Report from a Convening of Grantees on Educating and Training to Professionalism

Josiah Macy Jr. Foundation
Institute on Medicine as a Profession

September 19–20, 2017

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INTRODUCTION

Working in today's complex health care environment places a complicated set of stressors on physicians and other health care professionals. They want to put their patients' needs first, but must also manage rapidly increasing demands on their time, energy, abilities, and mental health. Preparing students for these challenges requires our nation's health professions schools and clinical learning environments to adopt a much more deliberate and integrated approach to teaching professionalism. According to the ABIM (American Board of Internal Medicine) Foundation, "medical professionalism is the daily expression of the desire to help people and society as a whole by providing quality health care to those in need." It also is a concept that is evolving and expanding—"from autonomy to accountability, from expert opinion to evidence-based medicine, from individual responsibility to teamwork and shared responsibility." Teaching professionalism instills in learners a strong ethical foundation that helps them balance competing needs and resolve moral dilemmas while delivering high-quality, patient-centered health care.

In 2011, the Institute on Medicine as a Profession (IMAP) and the Josiah Macy Jr. Foundation jointly launched a pilot program to develop innovative approaches to teaching professionalism to the next generation of physicians. The successful pilot effort became a four-year national grant program: *Educating and Training to Professionalism*. Between 2011–2014, two-year grants of $50,000

(with institutional matching) were awarded to 19 academic health centers across the country to establish novel programs to teach professionalism at the undergraduate and graduate levels.

Stony Brook University Medical Center

University of Massachusetts Medical School

University of California, Davis

Baylor College of Medicine

College of Medicine, University of South Florida

University of California, San Fransisco

Boston University School of Medicine

University of Chicago

Albert Einstein College of Medicine

SUNY Upstate Medical Center (partnering w/ American College of Physicians)

Children's National Medical Center

University of Colorado/Children's Hospital Colorado

Wake Forest School of Medicine

Saint Louis University School of Medicine

UCSF-Fresno

Thomas Jefferson University

University of Central Florida

Pennsylvania State University

University of Rochester

The grant program defined professionalism in teaching and learning environments as a set of ethical behaviors and actions that medical students and residents can observe, model, and practice—in their interactions with patients, with their health care team members, and within their larger health system communities. The grant program was intentionally permissive and did not specify which aspects of professionalism were to be emphasized. The following areas were suggested as illustrative of topics to be considered.

- **Putting Patient Interests First**: Physicians must not allow their own interests or those of their institutions to take precedence over the well-being of their patients. Conflicts of interest must be resolved in favor of patients.

- **Enhancing Social Justice**: Physicians should work to eliminate inequities in health care delivery, providing

patient care that is informed by the social determinants of health, and that addresses health disparities across all population groups.

- **Promoting a Just Distribution of Finite Resources**: Physicians are required to provide health care that is evidence-based and cost-effective. Physicians' professional responsibility demands scrupulous avoidance of unnecessary tests and procedures so as to protect patients from harm and preserve health care resources.

- **Valuing Interprofessional Teamwork and Collaboration**: Physicians are responsible for participating as equal members of high-functioning health care teams and for recognizing and supporting the vital roles and contributions of their team members.

- **Encouraging Physician Advocacy**: Physicians should understand the need for advocacy not only for their patients but also for the common good. They should be taught the skills necessary to fulfill this responsibility.

The 19 institutions pursued a variety of innovative, faculty-directed efforts to teach professionalism, with 15 targeted to residents, 11 to students, and 11 to faculty, and with most targeting at least two of these three groups. Three of the projects included an interprofessional component.

Today, several years after the initial IMAP/Macy pilot program, professionalism remains a crucial component of medical education—and of health professions education in general. Most of the 19 grant programs are still in operation in some form, having been integrated into their institutional curricula and/or residency programming.

To more widely disseminate what we learned through these efforts and what they achieved in their institutions, IMAP and Macy brought together representatives from the grant-supported programs to share their work and discuss next steps for professionalism education. The conference, *Educating and Training to Professionalism: A Convening of Grantees*, was held over two days in September 2017 at Columbia University in New York.

This monograph captures the important themes of the meeting and includes highlights from the keynote presentations as well as the plenary and small-group discussions. It also includes a conclusion from IMAP President David Rothman, PhD, and Macy Foundation President George Thibault, MD, identifying critical next steps and calling on institutions across the country to further advance the teaching of professionalism. Detailed summaries of the grant efforts also are included in this monograph. Finally, biographies of meeting participants can be found at the end of this monograph. It is a testament to the value and success of their efforts that leaders from 18 of 19 grant programs attended the meeting several years after their funding expired.

CONFERENCE THEMES

- The need to define professionalism and understand how best to teach it, including who should learn all components and who should learn certain components
- How to scale and sustain efforts to teach professionalism
- The need for faculty development around teaching professionalism and its components
- What are the best approaches to producing health professionals and what is the public's role in those approaches
- The role of burnout in professionalism and how to mitigate its effects
- The need to counter perceptions of the current environment as an impediment to professionalism
- The need to measure and assess efforts to teach professionalism

HIGHLIGHTS FROM THE GRANTEE CONVENING

In September 2017, the *Educating and Training to Professionalism* grantees met at Columbia University in New York. Representing 18 educational institutions, the grantees were hosted by IMAP and the Josiah Macy Jr. Foundation, which jointly sponsored the national grant program. The grantees came together to share insights they had gained about teaching medical professionalism and to discuss next steps to continue advancing the field.

