal sources such as newsletters and annual reports. In her opinion, it is a responsibility of faculty who are working in these clinics to publish research and outcome data so others can learn from their successes and failures. One attempt to do that, said Kolasa, is the Society of Student-Run Free Clinics. This is an interprofessional platform where those interested in starting, scaling up, or spreading student-run clinics can learn from others' best practices, research, and experiences.<sup>2</sup> Although it is only focused on the United States, some of the lessons could be applicable to other countries.

**Cost** An important point discussed in the breakout session and brought to the attention of the workshop participants by Kolasa involved the term *free clinic*. Although the student experiences in volunteer clinics are called free and involve no cost to the patient, a number of expenses are incurred. Faculty time, supplies needed to run the clinic, and the facility itself are not free. This raised the issue of sustainability for these types of clinics and educational opportunities.

**Sustainability** The topic of sustainability created a host of reactions from the members of Kolasa's breakout group. One reported opinion was that, for such clinics to be sustainable, the school should embrace the idea to ensure they remain after the volunteers staffing the clinic (faculty and students) are no longer with the institution. It would be termed a university- or school-run clinic rather than a faculty- or student-run clinic.

A counterargument was proposed to institutionalize volunteer student/faculty clinics in an effort to maintain staffing by those who are truly motivated to make a difference in the lives of their patients. But by formalizing the clinic and mandating who must work in them, the clinic would no longer be driven by people who want to be there. This sentiment was echoed by another participant, who felt the issue being discussed revolved around sustaining student engagement rather than sustaining care for a vulnerable

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<sup>2</sup> For more information, visit <http://www.studentrunfreeclinics.org>.

and marginalized population. In agreement with this view, one participant believed that volunteer clinics are for giving back to the communities and for building social responsibility and accountability in students. One possible model might combine a tuition stream, to support faculty time in the clinic, and a fee-for-service payer system. This way, the clinic could take clients regardless of their ability to pay. This model has been used in dentistry. In exchange for patients coming into the clinic, dedicating their time, and being part of an educational process, there is at least a 50 percent reduction in the costs versus other community-based dental services. That fee basically covers the facility and other minor expenses. And although none of the dentistry clinics are showing great profits or surpluses, they are mostly able to sustain their operations.

Following the discussion on sustainability, an interesting comment was expressed that for the most part, these clinics are not designed to provide sustainable care. They are opportunities to engage people in the health system and then hopefully move them into a more stable care system. Expecting more may be creating something the volunteer safety-net clinic was not set up to do. This comment resonated with speaker Eileen Moore, the director of the Hoya Clinic (see Box 4-2), who felt strongly that it is incumbent upon the faculty and the students to create the connectivity between their volunteer clinic and more sustainable care beyond what they can offer. At the Hoya Clinic, a student is assigned the responsibility of linking patients to additional or sustained care and for lowering barriers, such as transportation, to better ensure the patients' care is not an episodic one-time visit without any follow-up.

### *Closing*

Kolasa finished her report by noting that many faculty- and student-run clinics were started out of altruism to provide safety nets for the community. For reasons of sustainability, these same volunteer clinics are now evolving into educational establishments that go beyond the social mission on which they were founded. In pondering this shift, Kolasa asked how the specialness of the voluntary clinics might be retained as the institutional support is built into the framework of the clinics to better ensure sustainability. And with this new sustainable structure, how might the clinic remain a place where students can express creativity to finding solutions to real-life challenges of patients and vulnerable populations?

Building upon the origins of most volunteer health clinics, Kolasa called on academic institutions to value the range of clinics established by faculty and students. They are more than just a nice promotional piece for the university, she said—they are opportunities to give back to the community

**BOX 4-2**  
**The Hoya Clinic, Georgetown University**

*Eileen Moore, Director*

The Hoya Clinic, which opened its doors in September 2007, is a collaboration between Georgetown University School of Medicine and Georgetown Med-Star Hospital. The clinic is located in what used to be the DC General Hospital, which was turned into an emergency family shelter. The Hoya Clinic is a freestanding, ambulatory care site that is accredited by The Joint Commission. The clinic is open in the evenings, usually from 6:00 PM to 11:00 PM, but often later. The clinic includes primary care specialties and some subspecialties, including psychiatry, OB/GYN, otolaryngology, orthopedics, and nursing medicine. The services are free for patients, and everyone who works at the clinic is a volunteer. There are more than 400 medical students, 27 doctors and nurse practitioners, and 24 registered nurses involved.

Though the structure of medical education in the United States is typically 2 years of preclinical experience, followed by 2 years of rotations in clinical practice, the Hoya Clinic offers all students an opportunity to engage with patients. The first-year student greets the patients, brings them to the appointment room, and takes their vitals. The second-year student records the patients' history of present illness. Then a student clinician, a third- or fourth-year student, will conduct a visit, and the faculty will see each patient. The supervision model is very direct; the students see each patient, then the faculty member learns about the patient and staffs the case. The Hoya Clinic uses the electronic medical health records to document all information. The clinic also has a fairly full pharmacy and dispenses directly (supervised by a faculty member).

To maximize the value of the patient, the Hoya Clinic respects the patient's time by aiming for a 1-hour visit with patients (from when they enter the clinic to when they leave the clinic) without compromising quality or any of the visit metrics. To facilitate this, the volunteers will often have an educational roundup at the end of the night to discuss an interesting case and talk about the educational aspects.

Moore sees two important key values of the clinic: the educational value to the students, and the service to the community and to the patients. Seeing health disparities firsthand is far more educational than being lectured about health disparities in a classroom, she believes. And the sense of community is strong because the volunteers are essentially practicing in the home of the patients. The Hoya Clinic has also worked hard over the past several years to gain the trust of the community.

Moore also identified the challenge of faculty burnout, because the Hoya Clinic is a 100 percent volunteer organization. The clinic started with only two physicians supervising, but it now has more than 20 providers. To add context to this challenge, Moore added, "Every time I go to Hoya Clinic—and I go pretty frequently—I receive so much more than I give. I actually find it rejuvenating, edifying, and sustaining. I would submit that precepting in a volunteer clinic of this sort is more rejuvenating than it is energy consuming."



and to role-model social accountability and true interprofessionalism for the next generation of faculty and health providers.

### **IPE: Preparing Law Enforcement and Health Professions Together**

*Leader: Virginia Adams, National League for Nursing*

*Assisted by: Joseph Morquecho, DC Metropolitan Police Department  
Gay and Lesbian Liaison Unit; and  
Marsha Regenstein, George Washington University*

#### *Background*

To set the stage for her breakout session, workshop planning committee member Virginia Adams explained that jails are community organizations where the majority of detainees and inmates (73 percent) have mental health and/or substance use disorders (CASA, 2010). Of the 1.5 million jail inmates in the United States, only about 11 percent receive any professional treatment for substance use disorders while admitted (CASA, 2010). Adams made the distinction between jails, which are at the local level and part of the community, and prisons, which function at the federal level and have access to greater financial resources. However, in both jails and prisons, there are evidence-based treatments that could be used but are rarely employed. This is particularly true in jails, mainly because of the short amount of time inmates and detainees typically stay in the correctional facility. The result is an unacceptably high recidivism rate of almost 45 percent, some of which can be prevented (Pew Center on the States, 2011).

#### *Sensitivity Toward Marginalized Populations*

Adams said that there has been an attempt through officer training to sensitize police officers to the needs of vulnerable and marginalized populations such as the LGBT (lesbian, gay, bisexual, and transgender) community. The District of Columbia police force now provides liaisons to LGBT persons and other marginalized groups. An objective of this effort is to strengthen positive communication with special populations. In this way, she said, officers' communication with vulnerable and marginalized persons can potentially keep LGBT individuals (who come in contact with law enforcement) out of jails by directing them to appropriate community-based intervention services.

Adams explained that health providers, who may not typically receive similar sensitivity training as that provided during officer training, could benefit from collaborative education with law enforcement officers. The

breakout session, she said, explored how the health professions' and police officers' training in a community setting could create a more sensitized and effective health professional workforce. It might also identify other unique opportunities for improving collaborations between law enforcement training and health professional education.

For her breakout group, Adams was assisted by police officer Joseph Morquecho. Morquecho is a full-time member of the Washington, DC, Gay and Lesbian Liaison Unit (GLLU) of the police department (see Box 4-3 for more information on GLLU). His unit focuses on the public safety needs of the LGBT community and their allied communities. They conduct public education campaigns on issues related to hate crimes and public safety.

The primary focus of GLLU is to gain the trust of the community and to seek out information that leads them to the closure of hate crime and violent crime within the LGBT community. They conduct patrol functions and respond to all citizen complaints. Morquecho is a first responder, especially if teenagers are involved who might be arrested but should not be in jail.

In addition to Morquecho, Adams had input in her breakout group from Marsha Regenstein, a professor of health policy at George Washington University (GW). The focus of Regenstein's work is on the availability, the quality, and the cost of care for underserved individuals. Regenstein also directs the research and evaluation for the National Center for Medical Legal Partnership and provided a unique perspective that combines policy with law for the protection of incarcerated patients.

### *Jails as Community Organizations*

In her report to the entire audience of workshop participants, Adams pointed out that there are a number of organizations that make up a community. Jails are one of these organizations that temporarily house many of the community's members. These members are part of families that make up the community, and many of them have serious mental and physical health issues. These include mental health and substance use disorders as well as chronic and infectious diseases. In trying to better care for the vulnerable populations that reside in the jails, Adams explored with her group how to better coordinate the work of those in law enforcement with health professionals and how to educate students using this model.

In looking at the value of law enforcement and health professionals working together, Adams was struck by how little those who work in the health field know about law enforcement issues, and vice versa. Given the lack of mutual understanding between police and health care providers, Adams wondered how each group could maximize the work of the other to benefit those who are part of the revolving door into and out of jail.

**BOX 4-3**  
**DC Metropolitan Police Department**  
**Gay and Lesbian Liaison Unit**  
*Joseph Morquecho, Officer*

In 1999, two openly gay female officers in the police department read an article noting that in the past 4–5 years there had been zero reported hate crimes in the DC metropolitan area, despite the fact that DC had a large gay, lesbian, bisexual, and transgender (GLBT) community. The officers wondered why hate crimes had not been reported—they thought maybe it involved a lack of training, a lack of education, or officers and/or the public not knowing how to handle the situations. The police department already had several liaison units (such as the deaf and hard of hearing liaison, the Asian liaison, and the Latino liaison), and so the officers proposed the creation of the DC Metropolitan Police Department's Gay and Lesbian Liaison Unit (GLLU). According to Joseph Morquecho, police officer with GLLU, no other law enforcement agency in the United States had a gay and lesbian liaison unit at the time.

*Gaining Trust and Developing Partnerships*

Community policing is meant to be all-encompassing, said Morquecho, and everyone in the community should partner to work toward a healthier, safer community—including health care, law enforcement, and schools and universities. To do this, GLLU reached out to the most vulnerable of the GLBT community—African American GLBT youth and people from the transgender community. There was a large part of the GLBT community that distrusted law enforcement, so GLLU worked to break down barriers and overcome this challenge through outreach programs. They partnered with the Department of Health, Child and Family Services, and nongovernmental organizations (NGOs) that had experience in health care. GLLU aimed to gain the trust of the community and to help community members improve their health so they would reduce their risk of later becoming victims.

Before GLLU existed, there were not many places where people could go to get help in difficult situations. Morquecho told a story of parents calling 911 because they found a dress in their son's room, knew he was possibly transgender, and thought he was therefore mentally ill and needed to be taken away. GLLU officers receive training, and they understand what services exist for people in need. They are in communication with psychiatrists, doctors, and mental health services, including many who are openly gay or lesbian and want to help in emergency situations. They also have contact information for most people in DC government services. Morquecho said that because of the support of the DC health department, DC mayors Vincent Gray and Adrian Fenty, and the management of the DC police department, GLLU is able to succeed.

*Work with Marginalized Communities*

The transgender community is at great risk of sexual assaults, robberies, domestic violence, and engagement in survival sex. For some of GLLU's outreach to this community, they brought in doctors from Johns Hopkins Hospital (which

does sexual reassignment surgery) to learn from the medical perspective about a transgender person's experiences. Morquecho made an important distinction that many low-income or black transgender persons face significantly different challenges that transgender persons who have accepting families, have health care, or are Caucasian. Despite the fact that the DC government has implemented some progressive changes for the transgender community, stigma continues to exist. GLLU works to decrease the stigma by doing trainings about the transgender community with various groups, such as other police officers, the National Park Service Police, parole and corrections workers, DC government employees, and bus drivers.

DC also has one of the highest HIV/AIDS rates in the country, and GLLU works to promote safe sex among the DC population, especially DC youth. GLLU also works with universities' public safety officers and trains the universities' resident assistants on how to identify club drugs, how to identify domestic violence, and how to reach out to vulnerable GLBT students.

The police department has also taken initiatives to learn how to handle cases involving people with mental illness. In the past, a person who was behaving strangely would be handcuffed and sent to jail or to DC General Hospital. Now, the police department trains critical incident officers (CIOs), who do an evaluation on a first-responder level of what needs to happen in a given situation. They also contact the proper facilities; for example, the Department of Mental Health 24/7 response team or the police emergency crisis team (they bring a psychologist to the scene). The police department partners with GW Hospital and the Psychiatric Institute of Washington to help the person in need receive proper care.

#### *Sensitivity*

Morquecho noted that his officers heard language used or questions asked in hospital settings that were inappropriate or offensive. In these situations, a person who is very sick might shut down and not let providers help. GLLU works with hospitals to do sensitivity trainings with a specific GLBT focus to help providers understand what is appropriate or inappropriate, and how to communicate with people who are vulnerable and need help. GLLU also engages students through internships and ride-alongs; some participating groups include GW students studying medical health and American University students studying criminal justice. This helps students understand marginalized and vulnerable populations in a new way and helps students to be sensitive to the issues these individuals face.

#### *Scale-Up and Spread*

Morquecho described GLLU as an innovative program that redefined community policing for the GLBT community. In fact, people from outside the GLBT community began approaching GLLU because of the services they offered. The DC police department combined law enforcement, outreach, and training into one initiative using every resource available, and created a replicable program. In Morquecho's opinion, this is what makes something truly innovative. GLLU, which won the Harvard Innovation in American Government award in 2006, has advised the governments of Cleveland, Toronto, Montreal, Scotland, Haiti, and Queensland, Australia, to help them develop similar units and trainings.

*Educational Innovation*

Adams then described the major innovation that she envisioned: Provide joint educational opportunities for trainees in law enforcement and the health professions. The training materials would be modeled on the mental health facilitation curriculum that is described in Chapter 3 of this summary report. As such, the curriculum would use a common language that is easily understood by all students and would employ a set of educational materials that are simple and flexible.

Experiential learning for gaining a better understanding of the vulnerabilities of community members could be undertaken through police car ride-alongs and specific training designed to create greater sensitivity toward vulnerable populations in service settings, such as emergency care situations. Adams believed much of the training could be done through shadowing. A component of the curriculum might also address the language used with the prisoners or detainees in the jails.

Adams also pointed out that people with a history of substance abuse and mental health problems often have a multitude of social challenges, including homelessness. These are the same people who are repeatedly jailed. Many people in society fear them and do not know how to deal with them because of their unfamiliar behaviors. The training would educate law enforcement and health professionals on how to deescalate a potentially dangerous situation in order to keep all community members safe, regardless of whether the threat is real or perceived.

*Improving Communication*

Adams reported that a major focus of the training could be on improvements in communication—more specifically, communication between law enforcement and health professionals, particularly for training around a more centralized intake process that better informs police officers and health providers. But, said Adams, that raises the question of how much information can be shared without violating HIPAA or a patient's confidentiality. For example, if a health professional suspects a client with mental health issues may have tendencies toward violence, how might the health professional safely share that information with an agency that is in the business of enforcing the law, especially when his or her prediction could be wrong?

Assuming this obstacle can be overcome, an advantage to a coordinated intake system is the potential cost savings of not having to input the same information and data from separate sources. Making the system available electronically allows for real-time information that can be turned into alerts for either the health worker or the police officer. Interprofessional training

on such a system could be used as the communication bridge between law enforcement and health.

### *Facilitating a Return to the Community*

Many inmates in the criminal justice system occupy jails for very short periods but do so repeatedly. Given this, Adams wondered whether a more coordinated system could be in place between jails and the community services that could help provide inmates with the sorts of support systems they need to prevent further recidivism. In this way, communities become safer places for everyone, including the inmate. Adams proposed that the innovative curriculum could start relationships between law enforcement officers and health providers from social services.

### *Challenges and Opportunities for Scale-Up and Spread*

**Resources** One challenge Adams identified is the lack of resources available to initiate the interprofessional curriculum. That said, the DC Metropolitan Police Department is already providing sensitivity training to their officers. Morquecho made the comment during the breakout session that his training has already been scaled up to other sites in the world. Based on that, he was confident his program could be replicated. Adams agreed with Morquecho but recognized there would be differences in the populations of trainees that would require bridging. Although this could be a challenge, Adams also considered this an asset; for example, law enforcement resources could be leveraged with social service training resources in an effective manner.

Newly available resources that Adams highlighted were discussed by Marsha Regenstein during the breakout session. Regenstein talked about the Patient Protection and Affordable Care Act and how more of the young men, especially young black men, who do not have services while they are incarcerated will now have access to health care. This may be a way of providing health care services to recently released inmates. It might also be an opportunity for interprofessional training to police candidates and health professional students or trainees. However, Adams wondered how these resources might be sustained.

**Electronic curriculum** Adams pointed to the availability of short-term, interactive modules that can be used or adapted for sensitivity training with police and health professionals and their students. If done well, it might be possible to scale up parts or the entire curriculum electronically, she said. However, in designing the virtual curriculum for scale-up and spread, considering cross-cultural messaging and differences in geographical target

areas would likely increase the reality of the situations presented to the trainees. To make the learning more active, Adams suggested the electronic curriculum could involve case modules as well as interactive chat rooms for discussions that engage law enforcement and health professionals in active dialogue.

**Leadership** Another challenge Adams identified is leadership. Most successful endeavors are pushed by a champion, who in this case would bridge the divide between law enforcement and the health professions. For this curriculum to succeed, she said, joint leadership from both sides—law enforcement and health care—would more likely drive the agenda.

**Measuring success** The final challenge is knowing how and when to measure success. Adams indicated that the ultimate desired outcome is reduced recidivism. The other way to measure success is to look at the number of inmates who connect with the right services, the number of inmates who successfully transition into the community, and the number of inmates who remain out of jail.

### *Closing*

In laying out the need for improved communication between health professionals and law enforcement, Adams cited the recent example of the 56-year-old Marine veteran who was arrested for trespassing. However, the real motivation for his arrest was an attempt by the police to keep him safe and warm during a freezing cold New York winter night. The veteran was homeless and on antipsychotic and antiseizure medication, which can increase one's vulnerability to heat. When the jail cell he was retained in reached more than 100 degrees, the veteran died from excessive heat in a facility that was ill-equipped to handle his health condition (CBS New York, 2014).

Had a system of communication been established between police and health professionals, this death and other similar incidents could potentially be avoided, suggested Adams. Members of Adams's group identified a communication tool that could possibly be adapted for these purposes. Called the Blue Button, this tool facilitates easy access to and sharing of electronic health records.<sup>3</sup> Blue Button is currently being used by some health care providers and insurance companies as well as a number of federal agencies, including the Departments of Defense, Health and Human Services, and Veterans Affairs. Adams proposed that maybe Blue Button could be scaled

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<sup>3</sup> For more information, please visit <http://www.healthit.gov/patients-families/blue-button/about-blue-button> (accessed October 3, 2014).

up and spread through interprofessional training efforts that engage more than just the health professions. A strategy such as this, said Adams, could initiate thinking and movement toward a common curriculum that would improve communication for the benefit of communities.

### LESSONS LEARNED

Warren Newton led the final session, in which he asked the workshop participants to reflect upon lessons learned based on the discussions that took place throughout the course of the workshop. He welcomed general observations as well as specific comments related to the scale-up and spread of community-based education of health professionals.

#### Broadening the Definition of Health

Malcolm Cox from the University of Pennsylvania observed how the Global Forum has evolved since its inception more than 2 years ago. To him, the tone of the discussions had changed. He noted that members were finally talking about health and communities, and making education the process for how to attain those goals or outcomes. This workshop was emblematic of that shift, said Cox.

In his opinion, this shift is important because scale-up and sustainability are about the return on investment. He said that it is important to influence the people who control the resources and the people who are most interested in health. It is up to the educators to inform workforce development to bring about system changes that result in the desired health outcomes.

Bjorg Palsdottir from Training for Health Equity Network (THEnet) agreed with Cox that education has to change in order to meet the health needs of people and communities, and she built on this point by encouraging workshop participants to look at a broader set of outcomes than just health. This could mean talking about the justice system, like what Virginia Adams addressed in her small group, or possibly the social determinants of health. Such topics are embedded in health but move the conversation into other areas. Some examples Palsdottir offered were economic opportunities that could improve health, the social capital that could be built through community clinics, the empowerment of people to take charge of their lives through health-based community outreach, and the creation of jobs through the establishment of health clinics. Palsdottir believes that the Global Forum can look at outcomes in a broader way that retains the “return on investment” that Cox mentioned.

In building on this discussion, workshop speaker Sarah Freeman from the Alaska Native Tribal Health Consortium made a concrete suggestion to bring the payers into the conversation. It would be exceedingly valuable, she



said, for groups like insurance companies, Medicare, and Medicaid to hear about health-related work and education from an outcomes perspective.

### **Roles of the Community Health Workers**

Patricia Hinton Walker from the Uniformed Services University of the Health Sciences (USUHS) expressed her view that this particular workshop on communities has pushed the participants to think more carefully about the roles of community health workers. Having been joined at the table by Malual Mabur and Siyad Ahmed—community health outreach workers in Maine and originally from Sudan and Somalia, respectively—and hearing from Daveda Hudson and Marjorie Cooper-Smith from the Care Center in southeast Washington, DC, Walker was moved to rethink her traditional definitions of health care providers.

In addition, reflecting on the talk by Scott Hinkle, who spoke about the Mental Health Facilitator program, Walker described greater sensitivity to what she termed “connections.” Health professionals are often more separated than they should be from the community, she said, but if the definition of a health provider were to include the links to the community through patient navigators and other community outreach workers, health professionals would not as separated from their communities.

### **Including Education with Broadly Defined Outcomes**

Pamela Jeffries from Johns Hopkins University School of Nursing agreed with the previous comments that there should be a focus on health, but she also felt that education has been neglected and would benefit from greater attention, not less. Jeffries mentioned that she recently attended a conference sponsored by Coursera, which is an education platform for massive open online courses (MOOCs). At that conference, Jeffries interacted with more than 450 attendees from around the world who were teeming with excitement about MOOCs being a catalyst for academic excellence in education. Jeffries wondered, how might the conversation include both education and health?

Jan De Maeseneer from Ghent University in Belgium agreed with Jeffries’ perspective. De Maeseneer is chairing the European Union Expert Panel on Effective Ways of Investing in Health.<sup>4</sup> One of the conclusions of its report was that education of health professionals should be seen as an investment. This reinforces the opinions expressed earlier—and in particular Jeffries’ opinion—about having a global perspective for keeping education and outcomes within the same sphere.

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<sup>4</sup> For more information, visit [http://ec.europa.eu/health/expert\\_panel/index\\_en.htm](http://ec.europa.eu/health/expert_panel/index_en.htm) (accessed October 3, 2014).

### Evaluating Education with Health Impacts

Zohray Talib, who is a member of the Medical Education Partnership Initiative (MEPI) Coordinating Center at GW, pursued comments about education and health but from the perspective of evaluation.

Having listened to the different examples and interpretations of community-based education, Talib suggested that an interesting and informative objective might be to try to connect strategies to outcomes through evaluation. For example, how much time does a student need to spend in a community setting in order to have the desired impact as defined by their educators, while also demonstrating an impact on the communities they serve? In answering this and other similar questions, Talib reflected on the debates session of the workshop that focused on longitudinal versus block education. She asked if it would be possible to set up a coordinated effort that looks at different models to determine which ones are having the agreed-upon effect. Those outcomes could involve improving quality, quantity, or retention of the health workforce. It would be good, she said, to compare the different types of community-based education models to see which ones achieved the desired outcome.

One complication Talib acknowledged to using health outcomes as an evaluation tool is it often takes time to demonstrate patient or community impacts, which are different from student impacts that can be assessed relatively quickly. But, said Talib, there may be surrogates that can be used for short-term evaluations when students are brought to the community for experiential learning. The students not only are being trained to be competent providers for serving their communities better in the long term, but the students are also improving the health of the target community and the facility's performance during their experiential learning opportunity. Talib wondered whether that data could be captured in a way that sustains funding for community-based initiatives; this could be a powerful message to bring to ministries of health and finance for funding, she added.

### Leveraging a Full Global Oversight Framework: Accreditation, Licensure, and Certification<sup>5</sup>

Given that accreditation is a voluntary process involving self-regulation, Newton wondered why more professions in the United States do not make community-based education part of their accrediting standards. John

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<sup>5</sup> According to the Institute of Medicine report *Health Professions Education: A Bridge to Quality* (IOM, 2003, p. 7), "It is imperative to have [such] linkages among accreditation, certification, and licensure; it would mean very little, for example, if accreditation standards set requirements for educational programs, and these requirements were not then reinforced through testing on the licensing exam."

Finnegan from the Association of Schools and Programs of Public Health widened the discussion and commented that two accreditation agencies he knows of in the United States—public health and veterinary medicine—also accredit internationally, although there are others. Linking this to Newton’s question, Finnegan asked whether community-based education accrediting standards might be expanded to recognize that the United States is part of a global community. He acknowledged that there may not be agreement on one unified design theory and that regional differences would have to be considered. But Finnegan still felt that if this is a serious social movement that includes but does not stop with education, one must ask how it might be scaled up to demonstrate a worldwide impact. In his opinion, there is a relatively substantial global interest for undertaking this.

Palsdottir confirmed Finnegan’s point, citing several global initiatives and activities under way in this area. For example, the World Health Organization recently published guidelines on transforming education for health professionals for health equity (WHO, 2013). Both she and De Maeseneer are involved in a follow-up activity to this report addressing social accountability. Palsdottir believes the Global Forum can contribute substantially to the major world conferences and international networks that also occur. The greatest value of the Global Forum, said Palsdottir, is its interprofessional membership and approach to Forum-related activities. As someone who works primarily outside of the United States, Palsdottir encouraged her fellow Forum members to seek opportunities for sharing lessons learned on a more global platform. Finnegan agreed with Palsdottir about the large amount of activity currently under way around the world, but he expressed a desire for more specificity on how to actually move the global accreditation–licensure–certification framework agenda forward.

### Envisioning the Future

Joanne Schwartzberg, a scholar in residence at the Accreditation Council for Graduate Medical Education, commented about a forward-looking issue involving home-based health services. Currently, many of these services and interventions are provided through home health and community agencies. She noted that training programs for nurses, therapists, and social workers make use of these services as an entrance into the community. In her opinion, many other health professions could similarly work with the home-based agencies for more experiential learning and training opportunities. In this way, more health professional students might explore such topics as how families live with chronic illnesses and what that means to the patient and those around them. Schwartzberg was involved with such an educational program many years ago that went beyond the health professions and engaged urban planners and architects. In looking

at health more broadly, Schwartzberg felt that nonhealth professions are a resource with whom health educators might work more closely.

De Maeseneer's final remark encouraged participants to look at new challenges that emerge not only from societal evolutions but also from scientific evolutions. How might society, and thus education, deal with future innovations coming from such fields as genomics, proteomics, and microbiomics, and what effect might discoveries in these areas of research have on the way health care is delivered? How might the health professions anticipate changes and integrate them in a meaningful way through an educational process that is more responsive to—and in sync with—the health care delivery process? If innovations trigger significant changes, how might the aims of equity and social justice be maintained and safeguarded? And, how will accountability of universities, both in their research and in their educational component, be determined? His last question explored whether innovations meant to improve lives will lead to greater inequity, or whether such advancements will be integrated in a way that brings about better health for everybody on the planet.

With that, Newton thanked the audience, and the workshop was adjourned.

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# Appendix A

## Workshop Agenda

### SCALING UP BEST PRACTICES IN COMMUNITY-BASED HEALTH PROFESSIONAL EDUCATION<sup>1</sup>

A Public Workshop of the Global Forum on  
Innovation in Health Professional Education  
May 1–2, 2014

The Keck Center of the National Academies  
Washington, DC 20001

DAY 1: MAY 1, 2014

#### Workshop Objectives:

- To provide a framework for a common understanding of the responsibilities of health professions, institutions, and students to the communities they serve.
- To explore how common terminology is interpreted within various community health settings: What is community, diversity, social accountability, ethnicity, culture, and equity? Who are the health workers and health providers?
- To identify and discuss competencies needed to engage with communities for improving health and health outcomes: What knowledge, attitudes, and skill sets are needed? How might these be imparted through learning? Where along the pipeline from education to practice should efforts be concentrated?

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<sup>1</sup> There are many opinions on what constitutes “community-based” health professional education (HPE). For the purposes of this workshop, community-based HPE includes education and training that takes place anywhere outside of the hospital setting (e.g., health clinics, churches, schools, health departments, and government offices).

- To identify gaps and best practices in scaling up community-based experiential learning using incentives and tools such as payment structures, accreditation/licensure/certification, policy, tracking, and social accountability.
- To explore a wide variety of models of community-based health professional education.

8:30am      **BREAKFAST**

9:00am      **Welcome and orientation to the workshop**  
               - Warren Newton and Susan Scrimshaw,  
               Workshop Co-Chairs

### **SESSION I: ESTABLISHING A FRAMEWORK**

Objective: To provide a framework for a common understanding of (1) the community context of health; (2) terminology; and (3) responsibilities of health professions, institutions, and students to the communities they serve.

Moderator: Susan Scrimshaw

9:10am      **Responsibilities *of* and *for* the community**  
               - Jehan El-Bayoumi, Rodham Institute out of George  
               Washington University  
               Q&A

10:00am     **What I wish the health professional knew: Views from the street**  
               - Lisa Fitzpatrick, Daveda Hudson, and  
               Marjorie Cooper-Smith, Care Center

10:15am     **Facilitated table discussions. Question: Given what you heard, how would you educate health professionals in order to develop these qualities or skills?**

10:25am     **Reporting back**

10:45am     **BREAK**

**SESSION II: SKILL SETS AND PEDAGOGY**

- 11:15am      **Competencies for work in communities**  
 Objective: To identify and discuss competencies needed to engage with communities for improving health and health outcomes: What knowledge and skill sets are needed? How might these be imparted through learning?  
 Facilitator: Beth Velde, Public Service and Community Relations, East Carolina University  
 Speakers:  
     - Jusie Lydia Siega-Sur, University of the Philippines Manila School of Health Sciences  
     - Jennifer Morton, University of New England  
 Q&A
- 12:15pm      **LUNCH**
- 1:15pm      **Community-based HPE pedagogy: Framing foundational issues through debate**  
 Objective: To debate the pros and cons of how and when to expose health professional students to community-based experiences  
 Three short debates with facilitated discussion  
 Facilitator: Warren Newton  
     - Admission Versus Training (Rick Kellerman and Sarita Verma)  
       Voting Proposition: Nature versus nurture: Health profession educational institutions should place more emphasis on admissions than in training specific competencies during the educational program.  
     - Longitudinal Versus Block (Lucinda Maine and Holly Wise)  
       Voting Proposition: Health professions education of the future should promote the use of longitudinal clinical education experiences to the advantage of patients, learners, sites, and academic programs.  
     - Virtual Versus Real (Pam Jeffries and Eric Holmboe)  
       Voting Proposition: A priority in the development of health professions education should be development of robust simulations that can train and assess the variety and complexity of behaviors necessary to implement the Triple Aim.



- 2:35pm **Introduction to spreading and scaling up community-based HPE**  
- Warren Newton
- 2:45pm **BREAK**
- SESSION III-A: SPREAD AND SCALE-UP**
- Objective: To discuss methods of improving population health outcomes by identifying and addressing gaps and by scaling up best practices in community-based experiential learning, and where along the pipeline from education to practice efforts might be concentrated.
- 3:15pm **Spreading community-based innovations**  
Moderator: Zohray Talib, Medical Education Partnership Initiative (MEPI) Coordinating Center, George Washington University  
Speakers:  
- Scott Hinkle, National Board for Certified Counselors' Mental Health Facilitator Program  
- Ruth Wageman, ReThink Health  
Q&A
- 4:15pm **Technology and innovations in community-based HPE**  
Moderator: Gillian Barclay, Aetna Foundation  
- Jeffrey Brenner, Camden Coalition of Healthcare Providers  
- Sarah Freeman, Alaska Native Tribal Health Consortium  
Q&A
- 5:30pm Closing remarks and adjournment  
- Susan Scrimshaw
- 5:30pm Poster session and reception (Keck Atrium)

## DAY 2: MAY 2, 2014

8:00am **BREAKFAST**8:30am **Welcome back and instructions**  
- Warren Newton, Workshop Co-Chair**SESSION III-B: SPREAD AND SCALE-UP OF IPE**8:45am **Breakout groups:**

Objective: To hold focused discussions on increasing the number of available interprofessional, community-based learning experiences through (1) scale-up of current, successful programs and (2) the introduction of new opportunities for community-based experiential learning.

1. Community colleges: A model for spreading community-based IPE.

*Leader: Donna Meyer, National Organization for Associate Degree Nursing*

*Assisted by: Poonam Jain, SIU School of Dental Medicine*

2. Scaling up community-based, interprofessional, faculty-run and faculty-assisted student-run clinics.

*Leader: Kathy Kolasa, Academy of Nutrition and Dietetics*

*Assisted by: Riva Touger-Decker, Nutritional Sciences/Rutgers University; Rick Valachovic, American Dental Education Association; and Eileen Moore, Georgetown University*

3. Interprofessional education: Preparing law enforcement and health professions together.

*Leader: Virginia Adams, National League for Nursing*

*Assisted by: Joseph Morquecho, DC Metropolitan Police Department Gay and Lesbian Liaison Unit; and Marsha Regenstein, George Washington University*

**Main room: Innovations in community-based HPE**

A webcast of community-based HPE examples (presentations are by invitation only)

Moderator: Stephen Shannon, American Association of Colleges of Osteopathic Medicine

10:45am **BREAK**

**SESSION IV: IMPACTING OUTCOMES**

- 11:10am **How do we improve community outcomes?**  
Introduction and remarks by Afaf Meleis, Global Forum  
Co-Chair  
- Ruth Lubic, DC Developing Families Center
- 11:30am **Breakout group report back and discussion**  
Moderator: Marietjie de Villiers, Stellenbosch University,  
South Africa  
1 – Group 1 leader: Donna Meyer  
2 – Group 2 leader: Kathy Kolasa  
3 – Group 3 leader: Virginia Adams
- 12:15pm **Spreading innovations in HPE: Lessons learned over the last 2 days**  
Objective: To discuss how the ideas presented in the workshop could be taken forward in an organized, systematic fashion that could enhance opportunities for education and training in communities that benefit both the community and the learner  
Facilitator: Warren Newton, Workshop Co-Chair  
  
Facilitated table discussions:  
What are the three most important lessons learned for health professional engagement of and for the community?  
What are the three most important lessons learned for how these can be accomplished through HPE?
- 1:00pm **LUNCH AND ADJOURNMENT**  
Room 100 will remain open until 5:00 pm for networking opportunities.

# Appendix B

## Abstracts of the May 2, 2014, Webcast Session

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## B.1

EVALUATING CBE—THE UKWANDA RURAL CLINICAL SCHOOL:  
A LONGITUDINAL EVALUATIVE STUDY

*Susan C. van Schalkwyk, Ph.D.,*  
*Juanita Bezuidenhout, M.B.Ch.B., M.Med., Ph.D.,*  
*Julia Blitz, M.B.Ch.B., M.Fam.Med.,*  
*Hoffie H. Conradie, M.B.Ch.B., D.C.H., M.Prax.Med., FCFP(SA),*  
*Therese Fish, M.B.Ch.B., M.B.A.,*  
*Norma J. Kok, M.P.H.,*  
*Ben van Heerden, M.B.Ch.B., M.Sc., M.Med.,*  
*Marietjie R. de Villiers, Ph.D., M.B.Ch.B., M.Fam.Med., FCFP*  
*Stellenbosch University*

Implementing medical education innovations places a responsibility on the relevant institutions to critically consider the efficacy and relevance of these innovations. The implementation of the Ukwanda Rural Clinical School (RCS) in 2011—the first of its kind in Southern Africa—established such an imperative for the Faculty of Medicine and Health Sciences at Stellenbosch University, South Africa. This presentation outlines the methods and some results of a 5-year longitudinal study that is investigating the impact of the Ukwanda RCS by drawing on the perceptions of those who are within its sphere of influence (students, clinicians, health care practitioners, patients, and the community).

Funded by the Stellenbosch University Rural Medical Education Partnership Initiative (SURMEPI), the study will ultimately conduct in-depth and focus group interviews with close to 350 respondents. Statistical analyses, including comparisons between RCS students and those completing their final year at the tertiary hospital, of each successive cohort from 2011 to 2015 will be completed. Now in the fourth year of data collection, the project has progressed from an initial baseline study to where it is currently seeking to identify the factors that can explain some of the experiences that have been described to date.

The study is situated predominantly in an interpretive paradigm and draws on several different data sets providing mostly qualitative data but also some quantitative results. Given the extent of the study, the design is complex, functioning at both a horizontal level—within a specific year across a range of stakeholders—and at a vertical level (the ongoing cohort analyses). Important overarching themes from the baseline study included a different learning experience, an enabling clinical environment, the role of the specialists (clinicians), and the influence of community immersion.

The second phase of analysis provides an opportunity to start tracking experiences over time. The newly generated qualitative data sets (2012), which included interviews with RCS students in that year, with the 2011

RCS cohort (as interns) and their intern supervisors at different hospitals, as well as further interviews with clinicians involved on the rural platform, were subjected to thematic content analyses. At the same time, data from 2011 were revisited. The emerging themes from this expanded data set were then considered in light of Kirkpatrick's levels for appraising educational interventions, thus developing a hierarchy from the participants' views. This analysis demonstrated how the students' initial uncertainties about attending the RCS had shifted. The results indicated a progression through the levels of Kirkpatrick's model. Attitudes, skills, and knowledge were modified during the RCS year (Level 2a and 2b), followed by a change in behavior (Level 3) and ultimately, in professional practice (Level 4a). Quantitative analysis of students' assessment marks showed that the RCS cohort performed on par with their counterparts, and better in some instances.

The experience of an educational intervention in a rural space appeared to be enriching, not only for students but also for clinicians and other health care practitioners. The rural platform provides opportunity for the lived experiences of the students to contribute to their embodied knowledge through being constantly immersed in the practice of their profession. Our findings highlight the importance of location, context, and identity development in this process, offering critical insights for medical education going forward.

## B.2

### THE MENTAL HEALTH FACILITATOR PROGRAM

*J. Scott Hinkle, Ph.D., NCC, CCMHC, ACS, HS-BCP, BCC,  
Wendi K. Schweiger, Ph.D., NCC, LPC,  
Andreea Szilagyi, Ph.D., NCC, GCDF  
National Board for Certified Counselors*

The World Health Organization estimates that 450 million people worldwide are underserved in the area of mental health care. The citizens of many countries have little to no access to mental health services, and there are many areas of the United States where people have difficulties accessing services. The Mental Health Facilitator (MHF) program trains mental health first responders to work toward meeting these service gaps. This program is based on a 30-hour curriculum integrating internationally accepted and multidisciplinary mental health concepts and skills. It is designed to be contextualized to fit diverse local mental health needs and is currently translated into 10 languages. The curriculum trains laypersons, paraprofessionals, and professionals from outside of mental health in areas such as fundamental helping skills, identification of mental health needs, referral, and advocacy. The MHF program is not intended to develop a new

mental health profession. Its aim is to provide trainees with skills they can use to support those in need of mental health care.

Initially conceptualized in consultation with the Department of Mental Health and Substance Abuse of the World Health Organization, the MHF program was created and is administrated by NBCC International (NBCC-I), a division of the National Board for Certified Counselors. It is currently being expanded to include two more versions of the initial curriculum. NBCC-I is conducting a pilot program using the MHF-Educator's Edition (MHF-EE) with a county school system. This curriculum version is being developed to train teachers, administrators, and staff of K–12 schools in fundamental mental health knowledge and skills specifically geared toward the needs of schoolchildren. For individuals who cannot commit the time to the 30-hour curriculum but are still committed to community mental health education, the 8-hour MHF-ASAP! is being developed and covers the basic components of the original 30-hour version of the curriculum.

NBCC-I is currently analyzing qualitative data collected in collaboration with MHF program partners in Malawi and Mexico toward a mixed methods study that will be submitted for journal publication. In addition, NBCC-I is working in collaboration with a U.S. counseling professor who has received a grant to train teachers in a local school system using the MHF-EE curriculum. This grant will include outcome research on the effectiveness of this curriculum.