In welcoming grantees to the meeting, David Rothman, PhD, president of IMAP, facilitated introductions of the attendees and brief summaries of the grant projects they had undertaken at their respective institutions. These projects ranged broadly: from designing and implementing coursework focused on professionalism, to introducing efforts to reduce burnout so that learners are better able to maintain professionalism, to launching opportunities for medical students and residents to become advocates on behalf of their patients, to using technology to enhance professionalism, and much more.

"The range of issues that you all chose to explore and the intellectual diversity across your approaches, as well as the

geographic diversity of your programs, were really quite extraordinary," said Dr. Rothman. "We have brought you here today in hopes of having an exchange of ideas among folks who are doing work that is closely related but not identical. We want to explore the aspects of teaching professionalism that hold potential for best results."

Following Dr. Rothman's welcome, George Thibault, MD, president of the Josiah Macy Jr. Foundation, underscored the critical need for the meeting. "Professionalism is even more relevant now than when we launched the grant program in 2011," said Dr. Thibault. "Today's pressures, including increasing demands on time and a broader culture that often feels antithetical to professionalism, are making professionalism harder to maintain. And new factors are emerging that require more complex thinking about professionalism, such as interprofessional education and teamwork and the corporatization of health care. Taken together, these things mean we need to keep working on enhancing professionalism."

"Most of your efforts around professionalism have been sustained at your institutions, which is a mark of success," Dr. Thibault continued. "We thought so much good work has been done that we wanted a permanent record of this work, but also a discussion about where should the field go next?"

PRESENTATION OVERVIEW: *MEDICAL PROFESSIONALISM IN A COMPLEX ENVIRONMENT*

Holly Humphrey, MD, dean for medical education at the University of Chicago's Pritzker School of Medicine, presented on *Medical Professionalism in a Complex Environment*. She defined a *profession* as a "body of people with a specialized set of skills," and *professionals* as "those who possess the skills use them for the benefit of others and, working on behalf of others, are granted the privilege of self-regulation by society."

In her former role as director of Pritzker's internal medicine residency program, her biggest challenges, she said, were always related to professionalism—a trend that continued when she moved to the dean's office. "Adding the '-ism' to 'professional' is where the challenge lies," she noted. She went on to discuss three topics relevant to teaching professionalism: identifying learners, developing standards for learning environments, and case studies highlighting challenges to professionalism.

Selecting the Learners

Dr. Humphrey explained that many medical schools are trying to better identify desirable characteristics in their applicants by moving to a "holistic" admissions process, defined as a flexible, individualized way of assessing a potential learner's capabilities that gives balanced consideration to experiences, attributes, and academic metrics. According to Dr. Humphrey, medical students'

desirable characteristics include intellectual ability, a desire to serve others, empathy and compassion, and interpersonal skills—and a holistic admissions process uses a variety of methods to identify these types of qualities, as noted in the graphic.

Medical School Admissions Process

Mapping Desirable Physician Traits to Applicant Data.	
Physician Trait	**Applicant Data Elements**
Intellectual ability	Academic record
Commitment to service	History of engagement
Cultural sensitivity	Past behavior
Empathy	Essay, letters of reference
Capacity for growth	Adversities overcome
Emotional resilience	Distance traveled*
Strength of character	Letters of reference, testimonials
Interpersonal skills	Interview, letters of reference
Curiosity and engagement	Life choices

* "Distance traveled" refers to cumulative life experiences — how far one has come in life, rather than physical distance.

Witzurg RA, Sondheimer HM. N Engl J Med 2013; 368:1565-1567.

Dr. Humphrey said that, at her own institution, students are held to the standards espoused in the school's mission, which reads as follows: *At the University of Chicago, in an atmosphere of interdisciplinary scholarship and discovery, the Pritzker School of Medicine is dedicated to inspiring diverse students of exceptional promise to become leaders and innovators in science and medicine for the betterment of humanity.* But, she said, "At end of day, we are still left wondering if we are able to identify a potential student's intrinsic motivation for medicine?"

She recommended the Association of American Medical College's (AAMC's) Annual Survey of Matriculating Students as one useful way to assess intrinsic motivation. The survey asks students to

rank things like work-life balance, ability to pay off student debt, and opportunity for innovation as important or not important considerations for their future. Matriculating students regularly rank items such as stable/secure future, work-life balance, and the availability of jobs as most important to them (see table below). The items that rank lowest tend to include working for social change, potential for earning a high income, and social recognition or status.

Sources of Intrinsic Motivation

"When thinking about your career path after medical school, how important are the following considerations?"

Considerations:	Very Important/Essential
Stable, secure future	86.7%
Work/life balance	84.0%
Availability of jobs	75.9%
Ability to pay off debt	75.8%
Expression of personal values	72.5%
Creativity/initiative	66.9%
Leadership potential	66.5%
Opportunity for innovation	63.7%
Working for social change	61.8%
High income potential	31.7%
Social recognition/status	16.4%

AAMC Matriculating Student Questionnaire, 2016

Developing Learning Environment Standards

According to Dr. Humphrey, the "intrinsic challenge" of both undergraduate and graduate medical education (UME and GME) is "balancing the educational needs of learners who require increasing independence, and the safety needs of patients, who benefit when cared for by the most experienced physician available." Given this

tension, Dr. Humphrey argued, developing standards for learning environments—which currently vary tremendously from institution to institution, and from UME to GME—is a way to support and enhance professionalism. She mentioned that both the Liaison Committee on Medical Education (LCME) and the Accreditation Council for Graduate Medical Education (ACGME) are working to establish and enforce learning environment standards with respect to professionalism in undergraduate and graduate medical education, respectively.

Regarding medical school learning environments, the LCME recommends medical education programs that are "conducive to the ongoing development of explicit and appropriate professional behaviors in medical students, faculty, and staff at all locations." It also states that "The medical school and its clinical affiliates share responsibility for periodic evaluation of the learning environment in order to identify positive and negative influences on the maintenance of professional standards, develop and conduct appropriate strategies to enhance positive and mitigate negative influences, and identify and promptly correct violations of professional standards."

Similarly, the ACGME's standards for residency education require, among other characteristics of the learning environment, excellence in professionalism through faculty modeling of the effacement of self-interest in a humanistic environment that supports the professional development of physicians. The standards also mention that residents and faculty members must be educated "concerning the professional responsibilities of physicians, including their obligation to be appropriately rested and fit to provide the care required by their patients" *and* that there must be a "culture of professionalism that supports patient safety and personal responsibility."
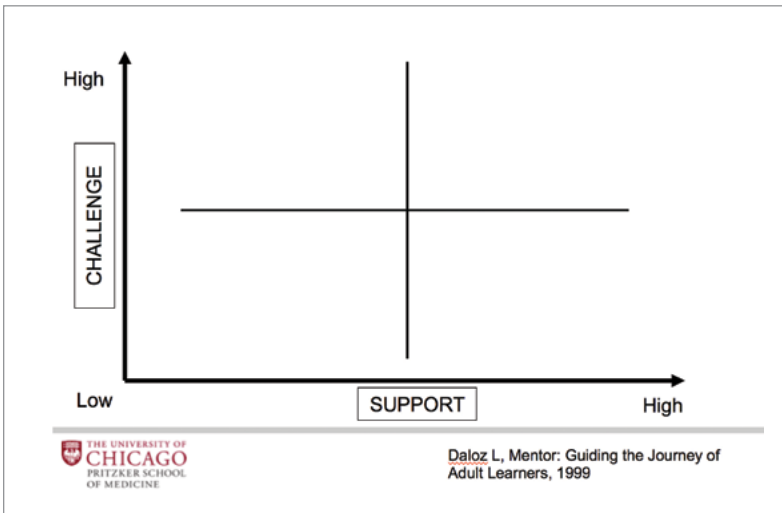
Reviewing Professionalism Case Studies

Dr. Humphrey provided overviews of four case studies on professionalism, which she and her colleagues developed based on real incidents that occurred at the Pritzker School of Medicine. She categorized the cases according to the four aspects of professionalism that meeting participants would be exploring in small breakout groups following her presentation: putting patients' interests first, maintaining competence and teaching the next generation, valuing and promoting interprofessional teams, and promoting and implementing advocacy.

When presenting each case study, Dr. Humphrey also assessed each incident, reviewing the variety of possible responses and revealing how the incidents actually were handled. A simple conceptual figure (shown on next page), where the degree of challenge to the learner is the Y axis and the degree of support for the learner is the X axis, can help illustrate potential responses and provide a framework for addressing issues of professionalism in medical education. Ideal solutions are found in the upper right quadrant where both challenge and support are at the highest, offering the greatest opportunity for the professional growth of the learner.

In conclusion, Dr. Humphrey reiterated the importance of medical professionalism by telling the story of a physician who exemplified it. In 1960, Dr. Frances Kelsey became the first female physician to join the federal Food & Drug Administration, where she reviewed a pharmaceutical company's application to use a sedative, thalidomide, to treat morning sickness in pregnant women. Dr. Kelsey denied the application and, in doing so, provoked the company, which questioned her credentials and asked her

superiors to reverse the decision. Dr. Kelsey denied all subsequent resubmissions of the application because data regarding the drug's deleterious effects on infants were coming in from around the world—data that supported her original decision. Dr. Kelsey was rightly hailed as a heroine for putting patients' needs first. She also maintained her professional competence, relied on a team of experts to reach her conclusion, and advocated on behalf of patients. Dr. Kelsey was the epitome of medical professionalism.