### B.3

#### AFRICAN MEDICAL SCHOOLS INVEST IN COMMUNITY-BASED EDUCATION TO INCREASE THE QUALITY, QUANTITY, AND RURAL RETENTION OF THEIR GRADUATES

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*Atiene Solomon Sagay, M.D., FWACS, FRCOG,<sup>3</sup>*

*Susan Camille Van Schalkwyk, Ph.D.,<sup>4</sup>*

*Sinit Mehtsun, M.Sc.,<sup>1</sup>*

*Elsie Kiguli-Malwadde, M.B.Ch.B., M.Med., M.Sc.HPE.<sup>5</sup>*

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<sup>2</sup> *Makerere University College of Health Sciences*

<sup>3</sup> *University of Jos*

<sup>4</sup> *Stellenbosch University*

<sup>5</sup> *African Centre for Global Health and Social Transformation, Kampala*

**Background** The Medical Education Partnership Initiative (MEPI) is a \$US130 million program funded by the U.S. government supporting 13



African medical schools to increase the quantity, quality, and retention of physicians in underserved areas. All of the schools involved in the initiative have invested in strengthening community-based education (CBE) to achieve these goals.

**Methods** We used data from site visits of the funded schools, from a survey of all schools in the MEPI network, and from focal persons from the three MEPI programs highlighted.

**Findings** There are 13 primary awardees of the MEPI grant with some schools partnering with other in-country schools, creating a network of 24 schools. All are engaged in CBE. There is considerable diversity in the goals and characteristics of CBE activities among these schools. Although the majority of schools provide a total of less than 6 months of training in the community, a few schools offer longer experiences. The competencies addressed during community rotations are similar. Almost all of the schools teach public health skills, clinical skills, and research skills; two-thirds also offer management training during community rotations. CBE rotations are held at both rural and urban sites. The supervision of students during CBE rotations is largely through faculty from the medical school, but in some cases, clinicians working at the clinical sites provide oversight. Three programs exemplify how different models of CBE are being leveraged to achieve health workforce goals. In Nigeria, the tertiary hospitals have become crowded with students from many different training programs, limiting opportunities for students to practice clinical skills. The expansion of CBE is therefore to accommodate growing student numbers by using community hospitals for core rotations in internal medicine, surgery, and pediatrics. In Uganda, the goal of CBE is to train students to provide community-based care and to increase the number of physicians who practice in rural areas. To achieve these goals, Ugandan medical schools are strengthening their curriculum (particularly in the areas of research and management training) and have developed criteria for community sites to ensure the quality of these rotations. At Stellenbosch University in South Africa, the goal is to increase the number of students who choose to work in rural areas. Students are offered an elective year-long comprehensive rural immersion experience. Extensive evaluations are under way to examine the impact of these efforts to leverage CBE to improve the health workforce and health services.

**Conclusion** The MEPI program has stimulated an evolution in CBE among African medical schools. Schools are leveraging CBE in different ways to achieve the goals of improving the quality, quantity, and retention of physicians.

## B.4

**THE PACIFIC UNIVERSITY INTERPROFESSIONAL DIABETES  
CLINIC: A COMMUNITY-BASED HEALTH CARE INITIATIVE  
INVOLVING A MEMBER INSTITUTION OF THE ASSOCIATION  
OF SCHOOLS AND COLLEGES OF OPTOMETRY (ASCO)**

*Carole Timpone, O.D.*

*Pacific University College of Optometry*

*Jennifer Smythe, O.D., M.S.*

*Association of Schools and Colleges of Optometry*

**Presented by:**

*Linda Casser, O.D.*

*Pennsylvania College of Optometry at Salus University*

*Association of Schools and Colleges of Optometry*

**Background/Introduction** A doctor of optometry (O.D. or optometrist) is an independent primary health care professional who is trained, educated, and credentialed to examine, diagnose, treat, and manage diseases, injuries, and disorders of the visual system, the eye, and associated structures and who identifies related systemic conditions affecting the eye and visual system. An optometrist has completed preprofessional undergraduate education and 4 years of professional education at a school or college of optometry, leading to the Doctor of Optometry degree.

Established in 1941, the Association of Schools and Colleges of Optometry (ASCO) is the academic leadership organization committed to promoting, advancing, and achieving excellence in optometric education. ASCO has achieved this objective by representing the interests of institutions of optometric education, enhancing the efforts of these institutions as they prepare highly qualified graduates for entrance into the profession of optometry, and serving the public's eye and vision needs. ASCO proudly represents all 21 accredited schools and colleges of optometry in the 50 states and Puerto Rico, including the Pacific University College of Optometry (PUCO) in Forest Grove and Hillsboro, Oregon.

To address the needs of the growing predominantly Latino population that has diabetes and to prepare students for community-based collaborative health care delivery models, the College of Optometry and the College of Health Professions at Pacific University have developed and implemented an innovative model for interprofessional education and collaborative patient care.

**Methods** The Pacific University Interprofessional Diabetes Clinic (IDC) employs a teaching- and patient-centered model that provides optometry,

dental health, physical and occupational therapy, mental health, physician assistant, and pharmacy services. Patients are evaluated by faculty and student teams from up to three disciplines at one visit in order to improve access and to promote collaborative, coordinated care. Care concludes with a team case management conference led by student presentations and facilitated by an integrated electronic health record.

The bicultural patient care coordinator provides patient navigation, coordinating services, follow-up care, and, along with other community trainers, patient education in diabetes and chronic care using Stanford University's Chronic Disease Self-Management Program, *Tomando Control de su Salud*. Patients access the IDC through community health centers, outreach efforts, and other university-based clinical facilities.

**Results** Group patient data and demographics presented from the past 2 years demonstrate the need for interprofessional care and intervention (see Table B-1).

In a series of the first 50 consecutive patients, 42 percent exhibited diabetic retinopathy, more than 10 percent presented with glaucoma, and 100 percent had periodontal disease. A third of patients required physical or occupational therapy or would benefit from behavioral health intervention to mitigate barriers to self-management.

Patient satisfaction data collected after the first year indicated that 97 percent of participants would refer others to the IDC ( $n = 37$ ). Students ( $n = 41$ ) rated the experience favorably (4.5, scale 1–5), highlighting the knowledge and respect for all the participating professions that they acquired (4.6), the collaborative learning environment (4.2), and a more comprehensive knowledge of diabetic patient needs (4.5).

**Discussion** The IDC has provided the opportunity for students to gain firsthand team-based, collaborative, multifaceted practice experience that

**TABLE B-1** Group Patient Data and Demographics

Patient Data	Mean	Range	Results
Age (years)	49	24–75	Median age 50 years
BMI (kg/m <sup>2</sup> )	34	21.5–68	68 percent > 29
HbA1c (percent)	8.2	5.2–14	77 percent > 6.9; 45 percent > 8.0
BP (mmHg) systolic	131	95–191	53 percent > 129
BP (mmHg) diastolic	80	52–107	41 percent > 81; 17 percent > 89

NOTE: BMI = body mass index; BP (mmHg) = blood pressure (millimeters of mercury); HbA1c = glycated hemoglobin.

focuses on the whole patient. Diabetes, as a complex multisystem chronic disease, is a natural starting point for interprofessional care and clinical teaching. Integral to the success of this patient-centered model, the patient care coordinator, employing a culturally competent approach, assists in the effective coordination of care and patient self-management education.

Advantages of this community-based model include a more comprehensive patient history when gathered within the different contexts of each profession, aiding in the development of a more comprehensive evaluation and treatment plan; enhanced opportunities for both patients and providers to identify and address key barriers to successful self-management; and delivery of consistent, coordinated patient education. Challenges to this model beyond language and cultural barriers included creating an integrated electronic health record and addressing limited mutual understanding of each profession's roles and practices.

**Conclusion** The Pacific University IDC is a viable community-based model for providing patients and students the benefits and experience of comprehensive and coordinated collaborative patient care. Future goals include expanding services to diagnose and manage other chronic conditions and developing more robust evaluation measures of student education and patient care outcomes (Timpone, 2012; Timpone and Smythe, 2013).

## B.5

### UNDERGRADUATE COMMUNITY-BASED HEALTH PROFESSIONAL EDUCATION: AN INTERPROFESSIONAL COPC EXPERIENCE IN DEPRIVED NEIGHBORHOODS AT GHENT UNIVERSITY

*Lynn Ryssaert, M.A., Jan De Maeseneer, M.D., Ph.D.  
Ghent University (Belgium)*

**Background** In the undergraduate medical curriculum, students are, from the first year, learning the background of social inequities in health. They study social determinants and look at the importance of health systems and health policy in achieving health equity. In the third year, they work during 1 week in deprived areas in the city of Ghent, making a “community diagnosis” in the framework of community-oriented primary care (COPC).

**Learning objectives** The specific learning objectives of this 1 week are to develop a practical understanding of inequities in health; gain insight into the meaning of health and illness and their practical consequences in the

primary care context; appreciate the impact the community has on individual health; gain understanding of the range of professionals and services involved in health care; and learn how to make a community diagnosis by collecting and integrating individual stories as well as epidemiological data. In addition, the students have to acquire different skills, such as conducting semistructured patient and careprovider interviews; cooperating with students from different disciplines (apart from medical students, social pedagogic students, sociology students, nursing students, social worker students, management students are involved); taking up the advocacy role; formulating strategies for improvement at community level; and presenting the results to a public audience of health care workers and policy makers.

**Organization** The first day the students are introduced to the background of the community that they will work in. Then they visit a family living in poverty and three care providers who are working with this family. They do that in interprofessional groups of four students. On Tuesday afternoon they bring together all the information and try to find out what the commonalities are. Information from the family and provider interviews is complemented with statistical data on morbidity, demographic features, and criminality. The students then check their first community diagnosis with agencies involved in neighborhood development, in order to assess if the diagnosis is appropriate. Then they brainstorm to think about a possible intervention and how to monitor it. On Friday afternoon they present their results and debate the results with local stakeholders. In addition, they produce a poster that can be used later on by the community when taking up action. Finally they write a letter to an agency in order to improve the situation of the family they visited.

**The 2014 COPC week** During March 24–28, 2014, 233 students participated, working in 8 neighborhoods. They visited 64 patients and families and contacted 192 care providers.

**Evaluation and report** In the week following the COPC week, an electronic survey assessed attitudes of participating students, using a Likert scale: 55.2 percent of the students (totally) agreed with the statement, “As a care provider, it is your duty to continuously improve the care system”; 78.3 percent (totally) agree with, “In order to eradicate social inequities in health, we should tackle the upstream causes at the level of education, income, and work”; 78.3 percent (totally) disagreed with the statement, “People living in poverty are to a large extent themselves responsible for their situation.” Working with other disciplines has broadened the scope of the students. The statement “To work with students from other disciplines was an enriching experience” received (totally) disagreement from only

19.1 percent of the students. Of the total, 87.8 percent disagreed with the statement, “It is better for a family physician to only focus on curing diseases.” The experience did not lead to pessimism; only 12.7 percent (totally) agreed with, “I do not see solutions to all the problems of the people living in this neighborhood.” Finally, only 11.3 percent (totally) disagreed with the statement, “Health care is politics.”

**B.6**  
**TALES FROM TWO CITIES:**  
**COMMUNITY-BASED INTEGRATIVE HEALTH CARE**  
**EDUCATION IN TORONTO AND LOS ANGELES**

*Robb Russell, D.C.*  
*Southern California University of Health Sciences*

*Nicholas De Groot, N.D.*  
*Canadian College of Naturopathic Medicine*

*Myles Spar, M.D., M.P.H.*  
*Venice Family Clinic*

*John Weeks*  
*Academic Consortium for Complementary and Alternative Health Care*

**Introduction** Integrative teaching and learning programs affiliated with mainstream health care delivery can help close gaps between differently trained or licensed practitioners and dissolve interprofessional barriers. At the same time they can improve patient choice and community health. A prior Academic Consortium for Complementary and Alternative Health Care (ACCAHC)-involved survey of all accredited institutions in the United States and Canada from the chiropractic, naturopathic, acupuncture, and Oriental medicine, massage therapy, and direct-entry midwifery schools found that 34 percent had formal *classroom* experience with medical doctors, 39 percent had formal *clinical* experience involving care from medical doctors, and approximately 30 percent had clinical education provided through city or county-sponsored clinics. ACCAHC-affiliated academic institutions have traditionally been almost entirely in outpatient environments, often separate from the mainstream delivery system. Recent efforts to offer integrative, community-based education have focused on collaborating within institutions such as hospitals, health systems, and conventional primary care delivery. Two such programs are illustrated.

**Purpose** Two innovative, interprofessional programs, one in Toronto, the other in Los Angeles, are summarized. Although different in their settings

and the professions represented, each program actively involves integrative and mainstream health care practitioners in educational clinics whose overall purpose is offering patient-centered, community-based health.

**Discussion** In January 2013, in the Greater Toronto area suburb of Brampton, the Canadian College of Naturopathic Medicine (CCNM) opened the Brampton Naturopathic Teaching Clinic (BNTC) within an outpatient clinic of a conventional medical hospital, Brampton Civic Hospital (BCH). BNTC, however, operates during the hospital clinic's off-hours. With BNTC and BCH staff not physically working side by side, true interprofessional clinical integration has occurred only through effort and initiatives of administrators and faculty. For more than 7 years in the Los Angeles suburb of Santa Monica, the Venice Family Clinic has operated the Simms-Mann Health and Wellness Center, which houses an integrative chronic pain program for underserved and largely Spanish-speaking patients. Interns and their licensed supervisors are from two acupuncture colleges, Los Angeles College of Chiropractic (a college of Southern California University of Health Sciences), University of California, Los Angeles (the medical residents, physical therapy, and social work and mental health interns and practitioners), and trainees in massage, yoga therapy, and Feldenkrais. Integrative health and medicine practitioners interact with each other in the Western medical model during clinic shifts and case presentations.

**Conclusion** Health care practitioners exposed to these integrative clinics become familiar with the skill sets and toolkits of multiple professions. The communication fostered in these community-based programs helps reconcile the difference between the perceived needs of a patient—based on each practitioner's specific training (practitioner-centered care)—with the patient's actual needs, drawing from a variety of clinically effective approaches for truly patient-centered care.

In Toronto, after a little more than 1 year, interprofessional collaboration has begun to grow. A grant proposal for integrative care of diabetes is being pursued. Referrals and coordination of care between naturopathic and medical practitioners is budding. Further, BCH now appears to see the value of BNTC in building a bridge to the local community, which has a sizable population of South Asian and Caribbean inhabitants who value natural health care. In Los Angeles, the chronic pain clinic is well established and is successful, having a waiting list for all modalities of care. The structure and function of the Venice Family Clinic's integrative features serve to educate staff physicians on uses of integrative approaches in the care of chronic pain as well as exposing integrative practitioners to conventional health care.

## B.7 CAREGIVERS ARE HEROES

*Holly H. Wise, P.T., Ph.D., Paul F. Jacques, D.HSc., PA-C,  
Nancy E. Carson, Ph.D., OTR/L,  
Maralynne D. Mitcham, Ph.D., OTR/L, FAOTA  
Medical University of South Carolina*

Although academic educational programs espouse the tenets of compassion and caring in their mission statements and curricular design, educational methodologies that promote the development of compassionate and caring attitudes are not well delineated. The purpose of this presentation is to highlight innovative interprofessional (IP) educational strategies designed to imbue compassion and caring within health professions curricula. Key components of a model educational program in compassion and caring that has potential for universal and global application in educational curricula will be described. Preliminary baseline and comparative data using qualitative assessment and quantitative measures related to empathy, purpose in life, and altruism will be presented.

Caregivers are Heroes is an IP community-based learning activity designed to enhance caring and compassionate attitudes toward caregivers in first-year occupational therapy, physical therapy, and physician assistant students. For the past 5 years, more than 180 students per year engage in learning about the trials and tribulations of caregivers. A caregiver is an individual who provides unpaid care and support for a family member, friend, or partner with a disability who needs assistance with activities of daily living. Research has shown that caregivers may experience poor health associated with caregiving due to financial costs, discrimination at work, social isolation, stress, and physical injury.

The students are assigned to IP teams and are prepared for an in-home caregiver interview through a series of four interactive large group sessions followed up by individual team meetings. At the conclusion of the semester, the IP student teams creatively share their experiences through music, art, poetry, drama, etc., to present the humane perspective of the caregiver.

Funding Source: Arthur Vining Davis Foundation



**B.8**  
**EXPANSION OF THE UNIVERSITY OF KANSAS**  
**SCHOOL OF MEDICINE–WICHITA:**  
**A COMMUNITY-BASED MEDICAL SCHOOL**

*Rick Kellerman, M.D.*

*University of Kansas School of Medicine–Wichita*

The mission of the University of Kansas School of Medicine–Wichita (KUSM–Wichita) is to educate students, residents, and physicians through patient care, service, research, and scholarly activities to improve the health of Kansans in partnership with Kansas communities.

In response to a shortage of physicians in Kansas, KUSM–Wichita opened in 1971 to provide hands-on clinical training to 3rd- and 4th-year medical students. In 2011, KUSM–Wichita expanded to a full, 4-year campus, welcoming its inaugural class of 1st-year medical students.

Prior to 2011, all 200 University of Kansas medical students did their first 2 years of training on the Kansas City campus, a traditional academic medical center. Fifty to 60 third-year and 50–60 fourth-year students would complete their final 2 years of medical school on the Wichita campus. With the expansion of the first 2 years in Wichita, 28 students complete all 4 years of medical school in Wichita. They are joined for the third and fourth year by students who transfer from the Kansas City campus. The full 4-year class complement on the Wichita campus is currently 28 first-year medical students, 28 second-year medical students, 60 third-year medical students, and 60 fourth-year medical students.

The curriculum on the Kansas City and Wichita campuses is identical. Most lectures originate on the Kansas City campus and are podcast to Wichita. An experienced basic scientist oversees coordination of the year 1 and year 2 curriculum on the Wichita campus. His work is supplemented by bioscientists from local universities who teach in small group sessions. Cadaver dissection is performed on the campus of Newman University in Wichita, a 4-year college with a strong premedical program.

Full-time clinical faculty members teach history taking, the physical examination, developing of a differential diagnosis, and other aspects of the clinical process. Experienced clinicians facilitate problem-based learning courses that are linked to organ-based curricular modules. Special emphasis is given to the development of communication and interpersonal skills through the use of standardized patients. Each medical student during the first 2 years is paired with a community physician for shadowing experiences.

The extant third and fourth year of the curriculum has remained intact. More than 1,000 community physicians in Wichita and rural Kansas volunteer to teach medical students and resident physicians. Inpatient care

is provided in the state's two largest hospitals, Via Christi Hospitals and Wesley Medical Center.

Each year, 20 percent to 40 percent of KUSM–Wichita graduating medical students enter family medicine residency programs. KUSM–Wichita ranks sixth nationally in the production of graduates who practice primary care 5 years after the completion of medical school, many in rural and frontier communities (Chen et al., 2013). The KUSM ranks fifth in the nation for fulfilling a social mission of graduates who practice primary care in underserved areas and are underrepresented minorities (Mullan et al., 2010).

## B.9

### COMMUNITY-BASED NURSING EDUCATION

*Mary A. Paterson, Ph.D., R.N., Joan Stanley, Ph.D., R.N., CRNP  
American Association of Colleges of Nursing*

The American Association of Colleges of Nursing (AACN) supports curriculum development and innovation in undergraduate and graduate nursing programs through faculty-development workshops, curriculum resource material, toolkits, and guidelines. Community-based education has been one of our focus areas since 1999, when a faculty development workshop, supported by the Helene Fuld Health Trust, was held on this topic.

We define community-based nursing education as a pedagogy that enables students to learn to provide nursing care for people no matter where they encounter them. The content taught includes health promotion and disease prevention as well as the nursing care of people of all ages as they encounter the need for medical or health care interventions (Matteson, 2000). Early models of community-based nursing education include partnerships between schools of nursing and various community agencies to provide health education, screening, and immunizations. Recent community-based nursing education models have evolved to continuous student involvement over more than one semester in a community. Over time students form strong community partnerships to develop service learning projects and community support activities. The AACN with the support of the Centers for Disease Control and Prevention is currently inviting proposals for several small impact evaluation projects in established academic/practice partnerships in community health. Impact evaluations may focus on student impact, faculty impact, patient impact, community impact, or any combination of these foci. These projects will develop pilot approaches to support larger impact evaluations in community-based nursing education.

## B.10

**TRAINING MEDICAL STUDENTS AND RESIDENTS AT  
COMMUNITY HEALTH CENTERS: CONTEXT, CONTINUITY,  
COMMITMENT, AND COMMUNITY-ORIENTED PRIMARY CARE**

*Creating the doctors that the country needs to serve  
the underserved and help close the care gap.*

*Frederic N. Schwartz, D.O., FACOFP  
A.T. Still University (ATSU)*

According to Federal Uniform Data Set Reports assessed by the National Association of Community Health Centers (NACHC), the U.S. Federally Qualified Health Centers serve 20.2 million people annually. This number has grown 96.1 percent since 2001 and may double in the next half-decade given the progress of the Affordable Care Act. There is little debate that there is a growing shortage of providers in primary care disciplines (medicine, family medicine, pediatrics, and OB/GYN) and general surgery, geriatrics, and psychiatry (collectively, NACHC-needed specialties). This provider gap threatens the effectiveness of the national safety net system. The nation's approximately 1,200 community health center organizations provided more than 80 million patient visits in 2013. The patients served were poorer, sicker, and at higher risk than average for the United States. They were offered comprehensive, team-based, interdisciplinary, and prevention-oriented care.

And yet, the School of Osteopathic Medicine in Arizona (SOMA) at A.T. Still University (ATSU) is the only U.S. medical school to locate all of its medical students at community health centers (CHCs) for 3 of their 4 years of training. The difference between training “at” a CHC for a few weeks and “in” a CHC and its care partner institutions is significant. Because SOMA second-year students (OMS II-Osteopathic Medical Student II) receive their second year of basic science training while working 1 day per week under supervision at the CHC primary care clinics, they are able to place the clinical presentations discussed in class into the context of real care of the underserved.

Video telecommunication technology is employed to maintain the linkage between students and the Mesa Arizona campus. Educational offerings are both live and asynchronous. Students work in teams and interact with classmates around the country. SOMA CHC campuses span the distance from Hawaii to Brooklyn and South Carolina.

Second-, third-, and fourth-year medical students and family medicine (FM) residents (at the six sites where SOMA has both medical students and FM residents) participate in monthly interdisciplinary grand rounds designed to further the values and philosophy of community-oriented primary

care. All students must study epidemiology, biostatistics, and preventive medicine. Almost 10 percent of the student body will receive an M.P.H. from the ATSU School of Health Management upon graduation.

SOMA has pioneered the use of technology-enhanced active learning including games and simulations that promote engagement and active (interactive) learning.

All eligible students who applied for residency to date, beginning with the first graduating class in 2011, were accepted in the first year of application (nationally, 1,097 students did not match). Primary care and NACHC-needed specialties were chosen at a 3-year rate of more than 80 percent. Early evidence of employment agreements at CHCs is encouraging.

SOMA faculty understand that our role is to train interprofessionally competent, mission-motivated, teamwork-oriented “complexivists” who derive satisfaction from the community-focused, continuity-driven preventive and restorative care they can help to provide in meeting the Institution for Healthcare Improvement’s Triple Aim of enhanced experience, improved community health, and reduced cost of care. We believe our model is worthy of emulation and are willing to work with interested institutions and organizations to share what we have learned.

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# Appendix C

## Abstracts of the May 1, 2014, Poster Session

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**C.1**  
**SYNCHRONOUS CASE CONFERENCES AS A SUCCESSFUL  
 STRATEGY FOR ESTABLISHING INTERPROFESSIONAL  
 CLINICAL STUDENT EXPERIENCES DURING COMMUNITY-  
 ENGAGED EDUCATIONAL EXPERIENCES**

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**Objectives:**

- Describe a model of synchronous online activity that promotes a collaborative team approach during community-engaged educational experiences.
- Discuss best-practice elements of this model as they are linked to prior experiences and feedback.
- Assess and evaluate the value and usefulness of a synchronous online interprofessional clinical student activity for creating a collaboration-ready health care workforce.

**Background** Since 2011, The Medical University of South Carolina has been involved in multiple pilot projects to provide students the chance to meet in small interprofessional groups to discuss clinical cases and strategies to improve care specific to those cases. In response to the difficulty of bringing students on clinical practicums across the country together to meet in person, a pilot program was implemented in 2012 that enabled students to complete the same interprofessional activity synchronously online. The results of this pilot showed that synchronous online case conferences provided a viable opportunity for students to work together during community-engaged education online to share profession-specific knowledge and increase awareness of the value of interprofessional collaboration. In fall 2013, a new program was implemented in order to further improve the process, expand the scope of the pilot, and increase the number of participants and professions.

**Methods** Pharmacy, physician assistant, occupational therapy, physical therapy, and nursing students participated in a series of online synchronous meetings over 2 months to discuss example cases from their own caseload during clinical experiences. Over the course of the pilot program, students participated in multiple feedback methods (verbal and written, open-ended, and Likert questions) to gauge the student-perceived value of the online



interaction for enhancing care of patients and applicability of the pilot activity to the clinical setting.

**Results/Implications** Student participant data confirms value and relevance of this pilot project for students in clinical phase of education. In addition, students see applicability of this experience to future community-engaged educational experiences.

## C.2 INTERPROFESSIONAL SERVICE LEARNING WITH JUNIOR DOCTORS OF HEALTH

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**Purpose** Junior Doctors of Health (JDOH) is an interprofessional community service–learning project that trains future health professional students (FHPSs) to deliver a dynamic curriculum focused on the prevention of childhood obesity to underserved youth in Charleston and across the state of South Carolina (SC).

**Methods** FHPS training occurs through recorded and in-person orientations, and FHPSs deliver the interactive JDOH curriculum in interprofessional teams to preschool through eighth-grade youth over the course of four 1-hour sessions. The four sessions are unique to each grade level and include activities covering healthy eating and limiting sugar-sweetened beverages, exercise, health career exploration, and a health advocacy project. The youth graduate and become “Junior Doctors of Health” in which youth are empowered to take control of their own health and educate their family, friends, and community about the importance of healthy eating and exercise. Evaluation of the JDOH curriculum has shown important positive behavior changes in elementary youth and positive knowledge and behavior changes in preschool youth.

**Results** From 2011 to 2014, 458 students from The Medical University of South Carolina, University of South Carolina, College of Charleston, and Charleston Southern University delivered JDOH to underserved youth across South Carolina. Participating students came from a range of professions including medicine, nursing, occupational therapy, physical therapy, public health, and social work. Students participated in the program through several methods including an elective course, volunteer opportuni-

ties, course integration, and an interprofessional service-learning project in partnership with the South Carolina Area Health Education Consortium.

**Conclusions** There are several models for the JDOH program to expand to additional university sites interested in incorporating interprofessional service-learning opportunities. These include creating an elective course around childhood obesity, offering volunteer opportunities, or embedding JDOH as a class project within an existing course. Including the service-learning opportunity as a class project has been the most effective way for involving students in the JDOH program. Although course inclusion is not an interprofessional education (IPE) experience in itself, the ultimate goal is to collaborate with additional professions and train students to deliver JDOH in interprofessional teams.

JDOH administration is interested in expanding the JDOH program to additional university sites to reach more youth in underserved communities while providing a boxed service-learning IPE experience for future health professional students.

Funding Sources: Southeastern Virtual Institute for Health Equity and Wellness (SE VIEW), Sherman Financial Group LLC

### C.3

#### A LOOK INSIDE COMMUNITY-BASED SERVICES FOR INFANTS AND TODDLERS WITH SPECIAL NEEDS

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One way that therapy and other developmental health services for families and their infants and toddlers with special needs are provided is through the federal Early Intervention Program, whereby services are provided via professional visits in families' homes or other community settings. Concepts of family-centeredness underpin this multiple-discipline service program and its central goal of enhancing families' capacities to meet their children's special needs. Providers need to be skillful in both teaching families and directly interacting with children to promote use of the recommended practices of family-centered care.

A pilot study was conducted with 51 early-intervention service providers in eight states to explore activities occurring during home visits. Providers represented occupational therapy (19.6 percent), physical therapy (25.5 percent), speech and language pathology (21.6 percent), and developmental teaching (29.4 percent) professions. Providers were primarily Caucasian females with an average of 10.7 years of early-intervention experience.

Providers submitted videotapes of home visit sessions at three time points across an 8-month period with 108 provider-recruited families. Children were primarily Caucasian (72.6 percent) and were described by caregivers as having severe (11.1 percent), moderate (28.4 percent), mild (26.2 percent), or very mild (34.3 percent) disabilities. More than half of the children received occupational and physical therapy and speech and language pathology services on a once-per-week basis for an average of 2.29 hours weekly.

Home visit session videotapes were rated to quantify the extent to which providers used explicit strategies to teach or coach families, one characteristic of family-centered practice. As a whole, caregivers were rated as highly engaged across all three sessions. Coded teaching strategies included provider demonstration of a strategy, caregiver practice with provider feedback, conversation, and problem-oriented reflection. Proportions of use were calculated. As a whole, conversation and caregiver practice with provider feedback were most frequently used. Providers seldom engaged caregivers in problem-oriented reflection. There was little change in the use of strategies across the three visit videotapes. Providers primarily worked directly with children and used explicit caregiver-teaching strategies in less than 20 percent of 30 rated minutes or at an approximate rate of 12 minutes per hour visit. Analyses of various child, caregiver, and provider characteristics with total teaching strategy use at each time point yielded only one significant correlation. Child age was negatively correlated with teaching-strategy use, suggesting that providers were more likely to teach caregivers when children were younger. Other correlations between teaching-strategy use and provider characteristics (e.g., experience and discipline), caregiver characteristics (e.g., race/ethnicity, family socioeconomic status, caregiver education), or child characteristics (e.g., severity, hours of services) were not significantly related to use of teaching strategies.

These data illustrate the limited extent to which multiple-discipline early-intervention service providers directly enhance families' capacities to meet their children's special needs through use of caregiver-directed strategies. Results further suggest that health professional education must include as much emphasis on caregiver-directed as child-directed strategies if best practices such as family-centered care are to be scaled up for wide use in community-based settings.

C.4  
**FAMILY MEDICINE RESIDENTS, OPTOMETRY STUDENTS, AND  
 FACULTY MEMBERS ENGAGED IN HEALTH PROFESSIONS  
 EDUCATION AND COLLABORATIVE PATIENT CARE:  
 AN EXAMPLE OF A COMMUNITY-BASED INTERPROFESSIONAL  
 INITIATIVE BY A MEMBER INSTITUTION OF THE ASSOCIATION  
 OF SCHOOLS AND COLLEGES OF OPTOMETRY (ASCO)**

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**Background and introduction** A doctor of optometry (O.D. or optometrist) is an independent primary health care professional who is trained, educated, and credentialed to examine, diagnose, treat, and manage diseases, injuries, and disorders of the visual system, the eye, and associated structures, and who identifies related systemic conditions affecting the eye and visual system. An optometrist has completed preprofessional undergraduate education and 4 years of professional education at a school or college of optometry, leading to the Doctor of Optometry degree.

Established in 1941, the Association of Schools and Colleges of Optometry (ASCO) is the academic leadership organization committed to promoting, advancing, and achieving excellence in optometric education. ASCO has achieved this objective by representing the interests of institutions of optometric education, enhancing the efforts of these institutions as they prepare highly qualified graduates for entrance into the profession of optometry, and serving the public's eye and vision needs. ASCO proudly represents all 21 accredited schools and colleges of optometry in the 50 states and Puerto Rico, including the Pennsylvania College of Optometry (PCO) at Salus University in Philadelphia, Pennsylvania.

Salus University and its component colleges and programs—the Pennsylvania College of Optometry, the Osborne College of Audiology, the College of Education and Rehabilitation, the College of Health Sciences, and the Graduate Programs in Biomedicine—are committed to creating models and promoting a culture of interprofessional education that aligns with the university's vision to be recognized nationally and internationally for excellence and innovation.

**Methods** Beginning in October 2012, the Eye Institute of PCO and Chestnut Hill Hospital Family Practice, Philadelphia, Pennsylvania, have

collaborated in health professional education and collaborative patient care by developing and implementing an interprofessional model in which second-year family medicine residents participate in weekly sessions of active observation of comprehensive eye and vision patient care at the community-based Chestnut Hill satellite facility of the Eye Institute of the Pennsylvania College of Optometry at Salus University.

**Results and discussion** A total of 12 residents have participated in approximately two weekly sessions of patient care each since the initiation of the program. The family medicine residents have demonstrated a special interest in the triage of patients with urgent eye conditions, the differential diagnosis of patients presenting with red eye, ocular manifestations of systemic disease, clinical signs and management of glaucoma, and ophthalmic evaluation of the pediatric patient. The optometry students, family medicine residents, and faculty members have engaged in discussions regarding the assessment and management of patients with hypertension, uncontrolled diabetes, and other systemic conditions.

The family medicine residents initially taking part in the program were so pleased with their experience during the primary eye and vision care sessions that they requested an additional weekly session with the optometrist who specializes in pediatrics. The implementation of this additional session has taken place, and the family medicine residents state that it has added tremendous value to their clinical rotation. The interprofessional education and collaboration also reaches beyond the clinical activity: two optometrists have lectured to the family medicine residents during their regularly scheduled meetings. These lectures have been well received, and plans to expand this element of the collaboration are under discussion. Topics for the collaborative lectures have included components of a comprehensive eye and vision examination, ocular urgencies and emergencies, the differential diagnosis of a red eye, and pediatric eye and vision disorders.

**Conclusion** On a direct level, this initiative has allowed practitioners from both professions to gain further respect for each profession's contribution to patient care. On a larger scale, the collaboration represents a synergistic model of interprofessional health care and education. Most important, this collaborative approach to patient care and clinical education promises more effective health care delivery, ultimately leading to improved patient outcomes. The member institutions of ASCO, including students, residents, and faculty members, remain committed to effective community-based health professions education, IPE, and collaborative patient care.

## C.5

**THE ECONOMIC IMPACT OF A STUDENT-RUN FREE CLINIC  
AS A SAFETY NET PROVIDER FOR UNINSURED PATIENTS**

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The Student-Run Free Clinic (SRFC) serves a vital role as a safety net provider by providing free health care to indigent patients. This study examined (1) the potential reimbursable care provided at a SRFC and (2) the cost of potential emergency room (ER) visits avoided by patients seen at the clinic. This retrospective study involved a review of charts, services, and procedures at both medical and rehabilitation student-run clinics at The Medical University of South Carolina. Services delivered were estimated using evaluation and management (E&M) codes for moderately complex new patients and potential therapy Medicare billing codes. Additionally, all patients seen were asked if they would or would not have gone to the ER had they not come to the clinic. The SRFC provided 1,556 patient medical and therapy visits in 2011 for \$145,496 in health care services, resulting in approximately \$762,832 in potential annual ER visit costs avoided. Additionally, 276 total patients were turned away, which resulted in an estimated \$245,196 in ER costs per year that could have been avoided if the SRFC had had adequate capacity. SRFCs perform a valuable service as a safety net provider with cost saving to the community.

## C.6

**SCALING UP COMMUNITY-BASED FAMILY MEDICINE TRAINING  
IN AFRICA: THE GEZIRA IN-SERVICE MASTER PROGRAM**

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**Introduction** There is a huge problem of scaling up capacity in family medicine in Africa. Most of the training for family medicine takes place in hospitals. Since 2008, the Primafamed-Network has brought together experiences in Africa to create a “learning community.”

**Background** In 2010 the Gezira Family Medicine Project was initiated following an in-service training model in Gezira state, Sudan. It is a collaboration project between the University of Gezira, which aims at providing a 2-year master's program in family medicine for practicing doctors, and the Ministry of Health (MoH), which facilitates service provision and finances the training program.

**Methods** In this observational study, a self-administered questionnaire was used to collect baseline data at the start of the project from doctors who joined the program. A checklist was used to assess the health centers where they work. A total of 188 out of 207 doctors responded (91 percent). Data were gathered from all 158 health centers (100 percent) staffed by the program candidates.

**Results** The Gezira model of in-service family medicine training succeeded in recruiting 207 candidates in its first batch, providing health services in 158 centers, of which 84 had never been served by a doctor before. The curriculum is community based and community oriented. The project used a limited amount of traditional teaching, and the majority of the training was done in health centers. Online seminars and lectures were given in addition to regular supervision and opportunities for feedback through telemedicine in order to have a backup for difficult cases. The questionnaire was able to detect the areas where participants had high confidence (asthma management, postabortion uterine evacuations) and those where they were least confident (managing depression). A concern was the technical equipment of the health centers.

**Conclusion** This approach, with a 2-year postgraduate in-service program, provided a good model. The community-based training is highly motivating. And the fact that trainees provide care at the local level is much appreciated and contributes to scaling up the capacity of primary health care.

Use of modern information communication technology facilitated both health care provision and training.

C.7  
**THE CHANNELS PROJECT: INTEGRATED EDUCATION  
AT THE INTERSECTION OF CULTURAL KNOWLEDGE,  
HEALTH LITERACY, AND COLLABORATIVE PRACTICE**

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**Background** The CHANNELS (Community, Health, Access, Network, Navigate, Education, Leadership, Service) Project is a community-based initiative designed to prepare future health professionals with culturally appropriate skills to serve with and on behalf of underserved and vulnerable populations. The CHANNELS Project has three aims: (1) education for culturally informed collaborative practice, (2) community nurse leadership, and (3) community outreach and health promotion. This abstract focuses on the education arm of the project, which implemented innovative training and teaching strategies grounded in core interprofessional collaborative competencies, team-based person-centered care, cultural preparedness, and social enterprise directed toward community outreach. This integrated curriculum is co-taught by interprofessional faculty in collaboration with community health outreach workers (CHOWs) who serve as cultural navigators. Learners include two distinct groups: health professions students who take these classes in interprofessional classrooms and community professionals involved with CHANNELS's diverse aims.

**Purpose** The CHANNELS project's education arm concurrently teaches integrated skills for cultural competence, health literacy, and collaborative practice. The core learning objectives include teamwork and collaborative practice, which promote positive team working skills; cultural awareness and identity that reflects upon learners' assumptions, beliefs, and biases and raises awareness of power inequities and health disparities; cultural knowledge, which exposes learners to culturally appropriate attitudes, resources, and skills; and health literacy and communication.

**Methods/Design** The integrated curriculum was co-designed by an interprofessional faculty group, CHOWs, community partners, and students. Learning objectives were crafted to transcend learners' levels and were implemented using a range of teaching methods. Cohorts of students from across disciplines were determined by matching courses that included common content that did not add to faculty's teaching loads. Community partner trainings were offered to all CHANNELS partners. All learning sessions



were evaluated. Students completed reflective assignments using prompts that paralleled desired learning outcomes.

**Results/Findings** Students from six different professions completed the integrated curriculum over 12 months. Feedback was generally positive with students recognizing the importance of gaining skills in the domains described. Student comments indicated a desire to move past talking about skills toward applying them in clinical and community settings. Faculty found that each cohort required revision to customize teaching methods. In addition, the more successful sessions were made up of professional students who could envision working together in the future. Lastly, students gained significant awareness and knowledge from learning with and about the CHOWs, and especially from their stories, which brought the health perspectives of immigrants and refugees into sharper focus.

**Conclusions/Lessons learned** Lie and colleagues (2012) note that cultural competency and health literacy, though intricately related to one another, are mostly taught separately in health professions education. Interprofessional education strategies, whereby students learn about, from, and with each other, are natural environments to teach these important areas of knowledge concurrently and in collaborative learning settings. Learning in this way prepares students to work more effectively in health environments where they encounter diverse and unfamiliar cultures. Coordinating with CHOWs as co-teachers enhanced the learning experience for both students and faculty involved with the development of the education arm of the CHANNELS project.

## C.8

### THE ROLE OF COMMUNITY HEALTH OUTREACH WORKERS IN ACHIEVING THE TRIPLE AIM

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**Background** The role of community health outreach workers (CHOWs) in many parts of the world has been revered as integral to health care teams, not only to improve the cultural appropriateness and quality of care services to their communities, but to help to reduce the health care service system costs. In areas where integrated health care teams provide an array of services, the CHOW role is very crucial to its success. Portland, Maine, is a resettlement area that is home to more than 8,450 (13.5 percent of

Portland population of 65,000) foreign-born immigrants, refugees, and asylum seekers.

**Methods** The purpose of this project is to measure the value of the CHOW role according to the Institute for Healthcare Improvement's Triple Aim (population outcomes, patient experience, lower costs). The CHANNELS program (Community, Health, Access, Network, Navigate, Education, Leadership, Service) funded by the Health Resources and Services Administration (HRSA) proposes innovative community-based strategies to improve the health of immigrant and refugee communities in the Southern Maine area.

There are three arms of the project: education, training, and service delivery. All three arms include the role of the CHOWs as cultural brokers and medical interpreters. Three CHOWs were hired for the project that speak the most predominant languages (Arabic/Sudanese, Somali, Spanish) in the Portland area. Additionally, they are leaders within their own communities as well as having special insights into the cultural nuances embedded in those communities. The project also has hired and trained a number of per diem CHOWs for other prominent languages and cultures.

**Outcomes** There is a plethora of literature on the value that CHOWs bring to communities with respect to the patient experience and short-term outcomes; however, little evaluation exists that measures cost-effectiveness and long-term outcomes of patients and communities. This project uses a multifaceted evaluation approach that includes perceptions and attitudes of team-based care (CHOW included), Team Strategies and Tools to Enhance Performance and Patient Safety (TeamSTEPPS), clinical use data, and the electronic medical record. Early outcomes reveal that care for this population, when accompanied by CHOWs, improves access and adherence.

In summary, projects that truly "measure the difference" at a time when health reform is more important than ever will serve as an impetus to include CHOWs as health care organizational hires.