THE UNIVERSITY OF
CHICAGO
PRITZKER SCHOOL
OF MEDICINE

Daloz L, Mentor: Guiding the Journey of
Adult Learners, 1999

SUMMARY OF BREAKOUT GROUP DISCUSSIONS:
ASPECTS OF PROFESSIONALISM

Meeting participants broke into small groups and explored one of the following four aspects of professionalism:

- Putting patients' interests first

- Maintaining competence and teaching the next generation

- Valuing and promoting interprofessional teams

- Promoting and implementing advocacy

A plenary session followed during which participants shared brief summaries of their small group conversations. The plenary was moderated by the Macy Foundation's Stephen Schoenbaum, MD, MPH.

Group 1: Putting Patients' Interests First

The first group's conversation focused on challenges and solutions to teaching students to put patients first. They recognized that it is difficult to both foster and express empathy in a large, complex, and ambiguous health care environment and said faculty and staff must model empathy and show learners how to put patients first. They noted the lack of alignment between medical school and residency in terms of teaching desirable behaviors. "We're not educating them with the same focus and priorities in the two environments," the group's reporter said. "Things we teach in medical school and want them to retain get pushed aside during residency."

Burnout, which both faculty and students experience frequently, makes it difficult to put patients' needs first. The group developed the following list of challenges and solutions to putting patients first, which, in addition to burnout, can and should be addressed at the individual and systemic levels.

- Cognitive overload—educational and training requirements are increasingly demanding and leave learners feeling that they have little or no time to express their humanity with patients. As new requirements are added, older ones need revision.

- Scale and sustainability—medical schools' efforts to teach about putting patients first are not enhanced and reinforced as learners advance into graduate medical education. Such efforts should be integrated across medical school and residency training programs.

- Wisdom—learners are often uncomfortable with ambiguity. Helping them develop wisdom, such as through studying the humanities, better enables them to put patients first.

- Engage with patients, families, and communities—those who are being served should be included in meaningful ways, such as on committees and search panels, in the work of health care institutions and organizations.

- Celebrate institutions that prioritize efforts to put patients first and that teach their learners how to put patients first.

The group also discussed the concept of health care organizations putting faculty and learners first as a way of making it more likely that they will then put patients first. It is a tenet of customer service espoused by Richard Branson, head of Virgin America, that when

a corporation or company treats its employees well, that the employees are better able to take care of the customers. In health care, this idea is gaining popularity, as evidenced by the shift from the Triple Aim, in which cost, quality, and patient experience are the three pillars that underlie effective health care reform, to the Quadruple Aim, in which the fourth pillar is job satisfaction.

Group 2: Maintaining Competence and Teaching the Next Generation

The second group clarified that it took its charge to discuss "maintaining competence" to mean competence in professionalism as opposed to competence in health care practice. Group members believe that professionalism is "in a bit of a crisis" and the factors contributing to the crisis include all the things that cause burnout, such as excessive workload, academic pressures, high dropout rate in academic medicine, need to maintain clinical/research productivity, etc. The group reported that the demands of medicine "exceed the bandwidth" of medical students, residents, and especially faculty—those who would serve as role models, mentors, and teachers. "It is hard to mentor someone else when you can't take care of yourself," the group's reporter said.

The group discussed the importance of "allowing for proper space and settings to give and receive effective feedback" to aid in the development of professionalism. This is especially true when the feedback involves the development of interpersonal skills, which are essential to professionalism but difficult to critique. The group also noted the need to support junior faculty around professionalism— they need the vocabulary to teach it, time and incentives to incorporate it into their teaching, and to be shown empathy that they then model for students. The group also discussed that no licensing body is helping junior faculty think about professionalism.

"We tend to treat 'unprofessional' behavior as an individual deficit," the group's reporter said. "But we need to recognize that it is a symptom of the environment, that it is profoundly influenced by context. We need to understand that lapses in conduct are usually the result of stresses and pressures, and health professionals need to be given the space to say 'I'm not okay. I need support.' Just saying, 'don't do that again' does not address the root causes of unprofessional behavior."

Group 3: Valuing and Promoting Interprofessional Teams

The members of Group 3 began their discussion by reviewing the status of interprofessional education (IPE) and teamwork in health care. They said that while more evidence is needed to show that IPE improves patient outcomes broadly, there are strong indications that it improves patient safety. The group also said there needs to be a central structure within or across institutions that champions and promotes IPE through leadership and shared strategic goals.

The group noted the challenges to adopting IPE, such as scheduling and logistics across the various health professions schools and educational programs. Many academic health centers are showing, however, that these practical challenges can be overcome. Technology—in the form of online classes, virtual and augmented reality, standardized patients, electronic health records, and more—can be used to advance IPE. Modeling is also important to advancing IPE. Institutions that support high-functioning teams can serve as role models for other institutions that want to move in that direction. And faculty development around IPE is needed so that faculty can serve as teamwork role models for medical students, residents, and other health professions learners.

Group 4: Promoting and Implementing Advocacy

Traditionally, advocacy is thought of in political terms, such as championing desirable public policy changes, but Group 4 noted that advocacy takes many forms. Pediatricians, for example, can certainly advocate for local, state, or national public policies that affect their young patients, but they also can advocate on behalf of their patients within the clinical environment or at the patient's school.