C.9  
 SCALING UP BEST PRACTICES IN COMMUNITY  
 AND PUBLIC HEALTH TRAINING: THE CHANNELS'S  
 POPULATION-FOCUSED NURSE LEADERSHIP INSTITUTE

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**Background** Nurses working in population-oriented settings often face large caseloads, underfunding, and limited resources. Although the state of Maine and select municipalities house a modest public health infrastructure, the needs of many communities exceed the few positions dedicated to addressing the health of the state. Population health outcomes are optimized when nurses possess strong leadership skills, engage in shared decision making, and demonstrate capacity for interprofessional collaborative practice (IPCP) approaches to care. Nurses serving in community and public health roles commonly lack access to formalized IPCP training and leadership development. In an effort to address this need, the University of New England launched a Population Focused Nurse Leadership Institute funded by a HRSA Nursing Education Practice Quality and Retention (NEPQR) IPCP project titled CHANNELS.

**Purpose** The purpose of the institute is to provide a forum for community and public health nurses to enhance their skills and capacity in team-based collaborative leadership when working with vulnerable populations. The institute brings together emerging nurse leaders for four sessions over 9 months to focus on personal leadership development, leadership within interprofessional teams, and leadership within a community of interest. Enhancement of leadership and collaborative practice abilities provides impetus for population-based quality improvement, heightened systems thinking, and the delivery of safe, effective, and equitable care. This aligns with the Robert Wood Johnson Foundation/Institute of Medicine *The Future of Nursing* (IOM, 2011) report that advocates for nurses to lead teams to improve health systems, engage in lifelong learning, and assume leadership roles in advancing change and promoting health.

**Methodology** An institute planning team was convened reflecting expertise in public health, care of vulnerable communities, curriculum development, and leadership. Participants were recruited from a broad array of state and municipal public health employers, as well as home care/Visiting Nurse Association, school health, and ambulatory clinics. Twelve participants enrolled in year 1, reflecting the practice sites of schools (urban and

rural), HIV care, homeless health care, immunization/communicable disease management, home care and hospice, and ambulatory care (immigrant urban setting). The four meeting sessions were interactive and included facilitation from regional and national nurse leaders, interprofessional practice experts, and institute faculty. Each participant completed a DISC (Dominance, Influence, Steadiness, Conscientiousness) Work of Leaders profile, rendering a framework to examine the process of leadership and to appraise personal leadership strengths and challenges. Leadership within IPCP was explored, along with core competencies reflective of collaborative practice. The uniqueness of population-based nursing practice was analyzed, advancing the constructs of community as partner, cultural humility, and health literacy. Participants applied their leadership training in proposing an evidence-based population-oriented project designed to improve aggregate health outcomes, a system issue, or a public health practice concern.

**Results/Recommendations** The planning team and project evaluator are conducting a review of the collective impact of the evidence-based projects in an effort to further describe health disparities in the communities of interest and the impacts of the identified interventions. The collective contributions of this first cohort will be disseminated through scholarly presentations and publication. The evaluation team plans to longitudinally track the trajectory of this first cohorts' transition from emerging nurse leader to one of leveraging capacity and influence in the delivery of population-based health care.

### C.10

#### COMMUNITY-BASED INTEGRATIVE HEALTH CARE EDUCATION IN LICENSED INTEGRATIVE HEALTH CARE PROFESSIONS

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*John Weeks*

*Academic Consortium for Complementary and Alternative Health Care*

**Purpose** The purpose of this poster is to summarize the rationale and typical partnership models for this community-service movement in integrative health and medicine education.

**Methods** Data from a prior Academic Consortium for Complementary and Alternative Health Care (ACCAHC) survey of the extent of partnership models in all accredited programs will be shared. Two examples will be described: a Los Angeles–based community clinic in which medical students from University of California, Los Angeles, work in teams with students from an institution that educates chiropractic doctors and two acupuncture and Chinese herbal medicine schools; and a hospital-based clinical training program in the Greater Toronto area created via a partnership between the hospital and a college of naturopathic medicine.

**Results** Factors driving development of the two community-based programs will be described. Among these are growing interests of educators in providing experience with patients who are less likely to come to school teaching clinics; providing experience in integrated and interprofessional environments; and assisting these facilities in offering such services to their clientele. The business model usually includes the integrative health academic institution providing the on-site faculty to oversee the education and treatment with a cadre of senior students and the free provision of services.

**Discussion** The central challenge for academics in the licensed integrative health and medicine disciplines of providing community-based education turns the conventional system on end. Students in these fields typically gain clinical education through community-based outpatient teaching clinics associated with the schools and via preceptorships in solo or group practices of licensed members from their fields. To better imbed their clinical education in the community, many of these institutions are establishing relationships with conventional delivery system providers such as hospitals, federally qualified health centers, physician groups, community clinics, and senior homes. The client populations are frequently communities that are underserved, and particularly underserved for treatment by integrative health and medicine practitioners. Clinicians gain the opportunity to see new populations and participate in varying degrees in interprofessional and team care in these integrated, community environments.

**Conclusion** The clinical education experiences created through partnerships between integrative health and medicine academic institutions and mainstream delivery organizations can provide student clinicians access to new populations and offer opportunities for interprofessional and team-care experiences.

**C.11**  
**WALKING A MILE IN THEIR BOOTS:**  
**AN IMMERSIVE, COMMUNITY-BASED**  
**EDUCATIONAL EXPERIENCE**

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Daniel Lammers, B.S.*  
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**Background** With a motto of “Learning to Care for Those in Harm’s Way,” the Uniformed Services University of the Health Sciences (USUHS) is the premier Health Sciences Center for educating students about the unique aspects of military medicine in general, and care of the warrior in particular. Although community awareness is often taught using traditional educational strategies, these may limit the learner’s ability to obtain an authentic view through the lens of the community. One possible solution is incorporation of a community-based, immersive educational strategy. Such a first-person experience helps the learner relate to the community, appreciate its needs, and learn from community members. In this case, our community consists of wounded warriors and their families.

**Pilot program** USUHS is co-located on the same campus with Walter Reed National Military Medical Center. Wounded warriors at the center are involved in a number of therapeutic activities, including the Creative Arts Program (CAP) and Adaptive Sports Program (ASP). In September 2013, in collaboration with directors of the CAP and ASP, we developed and implemented an elective immersive educational experience called “The Wounded Warrior Partnership” (WWP). From all medical students in the class of 2016, 38 volunteered for the program, and 20 were randomly selected to participate. Of those selected, 50 percent were assigned to the CAP and 50 percent to the ASP with a requirement to attend at least one event lasting 2 to 5 hours per month. Students also participated in discussion groups at the end of each month.

**Benefits of the program and lessons learned** At the end of 4 months, all 20 students, faculty facilitators, and program coordinators discussed lessons learned. One hundred percent of students reported that their involvement in the program offered them the following benefits:

1. Better perspective for, and a greater sense of, responsibility to the community served
2. Greater insight into their own personal reactions when caring for those with a chronic illness or disability

3. Increased confidence in engaging with a member of one's community
4. Enhanced and sustained capacity for empathy
5. Greater appreciation for the needs of those from a wide array of socioeconomic backgrounds
6. Enhanced awareness of what it means to be a health care professional

Representative quotes included

- “The WWP allowed me to experience and not just be told about some aspects of the lives of wounded warriors and their families. This will not only help me to better care for them but to consider the perspective of all my patients and enhance my empathy.”
- “I really enjoyed having the opportunity to reflect on my experiences during my participation in the WWP. These discussions helped me to process my experiences in a way that is sure to help me be a more compassionate and competent physician.”

**Conclusion** This immersive pilot program demonstrates a novel approach to community-based education and affords participants a perspective they would be unlikely to gain through traditional educational approaches. Our strategy can be readily implemented in a number of different settings, and it can be tailored to meet the needs of learners, faculty members, and their communities. Further study to evaluate benefits of this and similar programs is planned for the future.

## C.12

### PARTICIPATION IN AN INTERPROFESSIONAL SERVICE LEARNING COURSE AND A STUDENT-RUN FREE CLINIC IMPACTS STUDENT CLINICAL REASONING AS MEASURED BY THE SELF-ASSESSMENT OF CLINICAL REFLECTION AND REASONING (SACRR)

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Student-run free medical clinics are a type of health care delivery program in which students take primary responsibility for clinic logistics and operational management. The Community Aid, Relief, Education and Support Clinic (CARES) is an example of an interprofessional student-run

free medical clinic at The Medical University of South Carolina (MUSC) where students from multiple disciplines and colleges work together to serve the uninsured patients in the community. Since 2005, this service learning experience has enhanced the preclinical experience of medical, occupational therapy (OT), physical therapy (PT), pharmacy, and physician assistant (PA) students.

Although student-run clinics are lauded for their potential to teach students clinical skills, medical humanism, and professional generosity, there are no studies that have measured the student learning outcomes from participation in these clinics. The purpose of this study was to examine the learning outcomes of OT, PT, PA, medicine, and pharmacy students that participated in the CARES student-run free medical and therapy clinics.

The experimental group consisted of preclinical OT, PT, PA, medicine, and pharmacy students ( $n = 101$ ) enrolled in an interprofessional (IP) course, Caring for the Community—A Service-Learning Elective. The control group consisted of students from each academic program that did not participate in the CARES class, or students who may only have volunteered in the CARES program ( $n = 232$ ). Students were administered three assessments, the Interprofessional Education Perception Survey (IEPS), the Reflection for Interprofessional Learning Scale (RIPLS), and the Self-Assessment of Clinical Reflection and Reasoning (SACRR) at the beginning and end of each semester.

Students who participated in the CARES IP class and medical and therapy clinics showed a significant change in self-rated measures of interprofessionalism and clinical reasoning after participation in hands-on learning at the clinic ( $P = 0.02$ ). There was no effect or significant change for students that were in either of the control groups ( $P = 0.55$ ). Improvements were seen in attitudes toward interprofessional cooperation, teamwork, collaboration, professional identity, roles, and responsibilities.

The study suggests that service learning, as opposed to only volunteerism at a student-run free clinic, can impact clinical reasoning in PT, OT, PA, pharmacy, and medical students. Service learning is typically associated with projects relating to the services rendered. These projects give students the opportunity to synthesize the information gathered from their service, which in turn makes it more meaningful. The students can process effective versus ineffective treatments through analysis leading to better clinical reasoning. In addition, students begin to consider the importance of working in a health care team in order to provide the highest level of care in today's health care environment.

Funding Source: The Medical University of South Carolina Interprofessional Grant



**C.13**  
**MARYMOUNT UNIVERSITY AND MANOS**  
**ABIERTAS: AN EVOLVING GLOBAL ENGAGEMENT**  
**PARTNERSHIP IN COSTA RICA**

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*Theresa Cappello, Ph.D., Faith Claman, D.N.P., R.N.,*  
*Aly Eisenhardt, D.H.S., MHSA,*  
*Sonia Hernandez, Ph.D., Sherri Hughes, Ph.D.,*  
*Diane Murphy, Ph.D.*  
*Marymount University*

**Background and purpose** Global perspective is an academic outcome of engagement within the global community that facilitates development of social responsibility in professional practice. This administrative case report details the evolution of a global partnership as a strategy for interdisciplinary student engagement in the advancement of a developing nongovernmental organization (NGO) in Costa Rica.

**Case description** Marymount University (MU) is a student-centered academic institution motivated toward service and integration of student experiences within the global community. *Fundación Hogar Manos Abiertas* (*Manos Abiertas*) is a developing NGO dedicated to the care of and attention to persons with physical and mental ailments. International Service Learning (ISL) is an international educational NGO that coordinates medical and educational teams for the provision of services to underserved populations. The alignment of shared mission and values among these partners guided the work culture and mutually determined priorities in this project. Curricula coordinated across programs and schools engaged students at MU in the development and advancement of *Manos Abiertas* as a maturing organization.

**Outcomes** One hundred forty-nine students and 12 faculty members representing 6 unique programs in 4 of the 5 academic units (schools) at Marymount University participated in the organizational development activities at *Manos Abiertas* in Costa Rica. The results—the student products embedded within the curriculum—include

- Establishment of physical therapist services,
- Advancement of the organizational structure,
- Organizational and operational improvements,
- Reassignment of special education resources and programs,

- Development of a model electronic medical record,
- Coordinated interprofessional care plans,
- Implementation of skilled nursing practices, and
- Professional staff development and training—all at *Manos Abiertas*.

**Discussion** Global engagement designed within the curriculum may be used successfully to advance developing organizations and guide student participation as professionals responsible for addressing needs across global communities.

#### C.14

##### INTERPROFESSIONAL SHARED CLINICAL EXPERIENCES WITH COMPLEX COMMUNITY- DWELLING PATIENTS AND THEIR FAMILIES

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*Nicole S. Culhane, Pharm.D., FCCP, BCPS,<sup>2</sup>*

*Angela M. McNelis, Ph.D., R.N., ANEF, CNE,<sup>3</sup>*

*Paula Teague, D.Min., M.B.A., B.C.C.,<sup>4</sup>*

*Thomas Crowe M.Div.,<sup>5</sup> Jennifer Hayashi, M.D.,<sup>4</sup> Nathan Poole, M.A.,<sup>1</sup>*

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**Background** Future health care providers will be required to work in high-functioning interprofessional teams. For educators, developing innovative methods that teach real-world clinical practice in a cost-effective, productive, and high-quality manner is essential. In response to these directives, we are implementing a longitudinal educational project to integrate IPE and clinical technology into the delivery of care to medically complex homebound elders.

**Objectives** This longitudinal project creates interprofessional teams of students/trainees to learn team-based interprofessional skills in the context of providing care to the vulnerable homebound elder. Unique aspects of this project include the use of simulation technologies, development of a

student/trainee-led home visit model, and facilitated reflection and debriefing methods.

**Methods** Graduate nurse practitioner students, pharmacy students, internal medicine residents, and chaplain trainees are participating in a longitudinal experience consisting of four online learning modules, an intensive session of team-building exercises, a standardized patient clinical simulation, and up to three student/trainee-led home visits, followed by self-debriefing or facilitated debriefing. Reflection on the experience is encouraged using journaling and team assessment following each home visit.

**Results** Program implementation began in fall 2013. The program's effect on learner IPE attitudes and beliefs will be assessed with pre- and postlearner surveys, using the Modified Attitudes Toward Interprofessional Health Care Teams (ATHCT) and the Interprofessional Socialization and Valuing Scale (ISVS). We will qualitatively analyze the learner journaling reflections to identify themes. Preliminary data will be available in summer 2014. Baseline results will be presented as well as challenges in project implementation.

**Implications** Developing and implementing a longitudinal interprofessional education program focused on integrating technology with home-based care is feasible. Data on the effects on learners will be presented and implications will be discussed.

### C.15

#### TAKING INTERPROFESSIONAL EDUCATION (IPE) FROM CLASSROOM TO COMMUNITY: THE I-TEETH PROGRAM

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The goal of interprofessional education (IPE) is to foster collaborative practice by providing shared learning opportunities among health professions students. By learning with, about, and from each other, students learn principles of teamwork and communication that they can apply in practice. Great strides have been made in addressing the Interprofessional Education Collaborative (IPEC) competencies but often in isolated classes, courses, or projects. Further, a preponderance of IPE efforts has been focused on prelicensure students; advanced health trainees such as advanced practice registered nurses, social workers, and medical and dental residents are in need of

learning opportunities that are grounded in an interprofessional pedagogy and situated learning in the community. Importantly, opportunities for joint training along the educational and learning continuum are needed.

The purpose of this presentation is to describe i-TEETH (interprofessional Teams Engaged in Education and Training in Health), a sequential interprofessional curriculum piloted with pediatric nurse practitioner trainees and pediatric dental residents. Curricula were developed with three goals: (1) allow trainees to experience the learning continuum together (exposure, immersion, integration), (2) allow trainees to move together along the didactic-to-practice continuum, and (3) address content and skill gaps in existing curricula. In consultation with educators and practitioners, the training program consisted of three phases, designed to progressively build upon each other so trainees were able to learn together both didactically and clinically and translate learned skills into practice. Trainees first took a multistep online module that included IPE and team training concepts, a group exercise, and content on growth and development and oral health. Parts 2 and 3 included an in-person seminar and a half-day clinical experience at a community-based clinic—the Center for Pediatric Dentistry. In the seminar, trainees collaborated in small groups to develop optimal care plans for several pediatric oral health cases featuring children and teenaged patients with special needs. During the half-day clinical experience, pediatric nurse practitioners and dental residents were paired together to teach each other how to conduct developmental assessments, oral health assessments, and skills such as the application of fluoride varnish. The interprofessional pairs jointly provided care to the children in the clinic. The end-of-program evaluations revealed that the trainees derived great value from the experiences, particularly the opportunity to learn and practice together in the community. Trainees reported an increase in knowledge and appreciation of the other profession's skills, the importance of team communication, and an increase in confidence in performing both team and oral health/developmental assessment skills. Not surprisingly, lessons learned included the need for long-term advanced planning, more faculty development, and more interactive training time for the trainees. Plans for expansion are under way to include social work trainees, family nurse practitioners, and family medicine and pediatric residents. This pilot provides the foundation for creating community-based interprofessional models of learning that are simultaneously intentional and integrated.

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## Appendix D

### Summary of Updates from the Innovation Collaboratives

The Institute of Medicine's (IOM's) Global Forum on Innovation in Health Professional Education is complemented by the work of four university- or foundation-based collaborations in Canada, India, South Africa, and Uganda. Known as innovation collaboratives (ICs), these country-based collaborations characterize innovators in health professional education through their demonstration projects that require different health professional schools to work together toward a common goal. The four ICs were selected through a competitive application process. By being selected, these collaboratives receive certain benefits and opportunities related to the forum that include

- The appointment of one innovation collaborative representative to the Global Forum,
- Time on each workshop agenda to showcase and discuss aspects of the IC's project with leading health interprofessional educators and funding organizations,
- Written documentation of each collaborative's progress summarized in the Global Forum workshop summaries published by the National Academies Press, and
- Remote participation in Global Forum workshops through a video feed to the collaborative's home site.

Each collaborative is undertaking a different 2-year program of innovative curricular and institutional development that specifically responds to one of the recommendations in the Lancet Commission report or the

2011 IOM report *The Future of Nursing*—reports that inspired the establishment of the Global Forum. These on-the-ground innovations involve a substantial and coordinated effort among at least three partnered schools (a medical school, a nursing school, and a public health school). As ad hoc activities of the Global Forum, the ICs are amplifying the process of reevaluating health professional education globally so it can be done more efficiently and effectively, and it is hoped it will increase capacity for teamwork and health systems leadership. The work of the collaboratives is detailed below.

## CANADA PROGRESS REPORT FOR THE INSTITUTE OF MEDICINE

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University of Toronto*

### The CIHLC

The Canadian Interprofessional Health Leadership Collaborative (CIHLC) is a multi-institutional and interprofessional partnership whose goal is to develop, implement, and evaluate an evidence-based program in collaborative leadership that builds capacity for health systems transformation. The CIHLC lead organization is the University of Toronto (UofT) partnered with the University of British Columbia (UBC), the Northern Ontario School of Medicine (NOSM), Queen's University, and Université Laval.

Through the foundational research it conducted, the CIHLC identified unique aspects of collaborative leadership and an existing Canadian program as an exemplar in collaborative leadership for system change. The Canadian Collaborative Change Leadership (CCL) Program housed at the University Health Network (UHN) closely aligns with the CIHLC vision and proposed design and is embedded in a context of interprofessional and relationship-centered care. Rather than launch an additional leadership education program, the CIHLC co-created the Integrated CCL program, adding the evidence and unique CIHLC components—including community engagement (CE), social accountability (SA) content, an online presence, and an enhanced developmental evaluation—to the existing CCL program.

### The Program: Design and Delivery

Structured to be context specific, the integrated CCL program is adapted to the individuals, teams, organizations, and communities participating. This program covers a 10-month period with five 2-day face-to-face sessions and blends these intensive sessions with coaching from faculty within and

between sessions. Additional coaching and learning will be promoted via an online platform and community of practice. During and between sessions the participants will develop, design, implement, and evaluate a capstone initiative in their community or organization based on the principles of SA and CE.

The CIHLC introduced a multilingual platform—the Blackboard Learning Management System—to allow the program to provide distance education and online collaboration through tools such as webinars, multimedia, discussion boards, Wikis, and online assessment tools. Blackboard allows the program to use online education to reach learners throughout Canada and, potentially, globally.

### *Session One*

The first program session was held April 11–12, 2014, in Toronto. The session was designed to explore collaborative change leadership theories and practices, develop understanding of social accountability and community engagement in the context of setting up the capstone initiative and organizational inquiry, and initiate the community of practice. The evaluation of the first session and the design of the second session are in progress.

### *Recruitment and Selection of Participants*

The goal of the integrated CCL program is to develop people to lead health system transformation and enable socially accountable change in their community; therefore, the targeted learners were senior and high-potential leaders across practice and education.