The group also noted the difference between advocacy, which implies the involvement of institutions, and activism, which is generally undertaken by individuals. Physicians who work with people experiencing homelessness, for example, are activists, but if those physicians also work to draw attention and resources to the challenges of homelessness, then they become advocates.

Group 4 noted that health care practitioners advocate for patients every time they put their patients first—ahead of the needs of the system. But how is that taught? How are learners taught to think of themselves as advocates without overwhelming them, given all the other expectations placed on them? The group also noted that medical students tend to be very interested and engaged in advocacy, but that the commitment wanes under the demands of residency. They also noted that those in primary care—including family medicine and pediatrics—tend to be more engaged in advocacy than specialists.

To promote advocacy broadly, the group suggested a national clearinghouse where those who have advocated for change at their institutions can share stories, lessons, tools, and materials. The clearinghouse could also share resources developed by professional societies and also help users identify potential advocacy mentors.

Breakout Groups Discussion

Dr. Schoenbaum led a discussion about the breakout groups' reports.

The need to support faculty in educating to professionalism was discussed at length. This must be tempered, however, with respect for their already overfull schedules. One participant noted, "If you graft more faculty development on a dispirited, cynical faculty, they will react negatively. Any attempts to do this must be meaningful and valuable."

The relationship between professionalism and burnout became the predominant topic of discussion. Burnout was seen as a primary cause of unprofessional behaviors. Burnout, whose hallmarks are depersonalization and emotional exhaustion, has been shown to reduce empathy and affect patient outcomes. A Mayo Clinic study found that, in 2014, 54% of physicians reported experiencing at least one symptom of professional burnout—up from 45% in 2011.[1]

The conversation around professional burnout resonated deeply with the meeting participants and spilled over briefly into a larger conversation about the corporatization of health care and its effects on professionalism. One participant noted, "Medicine is a badly run business. We need advocacy targeted at the C-suite. They need to stop thinking so much about mergers and start thinking more about their employees they already have working for them."

Dr. Rothman asked the group if burnout is the result of most physicians working as salaried employees these days—as opposed

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[1] Shanafelt, Tait D. et al. Changes in burnout and satisfaction with work-life balance in physicians and the general US working population between 2011 and 2014. Mayo Clinic Proceedings, 90(12):1600-1613.

to the older model of working in independent practices. Meeting participants did not believe that working salaried jobs was the cause of burnout, because salaried employment actually would provide physicians with more stability, flexibility, and access to resources. Instead, the concern is that health systems are growing and changing and are not as supportive of their employees as they could or should be.

"The issue is not whether you're salaried or not," said Dr. Thibault. "The issue is what are the values of the institution where you're salaried? Do they align with your own? Does the institution value its employees? Is there a healthy margin at the institution or is it cinching its belt tighter and tighter to the detriment of employees?"

"If you look at the literature on doctors' job satisfaction, it has tended to be higher among those who work in group and staff model health maintenance organizations than among those who operate independently," Dr. Schoenbaum said. "That suggests that being a salaried employee isn't at the root of the burnout problem."

Participants decided that, to help address burnout, faculty development around advocacy could be very valuable. Faculty could then advocate for changes in their system, including changes related to the education of medical students and the training of residents, that would both reduce burnout and enhance professionalism.

PRESENTATION OVERVIEW:
NOW YOU SEE IT, NOW YOU DON'T: HOW UNSEEN ORGANIZATIONAL FACTORS SHAPE PROFESSIONALISM

Eve Higginbotham, SM, MD, vice dean for inclusion and diversity at the University of Pennsylvania's Perelman School of Medicine, began the second keynote presentation by asking conference participants to think about the following scenario (see graphic below).

CONSIDER THIS SCENARIO

On morning rounds, an attending and a student visit a patient in a hospital setting. During the course of the discussion, the patient refers to the medical student as "that colored girl".*

Question raised by this scenario—
How should this attending manage this situation?

*Okwerekwu JA. Stat News. April 11, 2016

She promised to return to the incident later in her talk, explaining that she titled her presentation *Now You See it, Now You Don't: How Unseen Factors Affect Professionalism* because, as in the scenario, there are many seen and unseen factors that influence professionalism. There is what you see and witness or hear: the patient, the physician, the medical student, and the comment. And

there is what you don't see: the private thoughts and personal stories of each person involved, as well as the context, culture, and environment of the setting.

Dr. Higginbotham provided two definitions of the medical profession that resonate with her:

- "A commitment to compassion, benevolence, and clemency in the relief of suffering, and with an emphasis on humanitarian values."[2]

- "The practice of medicine is an art; a calling, not a business; a calling in which your heart will be exercised equally with your head; a calling which extracts from you at every turn self-sacrifice, devotion, love and tenderness to your fellow man."[3]

Just as unseen context and culture were at play in the scenario on the patient's hospital room, Dr. Higginbotham explained, they also are at play in health care broadly and in health care organizations, influencing both what we see and don't see. Specific examples of context and culture that have influenced today's health care environment include the Civil Rights Act of 1960; the Vietnam War; President Johnson's War on Poverty; the 1985 Heckler Report, which established the Office of Minority Health; continuous legal attacks on affirmative action; the defunding of key federal initiatives, such as Title VII and VIII of the Civil Rights Act (dealing with employment and fair housing); the rising cost of health care; and the 2010 Affordable Care Act.

In summarizing the effects of these influences, Dr. Higginbotham said, "As physician educators, we need to recognize how these

[2] Scribonius 47 A.D from Hamillton JS. Scribonius Largus on the medical profession. Bull Hist Med 1986;60:209-216.
[3] Sir William Osler from Bliss M. William Osler: A Life in Medicine (2007). Cambridge, United Kingdom; Oxford University Press.

things affect our patients, learners, and work environments. We are caught in a perfect storm of persistent inequality in wealth, health outcomes, rising health care costs, and continued pressure on the health care workforce to deliver culturally competent care."

Health professions students are aware of these issues and are engaging with them. One example: the Black Lives Matter movement, and specifically the 2014 launching of the "WhiteCoats4BlackLives" initiative via a national "die-in" protest at the University of California, San Francisco. Another example: the 2015 "Silent Curriculum" article, published in *JAMA*, in which a student asked why her professors were not bringing the lessons of the Black Lives Matter movement into the classroom.[4]

Dr. Higginbotham suggested another unseen component of medicine: women. Women comprise the majority of the U.S. population but are underrepresented in leadership positions in health care, from unequal paychecks for the same work to their absence from corporate boards of directors and executive level positions to fewer women deans and full faculty members in academia. "There is an unconscious bias against women that we must mitigate," she said. "If there were no bias, we would expect to see women comprising 50% of high-level positions." She suggested that search committees be comprised of at least 35% women in order to "change the conversation" around who is being recruited and hired.

To make the unseen seen in health care, we must recognize the domains of influence, including governance; policies and procedures; practice; and climate, culture, and patient experience. We also need to understand the role of unconscious bias and its impact on health and health care. As an example, Dr. Higginbotham noted that implicit bias is linked to disparities in care in medicine. She also said that diversity at the board and executive levels matters to the culture

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4   Brooks KC. A piece of my mind: The silent curriculum. *JAMA*. 2015;313(19): 1909-1910.

of an organization, as does implementation of inclusive policies (such as maternity leave) and processes (such as a holistic admissions process).

The first step in addressing implicit bias is examining an academic health center's culture. The University of Pennsylvania used the AAMC's diversity engagement survey to do this. Penn scored very well on access to opportunity, but scored low on cultural competence (defined as "effectively capturing perspectives of group to meet a shared business goal"). The survey also found that women experience Penn's culture very differently than men, with women feeling less included. Overall, gender, ethnicity, and sexual orientation remained significant variables in cultural experience.

"Silence allows cancerous ideas to grow," said Dr. Higginbotham. "It's an undercurrent that we can't ignore because it affects professionalism. We should teach our faculty, staff, trainees, and medical students how best to engage in difficult conversations, such as about race and racism." She recommended Howard Ross' book, *Everyday Bias*,[5] and suggested participants use Ross' mnemonic, P.A.U.S.E. (see box), to monitor their own behaviors.

P.A.U.S.E.

Pay attention to what's actually happening, beneath the judgments and assessments.

Acknowledge your own reactions, interpretations, and judgments.

Understand the other possible reactions, interpretations, and judgments that may be possible.

Search for the most constructive, empowering, or productive way to deal with the situation.

Execute your action plan.

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[5] Ross H. Everyday Bias: Identifying and Navigating Everyday Judgments in Our Daily Lives (2014). Lanham. MD; Rowman & Littlefield Publishers.

"Changing unseen organizational factors to create positive impact is within our grasp," Dr. Higginbotham said. Going back to the opening scenario, she suggested that the attending physician should have said to the patient, "Mrs. Jones, Ms. Smith is one our best medical students and we're here as a team to help you feel better." As the primary architect of this patient encounter, the attending has the opportunity and obligation to shape the caring environment for the patient and the learning environment for the student. First and foremost, the attending physician must be aware of her own biases, responses, and responsibilities.

Plenary Discussion of Conference Themes

Drs. Rothman and Thibault led a plenary discussion during which participants were asked to identify the themes that emerged during the meeting and make suggestions for next steps or actions that will advance the education of professionalism.

Themes that echoed through the meeting included the following:

- The need to define professionalism and understand how best to teach it, including what is part of general education of all physicians and what would contribute to a scholarly track or concentration

- How to scale and sustain efforts to teach professionalism

- The need for faculty development around teaching professionalism and its components

- The need to involve the public more in determining the best approaches for producing health professionals

- The role of burnout and how to mitigate its effects on professionalism

- The need to counter the perceptions that the current environment is an impediment to professionalism

- The need to measure and assess efforts to teach professionalism

An important example of professionalism noted during the discussion was the role that advocacy has played in improving gender diversity in surgical residencies. One participant mentioned

that, in recent years, his institution's GME programs have graduated all-female classes of surgical residents. Another participant mentioned that his institution has achieved an even number of male and female surgical residents. These examples demonstrate that perceptions of surgery as a male-dominated specialty can be changed. They also noted, however, that the same shift has not been seen in other residencies, and that racial diversity lags behind gender diversity.