The two program partners selected participants by direct recruitment through each of the four CIHLC partner sites outside of Toronto and through the CCL call for applications open to Canadian and international health leaders, largely focusing on Toronto-based organizations affiliated with UHN. A total of 32 participants were selected, with teams representing Anglophone and Francophone Canada, rural and urban leaders, and four provinces, including Alberta, British Columbia, Ontario, and Quebec. Each team brings to the program a capstone initiative that addresses an important issue such as seniors' health in aboriginal communities; mental health related to child and youth, addictions, rural, and northern populations; models of interprofessional collaborative education and care; and enhancing the accessibility of collaborative leadership education for French-speaking health leaders.



*CIHLC Website*

The CIHLC project website provides an Internet platform to present information on project activities, program development, and participant recruitment. The full website was translated to French in order to create a truly pan-Canadian forum for the CIHLC project and the program. The website will be updated in parallel in English and French throughout the program, to provide equal access to Anglophone and Francophone participants. The English website can be accessed at <http://cihlc.ca>; the French website can be accessed at <http://cihlc.ca/fr>.

*Knowledge Dissemination and Knowledge Transfer Strategy*

The CIHLC submitted several scholarly pieces for publication in reputable journals and books and is preparing several additional articles and book chapters pertaining to the research and program development for publication. Published scholarly work and other knowledge dissemination and knowledge transfer activities can be found at the following link: <http://cihlc.ca/research> (English) or <http://cihlc.ca/fr/recherche> (French).

**Next Steps**

The upcoming program session themes are outlined in Table D-1. Testing of the program will continue to be conducted during the 10-month period of the program. A final evaluation report will be produced by March 31, 2015, at the close of the CIHLC project.

**TABLE D-1** CIHLC Program Overview

Session	Description
Session 2	Interpreting organizational inquiry results, deepening knowledge of emergent change and meaning making; begin designing change strategies and evaluation.
Session 3	Navigating the tension between implementing a change plan and sensing system needs and adapting accordingly; leading meaning-making processes.
Session 4	Assessing movement, reflection, and adapting strategies based on what is emerging as meaningful in the organization or community.
Session 5	Presenting and celebrating work and coaching each other; assessing movement, reflecting on and adapting strategies based on what is emerging as meaningful in the organization, community, and system.

**INDIA**  
**BUILDING INTERDISCIPLINARY LEADERSHIP SKILLS AMONG**  
**HEALTH PROFESSIONALS IN THE 21ST CENTURY:**  
**AN INNOVATIVE TRAINING MODEL PROGRESS**  
**REPORT (APRIL 2012 TO MAY 2014)**

*Sanjay Zodpey, M.D., Ph.D.*  
*Public Health Foundation of India (PHFI)*

**Background**

The Lancet Commission report (Frenk et al., 2010) on *Education of Health Professionals for the 21st Century* discusses three generations of global educational reforms. It elaborates on transformative learning, focusing on development of leadership skills and interdependence in health education, as the best and most contemporary of the three generations. The purpose of this form of education reform is to produce progressive change agents in the field of health care. *The Future of Nursing* report (IOM, 2011) also strongly focuses on transformative leadership, stating that strong leadership is critical for realizing the vision of a transformed health care system. The report recommends a strong and committed partnership of nursing professionals with physicians and other health professionals in building leadership competencies to develop and implement the changes required to increase quality, access, and value and deliver patient-centric care.

Leadership is a complex multidimensional concept and has been defined in many different ways. In the field of health care, leadership serves as an asset to face challenges and is an important skill to possess. To reach this goal, common leadership skills must be looked for among students applying for health professional education, including medical, nursing, and public health professionals (Chadi, 2009). The Lancet Commission report's recommendations are targeted at a multidisciplinary and systemic approach toward health professional education. In India, the lack of and need for professional health care providers has been discussed for the past many decades. The education system for health professionals in India is strictly compartmentalized, and there are strong professional boundaries and demarcations among the various health professions (medical, nursing, and public health); there is recognized need for integrating these three streams. Moreover, the current health professional education system in India focuses minimally on the development of leadership competencies to address public health needs of the population.

### **Rationale for the Initiative**

Health professionals have made enormous contributions globally to health and development over the past century. The demand of 21st-century health professional education is mainly transformational, aiming to help the professionals strategically identify emerging health challenges and innovatively address the needs of the population. The need of the hour in India is to amalgamate the skills and knowledge of the medical, nursing, and public health professionals and to develop robust leadership competencies among them. This initiative proposed to identify interdisciplinary leadership competencies among doctors, nurses, and public health experts necessary to bring about a positive change in the health care system of the country.

### **Objectives of the Initiative**

1. Identification of interdisciplinary health care leadership competencies relevant to the medical, nursing, and public health professional education in India
2. Conceptualization and piloting of an interprofessional training model to develop physician, nursing, and public health leadership skills relevant for the 21st-century health system in India

### **Partners of the Innovation Collaborative**

The Innovation Collaborative is a partnership among the following three schools:

- Public Health Foundation of India, New Delhi: public health institute;
- Datta Meghe Institute of Medical Sciences, Sawangi, Wardha: medical school; and
- Symbiosis College of Nursing, Pune: nursing school.

These schools teamed up to further the objective of the Innovation Collaborative. Table D-2 provides basic information for the three schools.

### **Innovation Collaborative Activities—Update**

The three partner institutes collaborated to address the major objectives of this initiative. A formal approval of the proposal was obtained by the IOM, following which the team members conducted various outlined activities.

TABLE D-2 Innovation Collaborative Partners

Name of School	Address	Administrative Point of Contact	Members of Working Group
Public Health Foundation of India	Public Health Foundation of India, ISID, 4 Institutional Area, Vasant Kunj, New Delhi 110070, India	Prof. Sanjay Zodpey	Dr. Preeti Negandhi Ms. Kavya Sharma Dr. Himanshu Negandhi Ms. Ritika Tiwari
Jawaharlal Nehru Medical College—constituent college under Datta Meghe Institute of Medical Sciences (Deemed University)	Paloti Road, Sawangi Meghe, 442004, Wardha District, Maharashtra State, India	Pro-chancellor Dr. Vedprakash Mishra	Dr. Abhay Gaidhane Dr. Zahir Quazi
Symbiosis College of Nursing—constituent of Symbiosis International University	Symbiosis College of Nursing (SCON) Senapati Bapat Road, Pune, 411 004, Maharashtra India	Col. Jayalakshmi N.	Dr. Rajiv Yeravdekar Mrs. Meenakshi P. Gijare

### Constitution of the Collaborative

A team was formed including members from all three partner institutes. Prof. Sanjay Zodpey, Director-PHE, PHFI, represents the Collaborative as the National Program Lead along with Col. Jayalakshmi N., Principal, Symbiosis College of Nursing, and Dr. Vedprakash Mishra, Pro-chancellor, Datta Meghe Institute of Medical Sciences as Regional Program Leads. The team also included other member representatives from each partner institute.

### *Constitution of a Technical Advisory Group (TAG)*

The TAG was formed, comprising renowned experts in the field of health professions education. All these members were contacted to seek their consent to be a TAG member to oversee and provide guidance to the activities of the collaborative. Regular meetings were held with the TAG members, and their guidance was sought on various aspects of the project.

*Identification of Interdisciplinary Health Care Leadership Competencies*

The initial activity undertaken by the collaborative was an exhaustive literature search by the working group under the guidance of the program leads to understand need for and genesis of leadership competencies as a part of education of health professionals. Published evidence, both global and Indian, was included in the literature search to look for key interdisciplinary leadership competencies, the need for an interdisciplinary training of health professionals, and the current scenarios in interprofessional health education. The literature search strategies included journal articles from electronic databases, medical journals, grey literature, newspaper articles, and papers presented in conferences. The search was not restricted by the period of publication or language. The electronic search was complemented by hand searching for relevant publications or documents in their bibliographies. A process of snowballing was used until no new articles were located.

*Expert Group Meetings*

Once the literature search was complete, the working group summarized the findings of the search and prepared a formal report. This report was reviewed by all senior members and finalized. This was followed by a consultation with experts from various disciplines of health professional education, where the findings of the literature search were presented.

*Development of Training Model*

The next activity of the project was the development of the training model for the pilot. The training model was conceptualized based on the findings of the literature search and the recommendations of the expert group at the consultation. A training manual was developed for use in the trainings by the working group along with the team leaders.

The trainings are aimed at health professionals across the country from the medical, nursing, and public health fields. The long-term objective of this training model is its integration into the regular curriculum of the medical, nursing, and public health students, with an aim to develop interdisciplinary leadership skills among them.

To align with the objectives of the Innovation Collaborative, the training model was pilot-tested on some in-service professionals and students across the three streams. For this, a detailed agenda and the training material were prepared based on the content of the training manual.

*Piloting the Training Model*

The pilot trainings commenced in April 2013 and were completed in the first week of May 2013. These trainings were conducted in batches at three different sites:

- State Institute of Health Management and Communication, Gwalior (SIHMC);
- Indian Institute of Public Health, Bhubaneswar (IIPHB); and
- Datta Meghe Institute of Medical Sciences, Sawangi (DMIMS).

The duration of each training batch was 3 days. Resource faculty from the three partner institutes actively trained the participants. IIPHB had 25 participants for the training, while SIHMC and DMIMS had 16 and 25 participants, respectively. The average age of the participants across all the three batches was 32 years. The total number of males in the three batches was 40, and there were 26 females.

The group for each batch of the training workshop was mixed, with participants from different disciplines. The training was aimed at bringing the three disciplines (medical, nursing, and public health) together to build interdisciplinary leadership skills. Details of participants are shown in Table D-3.

The pilot training workshops included didactic sessions as well as group discussions. The didactic sessions were aimed at giving the trainees an understanding of leadership skills and their importance in health care. The aim of the group discussions was to train them to innovatively apply interdisciplinary leadership competencies in their local health care settings.

At the end of the pilot trainings, the trainees were asked to fill out a

**TABLE D-3** Participants at Training Workshop

Name of Institute	Participants from Medical, Nursing, and Public Health	Total Participants
State Institute of Health Management and Communication, Gwalior (SIHMC)	11 medical, 4 nursing, 1 public health	16
Indian Institute of Public Health, Bhubaneswar (IIPHB)	14 medical, 2 nursing, 9 public health	25
Datta Meghe Institute of Medical Sciences, Sawangi, Wardha (DMIMS)	14 medical, 8 nursing, 3 public health	25

feedback form about various aspects of the training. Positive responses from the participants were many, ranging from good coordination of the training, suitable content, good pedagogy, to friendly atmosphere. A few negative points, such as short duration of the training, more theoretical, less group discussions/practicum, were also emphasized.

Following the pilot trainings, a formal report was prepared by the working group and shared with the Global Forum at the IOM.

### *Revision of the Training Model*

Based on the feedback of the trainees, the training model was revised. The duration of the training was increased to 4 days. Certain topics—such as ethics of leadership, advocacy, conflict resolution, negotiation, and interpersonal communication—were added to the program. The program was revised to include group discussions and role plays wherever necessary.

This revised model was shared with members of the TAG for their inputs and accordingly finalized.

### *Taking the Initiative Forward*

Following the structure adopted for the pilot trainings and incorporating the lessons learnt from them, PHFI, through its academic institute, the Indian Institute of Public Health Delhi (IIPHD), conducted a 4-day training on Leadership in Health and Development Sectors April 1–4, 2014. This training was attended by 35 participants from across the country. These were professionals working at different levels in the health and development sectors, such as medical, nursing, program management, public health organizations, and academe. Innovative pedagogic techniques were applied during this training to engage the participants.

### **Prospective Activities Planned**

1. The activities undertaken as part of the Innovation Collaborative will be published in a peer-reviewed journal (see Table D-4). A manuscript detailing the activities of the collaborative is under way and will be submitted to a suitable peer-reviewed journal soon.
2. The collaborative will also present the findings of the initiative to the Global Forum on Innovation in Health Professional Education.
3. On the basis of the overwhelming response and the feedback of the participants of the recently concluded training, IIPHD is organizing a second round of the training in August 2014.

**TABLE D-4** Innovation Collaborative Activities—Update Summary

Activity	Current Status	Remarks
Constitution of the collaborative	Completed	Team formed comprising members from three partner institutes
Constitution of the technical advisory group	Completed	Regular meetings held and advice sought from members regarding project
Conducting a literature review	Completed	Report was shared with the IOM
Expert group meetings and consultation	Completed	Inputs taken from experts from the field
Developing training model	Completed	Training manual was shared with the IOM
Piloting the training model	Completed	Trainings were completed in May 2013
Preparation of report based on pilot findings	Completed	A formal report was prepared and shared with the IOM
Finalization of training model	Completed	The training model has been revised to incorporate the changes suggested by the participants of the pilot trainings and inputs of the TAG members
Manuscript submission to peer-reviewed journal	Ongoing	
Trainings on Leadership in Health and Development Sectors	First batch conducted at IIPHD, PHFI in April 2014. Second round to be conducted in August 2014.	



**SOUTH AFRICA**  
**THE AMAZING RACE FOR HEALTH:**  
**A NOVEL INTERPROFESSIONAL COMMUNITY-BASED**  
**EDUCATION EXPERIENCE FOR FIRST-YEAR HEALTH**  
**PROFESSIONS STUDENTS AT STELLENBOSCH UNIVERSITY**  
**PROGRESS REPORT JUNE 2014**

*Kalay Moodley, M.D., M.Med. Public Health, FCMPH, and*  
*Marietjie de Villiers, Ph.D., M.B.Ch.B., M.Fam.Med.*  
*Stellenbosch University*

The Stellenbosch University Rural Medical Education Partnership Initiative (SURMEPI) strives to develop, implement, and evaluate innovative, workable, and effective medical education models in order to strengthen medical education and health systems within rural and resource-constrained environments. This is in keeping with the South African Department of Health Human Resources for Health Strategy 2012/13–2016/17, which seeks to implement a rural health strategy to attract and retain health professionals in rural areas (SA Department of Health, 2011). SURMEPI addresses the pipeline for human resources for health including high (secondary) school learners, undergraduate and postgraduate students, faculty staff, and practicing health care workers.

While the Faculty of Medicine and Health Sciences (FMHS) at Stellenbosch University (SU) has been providing extensive community-based education and training experiences to our students (De Villiers et al., 2014), the challenge is to design and implement such community-based experience for a large cohort of first-year students. As part of strengthening the pipeline in the first year of study, SURMEPI in 2013 facilitated the development of “The Amazing Race for Health,” a new innovation at the FMHS. The underpinning of this innovation is to ensure a transformative educative experience for first-year students by exposing them to the context in which people live and seek health care. By making training more relevant to the South African context through progressive and longitudinal exposures, we aim to adequately prepare graduates for the realities of working in under-resourced health care systems.

“The Amazing Race for Health” forms part of the Health in Context module, an interprofessional module for first-year medical, physiotherapy, and dietetic students (see Box D-1 for the educational outcomes for the Amazing Race).

During the first phase of the Health in Context module, the students receive lectures on the social determinants of health and health systems. Students are then divided into 39 groups of 10 students each, and each group is allocated a subdistrict within the Western Cape, South Africa.

**BOX D-1**  
**Educational Outcomes for “The Amazing Race for Health”**

At the end of the module, the students will be able to describe:

1. The demographic and health profile of a community;
2. The social and environmental factors that impact the health of a community and its interrelationship with the individual; and
3. The public health infrastructures required for effective health care provision in a community.

The second phase of the module consists of group work, where each Amazing Race team researches their allocated site. This includes understanding the social determinants of health, the burden of disease, and the number and nature of health services provided in the sub-district.

When the students have acquired the background knowledge of the area, they are provided with the opportunity to visit their subdistrict to experience firsthand how the determinants of health affect patients, their families, and communities in the area. This serves to help them to better understand the organization of the health services in the specific community they had been studying for the previous 4 months, as well as to gain a better understanding of the functioning of the facility and the roles of the different professions and the health care team. These activities include joining community care workers on home visits, interviewing patients and health facility staff, visiting local community organizations, and observing health care professionals in local health care facilities.

When they return to FMHS, students reflect on their learning experiences in their groups. They prepare structured feedback and do a formal group presentation to the class. This presentation serves as the summative assessment of the activity.

The Amazing Race has now run for 2 consecutive years, and the feedback received from students is overwhelmingly positive. The following quotes from students’ personal reflections demonstrate that this was a valuable learning opportunity:

- The Amazing Race has taught me a great deal and has opened my eyes to see the bigger picture in health care. I started to see the importance of our careers and the enormous impact it has on a community.

- My appreciation for all health practitioners has grown tremendously. . . . I am inspired to be that passionate about my career and devote myself to give my best each and every day.
- The visit was quite eye-opening and made many of the concepts I had learned in class much more real and easy to identify with.
- One of the biggest lessons I learned upon visiting the town was the great need of health care workers in rural and farm areas, and how much change health care workers such as doctors, dieticians, and physiotherapists can bring to underserved areas.
- It made me realize that being a doctor involves so much more than just treating one patient at a time. When I chose to be a doctor, I also chose to make a difference in every community that I will work in, and going on the Amazing Race really inspired me to realize that.

The early and interprofessional exposure of students to the realities of underserved communities, their social determinants of health, and their health services facilitated consolidation and integration of students' theoretical knowledge with experiential learning. The experience reinforced the young students' motivation to be socially accountable and make a difference to their communities.

### Acknowledgments

Professor Lilian Dudley, Dr. Stefanus Snyman, Dr. Aziza Bawoodien, and Ms. Maryke Geldenhuys were instrumental in designing and implementing the Amazing Race initiative. We gratefully acknowledge funding from the U.S. President's Emergency Plan for AIDS Relief (PEPFAR) through the Health Resources and Services Administration (HRSA) under the terms of T84HA21652 via the Stellenbosch University Rural Medical Education Partnership Initiative (SURMEPI).

### UGANDA

*Nelson Sewankambo, M.B.Ch.B., M.Sc., M.D., F.R.C.P., L.L.D. (HC)*  
*Makerere University*

*Defining competencies, developing and implementing an interprofessional training model to develop competencies and skills in the realm of health professions ethics and professionalism.*

### **Innovation and Motivation for Selection of Innovation**

This project is a major innovation aimed at contributing to improvement in the quality of health service. Although there is a lot of discussion about the need to improve professional ethics and professionalism in low- and middle-income countries, there has been very little attempt to develop competency-based interprofessional education programs to address the challenges. Professionalism is defined in several different ways (Wilkinson et al., 2009). The Royal College of Physicians (2005) has defined professionalism as “a set of values, behaviors, and relationships that underpin the trust the public has in doctors.” This definition can be extended to embrace all types of health workers.

**Overall Aim:** To prepare a future workforce committed to practicing to a high degree of ethics and professionalism and performing effectively as part of an interprofessional health team with leadership skills.

### **Specific Objectives**

1. To define competencies and develop a curriculum for interprofessional education of health professional students (nursing, medicine, public health, dentistry, pharmacy, and radiography) in order to develop their skills in the realm of ethics and professionalism.
2. To pilot a curriculum for interprofessional education of health professional students (nursing, medicine, public health, dentistry, pharmacy, and radiography) to develop their skills in the realm of ethics and professionalism.
3. To develop curriculum for interprofessional education for health workers and tutors in ethics and professionalism and pilot its implementation in partnership with the regulatory professional councils.

### **Approach to Implementation of the Project**

#### *Instructional Reforms*

A critical element of this project will be the engagement of major stakeholders, including the Ministry of Health, patients, hospitals and health centers, private practitioners, professional councils, educators, students, alumni, and consumer rights groups nationally. This engagement will ensure the participation of stakeholders in the implementation and the commitment of local resources to support this effort. Through this engagement, the collaborative will define the extent of the problem (unethical and unpro-

fessional practices among nurses, doctors, public health workers, and other health professionals) and identify the necessary interventions, including the required competencies and interprofessional training approaches that will address the gaps as well as the necessary post-training support to ensure the institutionalization of ethics and professionalism among health professionals in Uganda. Stakeholders will participate in the implementation of training and mentoring trainees at their respective places of work. Of particular importance are the students who have initiated the formation of a student ethics and professionalism club. They are advanced in the planning process and will be supported through this project and contribute to the whole process of this project. Right from the beginning, the collaborative plans to align this educational project with the needs of Uganda's population. Concerns have been raised about ethics and professionalism among health professionals in Uganda, largely by the media. There are, however, only limited, brief reports in publications in the recent past in peer-reviewed literature on the issue of ethics and professionalism among health workers in Uganda (Hagopian et al., 2009; Kiguli et al., 2011; Kizza et al., 2011).

Some national reports highlight the challenges in this area, but few formal studies have been conducted to document the extent of the problem, the contextual factors, and possible interventions (UNHCO, 2003, 2010). Because of the lack of comprehensive evaluations and evidence, the collaborative plans to initiate this project with a systematic needs assessment. The needs assessment will involve the participation of representatives from several key partners mentioned previously. Data will be collected through an analysis of key documents from the professional councils, which are statutory units charged with the responsibility of investigating reports and cases of professional indiscipline among doctors, dentists, nurses, pharmacists, and others. The collaborative will undertake limited surveys and key informant interviews among the above-named groups.

### *Development and Implementation of the Curriculum*

Results from the needs assessments will be used to inform the curriculum development process, which will employ a six-step approach (Kern et al., 2009). Prior to curriculum development, interprofessional competencies will be defined through stakeholder engagement and suggestions, building on the five competencies defined by the 2003 IOM report *Health Professions Education: A Bridge to Quality*. Trainees will learn not only competencies related to ethical practices and professionalism but also competencies of interprofessional collaboration and leadership (IPEC Expert Panel, 2011). Stakeholder discussions will be held to get a clearer understanding of society's needs and the challenges of ensuring high standards of ethics and professionalism. This will be followed by a consensus process to

arrive at an agreed-on set of competencies to be acquired during an interdisciplinary course for the students who are the next generation of leaders.

A curriculum will be developed for students and for teachers based on the needs assessment results and the defined competencies.

### *Institutional Reforms*

A number of institutional reforms will be needed as the instructional reforms are implemented. These include a careful review of the linkages and collaboration between the university and the aforementioned stakeholders, and the recognition and the reward system for excellence in demonstrating the desired high standards of ethics and professionalism among both students and staff.

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## Appendix E

### Speaker Biographical Sketches

**Virginia W. Adams, Ph.D., R.N.**, earned her bachelor's degree in nursing at Winston Salem State University; her M.S.N. from University of North Carolina (UNC), Chapel Hill; and her Ph.D. from UNC, Greensboro. Previous academic experiences include a 14-year history of being the first African American dean hired at UNC Wilmington and the first African American dean to lead a predominantly white school of nursing in North Carolina. Other academic experiences include: Interim Dean, Department Chair, and Associate Professor in the College of Nursing, East Tennessee State University, Johnson City, Tennessee; Tenured Associate Professor Maternal Child Nursing, Winston-Salem State University, Winston-Salem, NC; and Clinical Instructor, North Carolina Central University. Her 15-year military experience included U.S. Air Force active duty and U.S. Army Reserve. As a W.K. Kellogg Foundation Community Partnerships Fellow, Dr. Adams explored strategies to build partnerships and bridge gaps in health services with the aim of redirecting health professions education. Dr. Adams currently serves as chair of the Southeastern Area Health Education Board of Directors, and is a member of the New Hanover County Board of Health, New Hanover Regional Medical Center Board of Trustees, Coastal Horizons Mental Health Board of Directors, and NC Scholars Commission. Other memberships include the American Nurses Association, NC Nurses Association, and Sigma Theta Tau International Honor Society. She has achieved recognition and awards for distinguished contributions to nursing education and regional engagement from her undergraduate and graduate institutions and community organizations. Current activities include chairing the inaugural steering committee of the International Council of Nurses



Education Network and overseeing the joint task force of National League for Nursing (NLN) and National League for Nursing Accrediting Commission (NLNAC) called INESA (International Nursing Education Services and Accreditation).

**Gillian Barclay, D.D.S., M.P.H., D.Ph.** (*Forum member*), is vice president for the Aetna Foundation. In her role, she leads the development, execution, and evaluation of the foundation's national and international grant programs and cultivates new projects within its three focus areas: promoting integrated health care, reducing obesity by promoting wellness and healthy choices, and improving health equity. Prior to joining the Aetna Foundation, Dr. Barclay was an advisor for the Regional Office of the World Health Organization (WHO) in the Office of Caribbean Program Coordination. There, she managed a portfolio of initiatives in the region that focused special attention on human resources for health, health leadership, the social determinants of health and equity, and strengthening health systems as well as the essential public health functions. Previously, she was the Evaluation Manager, Health Programs for the W.K. Kellogg Foundation, responsible for the outcomes and impacts of the foundation's investments to build leadership and increase health equity, to improve quality health and health care, and to enhance community health and wellness through food and community, among others. Dr. Barclay has taught at the Harvard School of Public Health and Hunter College in Manhattan, New York. Dr. Barclay earned her doctorate of dental surgery at the University of Detroit Mercy and completed her residency at New York Hospital Medical Center. She holds a doctorate in public health from Harvard University and a master's of public health from the University of Michigan. Her undergraduate work was at the University of the West Indies in Jamaica.

**Jeffery Brenner, M.D.**, is a family physician that has worked in Camden, New Jersey, for the past 15 years. Dr. Brenner owned and operated a solo-practice, urban family medicine office that provided full-spectrum family health services to a largely Hispanic, Medicaid population, including delivering babies, caring for children and adults, and doing home visits. Recognizing the need for a new way for hospitals, providers, and community residents to collaborate he founded and has served as the executive director of the Camden Coalition of Healthcare Providers since 2003. Through the Camden Coalition, local stakeholders are working to build an integrated, health delivery model to provide better care for Camden City residents. Dr. Brenner's work was profiled by the writer and surgeon Dr. Atul Gawande in an article in *The New Yorker* titled "The Hot Spotters" (1/24/11) and in an episode of *PBS Frontline* (7/27/11). In 2013, he received a MacArthur award. Dr. Brenner is also the medical director of

the Urban Health Institute, a dedicated business unit built at the Cooper Health System focused on improving care of the underserved. Using modern business techniques they are redesigning long-standing clinical care models to deliver better care at lower cost.

**Marjorie Cooper-Smith, M.S.W.**, joined the Care Center in 2012 and serves as the center's psychotherapist. She has clinical interests in HIV, depression, anxiety, empowerment, and substance abuse. She received her social work graduate-level training at Howard University in social services management and is currently an LICSW (Licensed Independent Clinical Social Worker) candidate in the District of Columbia.

**Marietjie de Villiers, Ph.D., M.B.Ch.B., M.Fam.Med., FCFP** (*Forum member*), is deputy dean of education at the Faculty of Health Sciences (FHS) of Stellenbosch University (SU) in South Africa, where she is also a professor in family medicine and primary care. She is currently responsible for all curriculum development, educational innovation, program implementation, and quality assurance on undergraduate, postgraduate, and continuing education levels at the FHS. Professor de Villiers is registered as a specialist family physician at the Health Professions Council of South Africa (HPCSA), holds a master's in family medicine, and completed a fellowship at the College of Family Physicians of South Africa. Professor de Villiers was awarded a Ph.D. in 2004 on the maintenance of competence of rural practitioners. She is chairperson of the Stellenbosch University Rural Medical Education Partnership (SURMEPI) Advisory Committee and is actively involved in the implementation and evaluation of the MEPI project. As chairperson of the Continuing Professional Development (CPD) Committee of the HPCSA, she was responsible for the national reconfiguration of the Council's CPD system and implementation. The main innovations Professor de Villiers is currently leading include the integrated learning of African languages in clinical communication courses; extension of medical training in rural settings; interprofessional education; interactive communicative technology in teaching and learning; and in-depth research in the effectiveness of medical education initiatives.

**Jehan El-Bayoumi, M.D.**, attended the University of Michigan in Ann Arbor for both undergraduate and medical school. She then moved to Washington, DC, in 1985 to complete her internship, residency, and chief residency in internal medicine at the George Washington University (GWU) School of Medicine and Health Sciences (SMHS). After completion of her training, she joined the Division of General Internal Medicine at GWU. Dr. El-Bayoumi served as clerkship director for many years prior to becoming the Internal Medicine Residency Program director in 1998, and remained in that role

for 15 years. Dr. El-Bayoumi is an associate professor of medicine, and she has a very active clinical practice. Learning how to better educate and evaluate learners from all levels has been a long-standing interest of hers. She has lectured and taught in the GWU Milken Institute School of Public Health, the School of Medicine and Health Sciences (SMHS), and the SMHS residency program, as well as in the community about topics such as women and minority health. She has served on the boards of Center for Women Policy Studies, National Women's Health Network, and Arts for the Aging. She is currently serving as a board member for Whitman Walker Health. Dr. El-Bayoumi founded the Rodham Institute to honor her patient, Mrs. Dorothy E. Rodham.

**Lisa Fitzpatrick, M.D., M.P.H.**, is a board-certified infectious diseases physician and Centers for Disease Control and Prevention (CDC)-trained medical epidemiologist. She is medical director of the Infectious Diseases Center of Care at the United Medical Center in Washington, DC. She is also a professorial lecturer at the GWU School of Public Health and Health Services, Department of Epidemiology and Biostatistics, and a guest blogger for *The Huffington Post*. She earned a B.A./M.D. at the University of Missouri–Kansas City and a master's in public health from the University of California Berkeley, School of Public Health.

**Sarah Freeman, Pharm.D.**, is the Telehealth Program development director for the Alaska Federal Health Care Access Network (AFHCAN) at the Alaska Native Tribal Health Consortium (ANTHC). Over a decade ago, AFHCAN, a program of ANTHC, designed and developed an innovative store-and-forward telehealth solution to meet the health care needs of rural Alaska. AFHCAN has evolved into a Food and Drug Administration (FDA)-listed medical device manufacturer that provides an array of telehealth products and services that empower organizations to improve health care delivery worldwide. Dr. Freeman's role is to work closely with clinical staff to create effective telehealth clinical programs for the Alaska Native Tribal Health System using leading-edge products in the telehealth market. This role includes developing and implementing training and education programs for health care staff to integrate telemedicine into their clinical practice settings. She is a pharmacist by training, receiving her pharmacy degree from the University of California, San Francisco, and a general practice residency at Kaiser Permanente in San Diego. She has a diverse health care background prior to settling into telemedicine and has worked in tribal and private sectors, as well as in university and rural settings.

**J. Scott Hinkle, Ph.D.**, is the director of professional development at the National Board for Certified Counselors (NBCC). Dr. Hinkle is a National

Certified Counselor (NCC), Certified Clinical Mental Health Counselor (CCMHC), and Approved Clinical Supervisor (ACS). He has been a practitioner for 35 years in the areas of community and school mental health. As a professor, Dr. Hinkle has taught graduate courses in family counseling, psychological testing, counseling research, and psychodiagnosis. He has taught in Europe and offered numerous courses online using computers in distance education. Dr. Hinkle has served as a team chair for the Council on Accreditation for Counseling and Related Educational Programs (CACREP) and provided consultation to universities on accreditation matters for more than 20 years. He currently consults with universities on issues concerning distance education and clinical training. Internationally, Dr. Hinkle has co-developed the Mental Health Facilitator (MHF) program, initially in collaboration with the WHO's Department of Mental Health and Substance Abuse. In addition to teaching the week-long workshop on MHF, he also presents the global workshop on clinical supervision that has developed an associated international certification in clinical supervision. Dr. Hinkle also has developed certification programs in Human Services (Human Services–Board Certified Practitioner) and Coaching (Board Certified Coach). He also consults on examination committees for other certifications, including the Certified Clinical Mental Health Counselor.

**Eric Holmboe, M.D.** (*Forum member*), a board-certified internist, is Senior Vice President, Milestones Development and Evaluation of the Accreditation Council for Graduate Medical Education (ACGME). Prior to joining the ACGME in January 2014, he served as the chief medical officer and senior vice president of the American Board of Internal Medicine (ABIM) and the ABIM Foundation. He is also adjunct professor of medicine at Yale University and adjunct professor at the Uniformed Services University of the Health Sciences. Prior to joining the ABIM in 2004, he was the associate program director at Yale Primary Care Internal Medicine Residency Program, director of Student Clinical Assessment at Yale School of Medicine, and assistant director of the Yale Robert Wood Johnson Clinical Scholars program. Before joining Yale in 2000, he served as division chief of general internal medicine at the National Naval Medical Center. Dr. Holmboe retired from the U.S. Naval Reserves in 2005. His research interests include interventions to improve quality of care and methods in the evaluation of clinical competence. His professional memberships include the American College of Physicians, where he is a fellow; Society of General Internal Medicine; and Association of Medical Education in Europe. He is an honorary fellow of the Royal College of Physicians in London. Dr. Holmboe is a graduate of Franklin and Marshall College and the University of Rochester School of Medicine. He completed his residency and chief residency at Yale–New Haven Hospital and was a Robert Wood Johnson Clinical Scholar at Yale University.

**Daveda Hudson** joined the Care Center more than 4 years ago as an HIV case manager. She believes that the solutions to improving engagement in HIV care largely involve shifting resources to develop targeted policy and implementing structural interventions. She works with the Care Center and Howard University to improve access to integrated mental health and substance use treatment by expanding clinical hours, engaging the community about health literacy, and discussing HIV and alleviating bureaucratic delays in securing health insurance.

**Poonam Jain, M.S., M.P.H.**, is a professor and the director of Community Dentistry at the Southern Illinois University School of Dental Medicine (SIU SDM) in Alton, Illinois. She has taught at SIU SDM since 1997. She obtained her B.D.S. degree from the University of Delhi in 1990 and her master's in science and a certificate in operative dentistry from the University of Iowa in 1997. She taught operative dentistry in the Restorative Dentistry Department at SIU SDM from 1997 to 2006 and took over as director of community dentistry in the Fall of 2006. Poonam Jain obtained her M.P.H. degree from the School of Public Health, St. Louis University, in 2011. Her teaching responsibilities at the SIU SDM include didactic and clinical courses in cardiology, community and preventive dentistry, special needs patient care, and geriatric dentistry. She directs all community outreach efforts at SIU SDM. At the national level, she served as chair of the Health Care Reform Subcommittee of the American Association of Public Health Dentistry, was a member of the Board of Directors of the ADEA Leadership Institute Alumni Association from 2009 to 2011, and has served on the Board of IFLOSS since 2008. Most recently, she is serving on the steering committee of the Illinois Oral Health Plan III. She is on the Board of Directors of the ITS Trail Committee and Staunton Education Foundation.

**Pamela R. Jeffries, Ph.D., R.N., FAAN, ANEF** (*Forum member*), Vice Provost for Digital Initiatives at Johns Hopkins University and professor at the School of Nursing, is nationally known for her research and work in developing simulations and online teaching and learning. At the Johns Hopkins University School of Nursing (where she was previously the associate dean of academic affairs) and throughout the academic community, she is well regarded for her expertise in experiential learning, innovative teaching strategies, new pedagogies, and the delivery of content using technology in nursing education. Dr. Jeffries has served as principal investigator (PI) on grants with national organizations such as the National League for Nursing (NLN), has provided research leadership and mentorship on national projects with the National Council State Board of Nursing, and has served as a consultant for health care organizations, corporations, large health

care organizations, and publishers providing expertise in clinical education, simulations, and other emerging technologies. Dr. Jeffries is a fellow of the American Academy of Nursing (FAAN), an American Nurse Educator Fellow (ANEF), and most recently, a Robert Wood Johnson Foundation Executive Nurse Fellow (ENF). She also serves as a member of the IOM's Global Forum on Innovations in Health Professional Education and has just been appointed as president-elect to the interprofessional, international Society for Simulation in Healthcare (SSH) by her health professional colleagues. Dr. Jeffries was newly inducted in the prestigious Sigma Theta Tau Research Hall of Fame and is the recipient of several teaching and research awards from the Midwest Nursing Research Society, the International Nursing Association of Clinical Simulations and Learning (INACSL), and teaching awards from the National League of Nursing, Sigma Theta Tau, International, and most recently, the American Association of Colleges of Nursing (AACN) Scholarship of Teaching and Learning Excellence award.

**Rick Kellerman, M.D.** (*Forum member*), has served as chair of the Department of Family and Community Medicine at University of Kansas School of Medicine–Wichita since December 1996. Dr. Kellerman is a past president of the American Academy of Family Physicians (AAFP) and served as chair of the AAFP Board of Directors. He was elected to the AAFP Board of Directors in 2002 and as president-elect in 2005. He chaired the AAFP Commission on Legislation and Governmental Affairs, served on the Publications Committee and the Home Study Self-Assessment Advisory Board, and was the board liaison to the Commission on Health Care Services, the Commission on Membership and Member Services, the Commission on Quality and Scope of Practice, the Committee on Rural Health, the Committee on Chapter Affairs, and the Committee of Special Constituencies. He was president of the Kansas Academy of Family Physicians in 1992 and served as a Kansas delegate to the AAFP Congress of Delegates from 1997 to 2002. Between 1988 and 1996, he served as the program director of the Smoky Hill Family Medicine Residency Program in Salina, Kansas. Dr. Kellerman is a graduate of the University of Kansas School of Medicine. He served as chief resident of the Wesley Family Medicine Residency Program in Wichita in 1981 and completed a Clinical Teaching Fellowship at the McLennan County Medical Education and Research Foundation in Waco, Texas, in 1982. Other awards include the national STFM New Faculty Award in 1989, the KUSM–Wichita Golden Chair Award in 1999, and selection by medical students as the KUMC Graduation Marshall in 2000. In 2003, Dr. Kellerman was the inaugural recipient of the Kansas Board of Regents Faculty Award. He is the recipient of the 2008 Dean's Excellence in Leadership Awards at KUSM–Wichita. In 2010, he received

the AAFP President's Award, only the third past president of the AAFP to receive this recognition.

**Kathryn M. Kolasa, Ph.D., R.D., L.D.N.** (*Forum member*), is Professor Emeritus, Departments of Family Medicine and of Pediatrics, Brody School of Medicine (BSOM) at East Carolina University (ECU). She is also nutrition consultant at Vidant Health (formerly University Health Systems of Eastern Carolina). She is a registered dietitian and represents the Academy of Nutrition and Dietetics (AND) on the IOM Global Forum on Innovation in Health Professional Education. Dr. Kolasa is active in teaching, research, consulting, and clinical care. Since 1986 she has been primarily involved in medical nutrition education but has taught other health care professionals, including students of nutrition and dietetics, occupational therapy, physical therapy, pharmacy, nursing, dental medicine, laboratory medicine, psychology, and public health. She has had the opportunity to work with foreign medical and health professions graduates. She has received many awards, including the Centennial Award for Excellence–Service from ECU, ECU Board of Governors Distinguished Professor for Teaching Award, and the Dannon Institute Award for Excellence in Medical/Dental Nutrition Education. She was named a Master Educator at BSOM. She was honored with the American Dietetic Association Medallion Award in recognition of outstanding leadership and service to the profession. Dr. Kolasa earned her Ph.D. in food science from the University of Tennessee, Knoxville, and her bachelor of science degree from Michigan State University. She was awarded a Kellogg National Leadership Fellowship. She has also served on the faculty at the University of Tennessee and Michigan State University.

**Ruth Lubic, C.N.M., Ed.D.**, is a nurse midwife and a MacArthur Fellowship recipient who has championed personalized care during labor and childbirth for all women, particularly those in low-income neighborhoods. She co-founded the National Association of Childbearing Centers in 1983 and has helped establish more than 200 freestanding birth centers. Dr. Lubic received a nursing degree from the University of Pennsylvania. She worked as a hospital nurse caring for cancer patients. She received her certificate in midwifery in 1962 from the country's first midwifery school. The program was run by the Maternity Center Association in New York. Dr. Lubic spearheaded the development of the Childbearing Center (known as the CbC), an out-of-hospital birth center. She founded the Morris Heights Childbearing Center in 1988. She founded the DC Developing Families Center in 2000 in one of the poorest neighborhoods of Washington, a city known for its high infant mortality rate. The center includes a health and birth center staffed with midwives and nurse practitioners. Dr. Lubic says that the center's philosophy of "high-touch, low-tech" has resulted in a lower rate of Cesarean



sections and premature births than the city as a whole. In March 2000, she founded the District of Columbia Birth Center, which provides prenatal care and birthing services to low-income women. She is also a member of Infant Mortality Commission.

**Lucinda L. Maine, Ph.D., B.Pharm.** (*Forum member*), serves as executive vice president and chief executive officer (CEO) of the American Association of Colleges of Pharmacy (AACP). As the leading advocate for high-quality pharmacy education, AACP's vision is that academic pharmacy will work to transform the future of health care to create a world of healthy people. Dr. Maine previously served as senior vice president for policy, planning, and communications with the American Pharmacists Association (APhA). She served on the faculty at the University of Minnesota, where she practiced in the field of geriatrics and was an associate dean at the Samford University School of Pharmacy. Dr. Maine is a pharmacy graduate of Auburn University and received her doctorate at the University of Minnesota. Her research includes projects on aging, pharmacy manpower, and pharmacy-based immunizations. Dr. Maine has been active in leadership roles in the profession. Prior to joining the APhA staff she served as Speaker of the APhA House of Delegates and as an APhA Trustee. She currently serves as president of the Pharmacy Manpower Project and as a board member for Research! America.