CONCLUSION

Drs. Rothman and Thibault Summarize Lessons Learned and Identify Imperatives to Advance the Teaching of Professionalism

When we conceived of the idea of a small grant program to promote innovation in the teaching of professionalism, we wondered whether modest grants ($50,000 over two years with institutional match) would be large enough to make a difference? Reviewing the 19 programs over the five-year life of the program and hearing testimonials at this meeting from representatives of 18 of those programs, the answer to this question is a resounding "Yes!" It has been extremely gratifying for us to observe and participate in this work and to be stimulated by the idealism and commitment we heard expressed at this meeting. After reviewing all the reports and digesting the rich discussion, we have arrived at 10 important take-home messages to guide future work for education in professionalism.
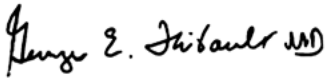
1. **These small grants had a catalytic influence on the institutions**. Involving faculty, students, residents, and staff in discussions of professionalism created opportunities to discuss many other issues and helped break down traditional barriers. This catalyzing of new relationships is perhaps the primary reason that almost all the efforts were sustained when external funding ended.

2. **Great flexibility is necessary to implement programs to teach professionalism**. Every one of the projects made alterations after starting their programs, based on feedback from the community and the need to respond to logistical obstacles. This iterative process is an important part of creating a "community of learners" in professionalism.

3. **No program will succeed without serious attention to faculty development**. Since the explicit teaching of professionalism is relatively new, most faculty have had little experience with it as learners or as faculty members. If handled well, faculty development can embody the principle that in the realm of professionalism, everyone is a learner.

4. **Professionalism education must have champions at the highest level of the organization**. This is important both for the role-modeling of professionalism at all levels, and for the necessary commitment of time and resources. Deans and chiefs must be "invited in" and be visible.

5. **Professionalism must be integrated longitudinally throughout the educational trajectory**. There needs to be frequent reinforcement of the content and principles of professionalism. The best learning is experiential. This is one reason why advocacy and community-oriented programs have been an effective way to teach and model professionalism.

6. **Learners at all levels are generally capable of more than has traditionally been asked of them**. They are, by and large, accurate observers of professional and unprofessional behaviors and are interested in expressing their professionalism when given the opportunity.

7. **A variety of less-conventional teaching tools exist to model, teach, and monitor professionalism**. These include newly developed smartphone apps to record behavior and observations; as well as social media, theater, and reflective writing. In many of these new modalities, students may be ahead of faculty in comfort and in readiness.

8. **Advocacy includes local, institutional advocacy as well as external advocacy**. Learners and faculty need to be active in changing institutional policies and practices so that they are synchronous with the tenets of professionalism.

9. **Serious attention must be paid to the issues of preventing burnout and the need for resilience in the health professions**. This topic was less a focus when we started this program than it is now (only one of the nineteen grants explicitly focused on this). It was notable—but perhaps not surprising—that the topic became the dominant theme of the discussion during the concluding session of the meeting. The prevalence of burnout and depression among learners and staff was cited as one of the greatest threats to professionalism today. Unprofessional behavior is frequently a manifestation of burnout. And re-instilling professionalism with its accompanying belief in purpose and a higher calling for our work can be a strong antidote to burnout. Already overburdened faculty, however, must not see this as an additional assignment, but rather as an opportunity to be re-invigorated themselves. Further, it must be clear that these efforts are aligned with institutional goals and ideals (see #8 above).

10. **Culture change <u>is</u> possible but it is slow and needs constant attention**—the job is never done. Most of the projects began as pilot projects on one or two services or with a subset of learners. They spread to other services and learners after "proof of principle" and the recruitment of new champions.

This meeting, its conclusions, and the projects on which it was based have made us very hopeful. We can see that we have identified and supported change agents who have made a difference in their institutions. This work is more important than ever to counter greater negativity and self-centeredness in our larger culture. We need to empower everyone in our microenvironments to promote professionalism. Our learners are hungry for more positive messages. They are looking for opportunities to express their idealism and to play meaningful roles in their profession and in society. This is a very important component of our educational mission, and we are grateful that we have so many willing and insightful participants.

George E. Thibault, MD   **David J. Rothman, PhD**

GRANTEES' PROJECT REPORTS

2011 GRANTEES

PROFESSIONALISM TIPPING POINTS: TEACHING INNOVATIONS IN CLINICAL MEDICAL EDUCATION

Baylor College of Medicine
Principal Investigator and Author: Ann Gill, DrPH, MS, RN

Project Background

The Baylor College of Medicine's project "Professionalism Tipping Points: Teaching Innovations in Clinical Medical Education" was a longitudinal, development-specific, educational intervention to promote formation of students' professional identity during all four years of medical school. Strategically sequenced interventions included clinical debriefings, reflective writing, mentoring, and standardized patient encounters. Educational activities were designed to both teach and assess professional behaviors related to social justice, distribution of finite resources, physician advocacy, and patients' interests. Although medical students were the primary target of this project, collateral learning occurred when the teaching faculty and/or residents were trained to deliver the

interventions. The grant's original specific aims, along with changes or modifications, are described below.