**Afaf I. Meleis, Ph.D., Dr.P.S. (Hon.), FAAN** (*Forum Co-Chair*), is the Margaret Bond Simon Dean of Nursing at the University of Pennsylvania (Penn) School of Nursing, professor of nursing and sociology, and director of the school's WHO Collaborating Center for Nursing and Midwifery Leadership. Before going to Penn, she was a professor on the faculty of nursing at University of California, Los Angeles (UCLA), and University of California, San Francisco, for 34 years. She is a fellow of the Royal College of Nursing in the United Kingdom, the American Academy of Nursing, and the College of Physicians of Philadelphia. She is a member of the Institute of Medicine (IOM), the Robert Wood Johnson Foundation Nurse Faculty Scholar National Advisory Committee, and the George W. Bush Presidential Center Women's Initiative Policy Advisory Council. She is a trustee of the National Health Museum and a board member of CARE, the Josiah Macy Jr. Foundation Macy Faculty Scholars program, and the Consortium of Universities for Global Health. She is chair of the IOM Global Forum on Innovation for Health Professional Education. Dr. Meleis is also President and Council General Emerita of the International Council on Women's Health Issues and currently serves as the global ambassador for the Girl Child Initiative of the International Council of Nurses. Dr. Meleis graduated magna cum laude from the University of Alexandria (1961), earned



an M.S. in nursing (1964), an M.A. in sociology (1966), and a Ph.D. in medical and social psychology (1968) from UCLA.

**Donna Meyer, R.N., M.S.N.** (*Forum member*), is the dean of Health Sciences and project director for the Lewis and Clark Community College Family Health Clinic, a nurse-managed center. Her career spans more than 35 years in both practice and education. She began her academic career at Lewis and Clark Community College in Godfrey, Illinois, as a nursing faculty member and progressed into director of the program and ultimately became the dean of Health Sciences. Additionally, she serves as the project director of the Lewis and Clark Family Health Clinic and mobile unit. Currently, she is serving as the president of the National Organization of Associate Degree Nursing. Her professional nursing activities include the Robert Wood Johnson Foundation Academic Progression in Nursing Advisory Board, American Association of Community Colleges Affiliated Council Member, Illinois Center for Nursing Advisory Board, the Illinois Healthcare Action Coalition for the IOM/Future of Nursing, Team Illinois/Center to Champion Nursing in America, National Nursing Centers Consortium Health Policy Committee, and Sigma Theta Tau International Honor Society, and she is a site reviewer for the National League for Nursing Accrediting Commission. Dean Meyer has received various awards for her work, including the MetLife Community College Excellence Award for Innovation, the Illinois Nurses Association Innovation in Health Care Award, the Illinois Community Administrators Award for Innovation, the Illinois Nursing Pinnacle Leader of the Year, the Southern Illinois University Outstanding Nursing Alumni Award, and the YWCA Woman of Distinction Award. She was recently inducted into the Southern Illinois University Hall of Fame. She completed her bachelor's, master's degree, and post-graduate work at Southern Illinois University, Edwardsville.

**Eileen Moore, M.D.**, completed her Health Resources and Services Administration (HRSA) Primary Care Fellowship at Georgetown in 2000 and has been on the faculty since that time. Dr. Moore is a clinician and educator with an exciting clinical practice in General Internal Medicine and a keen interest in progressive medical education. Her interests include access to care and quality of care for underserved and vulnerable populations.

**Joseph Morquecho, Officer**, is a full-time member of Washington, DC's Gay and Lesbian Liaison Unit (GLLU), a team of dedicated officers that focuses on the public safety needs of the lesbian, gay, bisexual, transgender (LGBT) and their allied communities. The team conducts public education campaigns on issues related to hate crimes and public safety. The team's primary focus is to gain the trust of the community and seek out information

that leads to the closure of hate crime and violent crime within the LGBT community. Members of the team conduct patrol functions and respond to all citizen complaints.

**Jennifer Morton, D.N.P., M.P.H., APHN**, is an associate professor and program director of the department of nursing at the University of New England (UNE) and as core faculty for the Interprofessional Education Collaborative (ICE). ICE seeks to develop innovative approaches in educating health professions students' collaborative practice in the United States and abroad. Dr. Morton has spent more than 15 years traveling to Western Region Ghana with students and faculty of multiple participating universities to deliver primary care and related services alongside the Ghana Health Services. Her research and scholarship interests are improving health and equity for vulnerable populations. Most recently UNE's department of nursing received an HRSA award aimed at improving health outcomes for immigrant and refugee communities in Portland, Maine, through innovative, culturally attuned team-based approaches with multiple community patterns.

**Warren Newton, M.D., M.P.H.** (*Forum member*), serves as the vice dean of education at the UNC School of Medicine and is responsible for the medical students and continuing medical education. He also provides strategic direction for GME at UNC hospitals. He has led the expansion of the UNC medical school and the development of a competency-based curriculum, including improving the health of populations and a new integrated clinical clerkship. Dr. Newton also serves as the William B. Aycock Distinguished Professor & Chair of Family Medicine. He is an adjunct professor of epidemiology, and serves as the chair of the Advisory Board for the Cecil G. Sheps Center for Health Services at UNC. Nationally, he has served as president of the Association of Departments of Family Medicine and was founding chair of the Council of Academic Family Medicine. In 2007, he was elected to the Board of Directors of the American Board of Family Medicine. He now serves as chair of the American Board of Family Medicine. In fall 2011, he was named to the Board of Trustees of the State Employees Health Plan. Dr. Newton's major scholarship focus is the organization and effectiveness of health care. Over the past 6 years, his major focus has been care redesign at the practice, community, and state level. He has led the I<sup>3</sup> Collaborative of Family Medicine, Internal Medicine, and Pediatrics residencies dedicated to dramatic improvement of quality of care in academic settings. As chair of the NC Improving Performance In Practice (IPIP) Steering Committee, he has worked with Community Care of North Carolina, AHEC, public health, and physician specialties to improve quality in all primary care practices across the state and now chairs the board of the NC Health Quality Alliance.

**Marsha Regenstein, Ph.D., M.C.P.**, is a professor of health policy at George Washington University. She also directs the Milken Institute School of Public Health's Doctor of Public Health Program. Dr. Regenstein has conducted dozens of studies that focus on the availability, quality, and cost of care for underserved individuals. Dr. Regenstein is the director of research and evaluation for the National Center for Medical-Legal Partnership and is principal investigator for an HRSA-funded evaluation of the Teaching Health Center program created by the Affordable Care Act. She has a particular expertise in language services delivery and quality as well as the health care safety net. Previously, Dr. Regenstein was director of the National Public Health and Hospital Institute and vice president of the Economic and Social Research Institute.

**Susan Scrimshaw, Ph.D., M.A.**, is currently the president of The Sage Colleges in Troy, New York. Prior to that appointment, Dr. Scrimshaw was president of Simmons College in Boston, Massachusetts. She was dean of the School of Public Health and professor of community health sciences and of anthropology at the University of Illinois at Chicago (UIC) from 1994 through June 2006, after serving as associate dean of public health and professor of public health and anthropology at the University of California, Los Angeles. Dr. Scrimshaw is a graduate of Barnard College and obtained her M.A. and Ph.D. in anthropology from Columbia University. Her research includes community participatory research methods, addressing health disparities, improving pregnancy outcomes, violence prevention, health literacy, and culturally appropriate delivery of health care. She is a member of the IOM of the National Academies, where she has been elected a member of the governing council and serves on the Committee on Science, Engineering, and Public Policy (COSEPUP), a joint unit of the National Academy of Sciences, National Academy of Engineering, and the IOM. She is also a fellow of the American Association for the Advancement of Science, the American Anthropological Association, and the Institute of Medicine of Chicago. While in Chicago, Dr. Scrimshaw was an appointed member of the Chicago Board of Health and Illinois State Board of Health. She chaired the IOM Committee on Communication for Behavior Change in the 21st Century: Improving the Health of Diverse Populations and served as a member of the IOM Committee on Health Literacy. She is a past president of the board of directors of the U.S.-Mexico Foundation for Science, former chair of the Association of Schools of Public Health, and past president of the Society for Medical Anthropology. Her honors and awards include the Margaret Mead Award, a Hero of Public Health gold medal awarded by President Vicente Fox of Mexico, the UIC Mentor of the Year Award in 2002, and the Chicago Community Clinic Visionary Award in 2005.

**Stephen C. Shannon, D.O., M.P.H.** (*Forum member*), has been president of the American Association of Colleges of Osteopathic Medicine (AACOM) since January 2006. Prior to assuming this position, he had served as vice president for Health Services and dean of the College of Osteopathic Medicine at the University of New England (UNE) since 1995. He served as chair of the AACOM Board of Deans from July 2003 to June 2005. Dr. Shannon earned his doctor of osteopathic medicine degree in 1986 from the UNE College of Osteopathic Medicine in Biddeford, Maine, and his master's of public health degree in 1990 from the Harvard University School of Public Health. He is board certified in osteopathic family practice and preventive medicine. He also holds B.A. and M.A. degrees in American history from the University of Maryland. As president of AACOM, Dr. Shannon serves as spokesperson on behalf of the nation's 26 colleges of osteopathic medicine. He currently serves as a member of HRSA's Advisory Committee on Training in Primary Care Medicine and Dentistry. He was instrumental in the development of a master of public health program at UNE, and prior to his appointment as dean was director of Occupational and Environmental Health at the Maine Bureau of Health. He has served on numerous public health boards and commissions and is a founder and past chair of the Board of the Maine Center for Public Health. In addition, he is past president of the Maine Biomedical Research Coalition and was a member of the state's Biomedical Research Board. He received the Dan Hanley Memorial Trust 2003 Leadership Award in June 2003 and the Finance Authority of Maine's Distinguished Service Award in the Field of Higher Education in November 2002.

**Jusie Lydia J. Siega-Sur, M.H.P.Ed.**, is associate professor and dean of the University of the Philippines Manila School of Health Sciences, Palo, Leyte. She is also the visiting professor emerita at Dokkyo Medical University in Japan. Dean Siega-Sur is an active member of Training for Health Equity Network (THEnet), where she participated in developing a Framework for Evaluation of Social Accountability in Medical Education. She is also a member of the International Reference Group on the Global Consensus on Social Accountability (GCSA) in Medical Education and a UNFPA Technical Consultant for the Ministry of Health in Timor Leste, Philippines. Since 1987, Dean Siega-Sur has completed numerous fellowships, including those with WHO, JICA, and UNFPA and most recently the Fellowship on Team-Based Learning that is a joint activity of Duke University and the National University of Singapore. She received her bachelor of science degree in nursing, magna cum laude, from Silliman University College of Nursing in 1979, and her master of health professions education degree in 1989 from the National Teacher Training Center for the Health Professions at the University of the Philippines, Manila. Dean Siega-Sur is currently seeking a

master of arts degree in nursing and nursing administration from St. Jude University College of Nursing.

**Zorhray Talib, M.D.**, is assistant professor of medicine and of health policy at the George Washington University (GWU) Medical School in Washington, DC. Dr. Talib practices internal medicine at GWU and serves as the director of the Internal Medicine Residency's Global Health Program, where she directs clinical, policy, and research activities. Dr. Talib's research focuses on strategies to strengthen the global health workforce. She is currently a co-investigator for the Coordinating Center of the Medical Education Partnership Initiative (MEPI), working with over 25 medical schools in Africa, examining training models aimed at improving the quantity, quality, and retention of graduates. In particular, she has published and presented on how community-based education (CBE) and eLearning are being leveraged to facilitate the scale-up and improvement of medical education. She convenes two Technical Working Groups within MEPI engaging faculty from across the globe on collaborative research and sharing of best practices in CBE and eLearning. Domestically, Dr. Talib is part of a team evaluating the community-based, primary care training programs affiliated with the Teaching Health Centers in the United States. Dr. Talib has also consulted on projects in Central Asia, East Africa, and India contributing to the strategic planning, implementation, and evaluation of research, clinical, and education activities of health programs in these regions. Dr. Talib received her B.S. in physical therapy from McGill University, Montreal, Canada, in 1997, and her Doctor of Medicine from University of Alberta, Edmonton, Canada, in 2002. She completed her residency in internal medicine at the George Washington University Hospital in 2005. She is board certified by the American Board of Internal Medicine, and a fellow of the American College of Physicians.

**Riva Touger-Decker, Ph.D., R.D.**, is professor and chair of the Department of Nutritional Sciences—School of Health Related Professions and director of the Division of Nutrition—Rutgers School of Dental Medicine at Rutgers University Biomedical and Health Sciences (formerly University of Medicine & Dentistry of New Jersey). She is a registered dietitian and is internationally recognized for her expertise in nutrition and oral health/dental education, nutrition-focused physical exams, and advanced practice dietetics education. She is on the editorial board of *Topics in Clinical Nutrition* and the *Journal of the American Dental Association*, where she represents the Nutrition Research Group of the International Association of Dental Research. Dr. Touger-Decker is a recipient of the American Dietetic Association's Medallion and Excellence in Dietetic Education Awards, the American Society for Clinical Nutrition Dannon Institute Award for Excel-

lence in Medical/Dental Nutrition Education, and the UMDNJ SHRP Excellence in Research Award. She is also a fellow of the New York Academy of Medicine. She holds degrees from New York State University College at Buffalo and New York University. As a dental school faculty member for more than 20 years, she has developed interprofessional approaches in nutrition and oral health education and training for dental students, residents, and faculty as well as dietetic interns and graduate nutrition students. She has collaborated with medical school faculty in the development of dietetic intern experiences in a community-run medical student clinic.

**Richard W. Valachovic, D.M.D., M.P.H.** (*Forum member*), is the executive director of the American Dental Education Association (ADEA) and president of the ADEAGies Foundation. He joined ADEA in 1997 after more than 20 years in research, practice, and teaching of pediatric dentistry and oral medicine/radiology. He is a diplomate of the American Board of Oral and Maxillofacial Radiology and completed postdoctoral training in pediatric dentistry and dental public health. He previously served on the faculty and administration of the Harvard School of Dental Medicine and the University of Connecticut School of Dental Medicine. Dr. Valachovic has served as president of the Federation of Associations of Schools of the Health Professions and as executive director of the International Federation of Dental Educators and Associations (IFDEA). He is a member of the Washington Higher Education Secretariat. Dr. Valachovic earned his B.S. degree in 1973 from St. Lawrence University, his D.M.D. in 1977 from the University of Connecticut School of Dental Medicine, and a master's in public health degree (1981) and a master of science degree in health policy and management (1982) from the Harvard School of Public Health. He completed a residency in pediatric dentistry at the Children's Hospital Medical Center in Boston in 1979.

**Beth P. Velde, M.S., Ph.D.**, is the director of Public Service and Community Relations at East Carolina University (ECU) and the chair of the Association of Public and Land Grant Universities' Council on Engagement and Outreach. She directs the ECU Engagement and Outreach Scholars Academy, an academy focused on the professional development of faculty and students focused on engaged scholarship. She is active on the Service-Learning Committee and has used community-based teaching pedagogies for more than 40 years. She has a B.S. degree in zoology, an M.S. in recreation and parks administration from the University of Illinois, an M.S. in occupational therapy from Misericordia University, and a Ph.D. in educational psychology from the University of Calgary.



**Sarita Verma, L.L.B., M.B., CCFP** (*Forum member*), is a professor in the Department of Family and Community Medicine, deputy dean of the Faculty of Medicine, and associate vice provost for health professions education at the University of Toronto (UofT). She is a family physician who originally trained as a lawyer at the University of Ottawa (1981) and later completed her medical degree at McMaster University (1991). She has been a diplomat in Canada's Foreign Service and worked with the Office of the United Nations High Commissioner for Refugees in Sudan and Ethiopia for several years. Dr. Verma is the 2006 recipient of the Donald Richards Wilson Award in medical education from the Royal College of Physicians and Surgeons of Canada and the 2009 co-recipient of the May Cohen Gender Equity Award from the Association of Faculties of Medicine in Canada. Along with colleagues at McGill University, the University of British Columbia, and UofT, she has been the lead consultant for the Future of Medical Education in Canada—Postgraduate Project on the Liaison and Engagement Strategy and the Environmental Scan Scientific Study. As deputy dean, Dr. Verma leads strategic planning and implementation as well as the communications and external relations. Additionally, she is responsible for integrated education across the health sciences and liaison with affiliated partners.

**Ruth Wageman, Ph.D.**, is a director with ReThink Health and associate faculty in psychology at Harvard University. She specializes in the field of organizational behavior, studying and teaching the design and leadership of task-performing teams. Professor Wageman researches the conditions under which teams are able to accomplish collective purposes and to grow in capability over time. Her work with teams places a particular emphasis on self-governing teams, especially those with complex problem-solving and social change purposes. Her current research focuses on creating and leading effective leadership teams, especially multi-stakeholder groups working to transform regional health systems; identifying the challenges faced by self-organizing groups; and the theory and practice of leadership development. Professor Wageman received her Ph.D. from Harvard University's Joint Doctoral Program in Organizational Behavior in 1993. She received her B.A. in psychology from Columbia University in 1987 and returned there to join the faculty of the Graduate School of Business, making her the first female alumnus of Columbia College to join Columbia's faculty. She joined the faculty of the Amos Tuck School of Business at Dartmouth College in 2000 and returned to Harvard in 2005.

**Holly Wise, P.T., Ph.D.** (*Forum member*), is the representative for the American Council of Academic Physical Therapy (ACAPT), a component of the American Physical Therapy Association, and she is chair of the ACAPT

IPE Task Force. She is an academic educator and physical therapist with a breadth of experience in IPE and collaborative practice. She is currently a professor at The Medical University of South Carolina (MUSC), an academic health center with six colleges: Dental Medicine, Graduate Studies, Health Professions, Medicine, Nursing, and Pharmacy. A graduate of Wake Forest University, Duke University, and the University of Miami, Dr. Wise has worked in settings ranging from acute care to rehabilitation centers, co-owned a private practice for 13 years, and co-founded two interprofessional post-polio evaluation clinics. Dr. Wise is a member of the MUSC incubator team with the National Center for Interprofessional Practice and Education (NEXUS), a member of the MUSC Strategic Plan IP/ID Operations Team, and a faculty facilitator for the mandatory MUSC IP course Transforming Health Care. She has also served as a faculty facilitator since the inception of the MUSC campuswide IP day and mentored numerous extracurricular IP activities, including the MUSC Presidential Scholars Program and the yearly MUSC Clarion competition. Dr. Wise has several publications related to her experiences with IPE and collaborative practice and has been actively involved in IP-funded research teams.





## Appendix F

### The Bridging Leadership Framework<sup>1</sup>

Bridging Leadership is the type of leadership that is appropriate in promoting multi-stakeholder processes to address societal inequities. It is about leading collaborative action to bring about social change. The leadership acts involves three main segments: Building Ownership of the response, Developing Co-Ownership with other stakeholders and together engaging in the Co-Creation of a new reality (see Figure F-1).

#### BRIDGING LEADERSHIP FRAMEWORK

The bridging leader whose values and principles compel him to make a personal response to address inequities and societal divides recognizes that the complexity of the problem can only be solved by convening the stakeholders to the divide. (**Ownership**)

Through a process of dialogue and engagement, the stakeholders arrive at a common vision and collective response to the situation. (**Co-ownership**)

The stakeholders then adopt a social innovation that leads to the societal outcome, and carries it out through new institutional arrangements. The bridging leader and the coalition of stakeholders ensure that these institutional arrangements have clear and measurable goals with the required capability and resources to demonstrate results. They regularly review their

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<sup>1</sup> Reprinted with permission from the Asian Institute of Management TeM Energy Center for Bridging Leadership. Originally published at <http://bridgingleadership.aim.edu/about/the-center>.

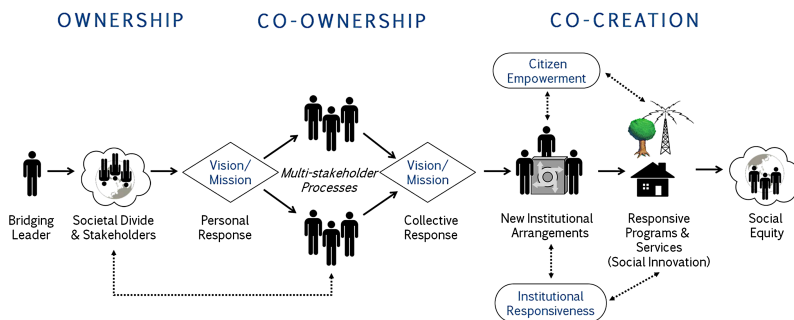


FIGURE F-1 The Bridging Leadership Framework.

SOURCE: Asian Institute of Management, n.d.

progress vis-à-vis the desired societal outcome and assess the individual and collective roles and accountabilities in the process. (Co-creation)

Over time, these arrangements become formal processes that lead to a reform-conducive policy environment and responsive programs and services. Other stakeholders are invited to the coalition regularly, and new bridging leaders are developed to sustain the transformation process toward societal equity.

## REFERENCE

Asian Institute of Management TeM Energy Center for Bridging Leadership. n.d. *Bridging leadership framework*. Makati City, Philippines. <http://bridgingleadership.aim.edu/about/the-center> (accessed September 24, 2014).