Aim 1. All <u>first-year medical students</u> were assigned to work one afternoon with a physician in a hospital setting to observe a clinical ethics case as part of their required ethics course. The physician facilitators were instructed to relate the clinical ethics case to one of the four fundamental professionalism principles (social justice, resource allocation, physician advocacy, or patients' interests) as they debriefed the clinical encounter with the student observers. Aim 1 was highly rated by the students on the end-of-course evaluation. For this reason, the activity continues today without change or modification.

Aim 2. Baylor College of Medicine (BCM) has an 18-month pre-clinical program, so <u>second-year medical students</u> begin their clinical rotations in the middle of the second year. These students were asked to write an essay about their clinical experiences. Because of changes in our mentoring program, the mentors were not available to meet with and debrief the students as originally described in our proposal. Therefore, we modified the intervention and had the students debrief their essays and clinical experiences with their *clinical preceptors*. End-of-course evaluations revealed inconsistent performance from the volunteer faculty assigned to read the essays and provide feedback. After the completion of the grant, we again changed this requirement and had the students write one-page essays about their shadowing experiences with health care providers from other disciplines. Today, the course directors read the essays and provide feedback in their grading. A qualitative paper describing the themes of the shadowing experiences was published recently.[1]

Aim 3. <u>Third-year medical students</u> were asked to reflect upon and write about their first six months of clinical experience during

a professionalism workshop that included a one-hour didactic session related to ethics and professionalism. Following the didactic session, students met in small groups with small group facilitators. Students were instructed to come prepared to discuss a clinical experience that either inspired or discouraged them. The facilitators probed the students for context and perspective and helped identify physicians' behaviors that ranged from exemplary to unprofessional. Qualitative analysis of these essays resulted in a poster presentation for the Southern Group on Educational Affairs[2] and for the annual meeting of the Association of American Medical Colleges (AAMC) in Philadelphia;[3] it is also available on the AAMC I-Collaborative.

The MS3 professionalism workshop remained unchanged until 2014, at which time a change of course directors occurred. Students are still required to read and discuss articles, but they also attend presentations given by inspirational and dynamic national speakers, who address different areas of professionalism and other relevant issues. Some of the speakers include Dr. Richard Gunderman from Indiana University, who spoke on professionalism and leadership; Dr. Charlene Dewey from Vanderbilt University School of Medicine, who discussed "Recognizing Burnout and How to Prevent It;" and Dr. Thomas Inui, also from Indiana University School of Medicine, who described ways to incorporate narratives into the practice of medicine. In addition to attending these lectures, students still meet in small groups to discuss and share concerns related to medical professionalism. As a direct result of this offering, the medical students developed a research project to understand why medical students are reluctant to report unprofessional behavior demonstrated by faculty and residents. This research has been disseminated in several forums[5–7] and published in the journal *Medical Education*.[8]

Aim 4. In year two of the grant (2012–2013), a standardized patient (SP) case was developed in collaboration with Texas Woman's University and the University of Houston College of Pharmacy for an interprofessional education (IPE) experience related to a medical error. In the case, a patient was administered 100 times the normal dose of heparin, requiring transfer to the intensive care unit. The IPE team (nursing student, pharmacy student, and medical student) must meet with an SP "family member" and deliver the bad news. The trained SP responds in one of two ways: 1) angry and antagonistic, or 2) sad and overwhelmed with grief. After the 15-minute scenario, the SP assesses the students on their teamwork, and then all the team members meet with the interprofessional faculty to debrief.

A common response from the students is a sense of guilt and shame because they blame themselves for the error: the medical student takes responsibility because he/she wrote the order, the pharmacist student feels guilty for filling the order, and the nursing student assumes blame for administering the medication. The scenario allows the students to explore the roles and responsibilities of each team member and appreciate each other's contributions to the health care team.

All three institutions who helped create the case remain committed to the educational activity and supply faculty and students each month to support the effort. Many students are emotionally moved by the scenario, which is based on an actual experience. This SP case experience, which has been incorporated into the internal medicine sub internship, has changed very little over time and continues to be a rich and rewarding educational experience. This educational activity has been published[9, 10] and is now being prepared for a MedEd Portal submission.

Aim 5. Like most medical schools, BCM has a <u>fourth-year medical student capstone</u> course (APEX). Our last aim was to create a workshop entitled *Quality, Value, and Patient Safety*. In addition to introducing the students to the Choosing Wisely website and other web-based resources that identify the cost of tests and procedures, the students were instructed to write a reflective essay using the following prompts:

- *Describe a time when you saw or witnessed a wasteful use of resources or non-evidence-based medicine.*

- *What were the indicators that led you to believe that the use of these resources were not warranted? What were your thoughts when this event occurred?*

- *What did you do to prevent or improve the situation? How will you respond in the future?*

Students discuss these experiences in small-group sessions that continue to this day.

Project Modifications: Barriers and Insights

The Quality, Value, and Patient Advocacy workshop was initially developed as a one-hour large group lecture to introduce Choosing Wisely, followed by a 1.5-hour small-group discussion of assigned readings, written essays, and a sample case using Choosing Wisely. Each year, workshop evaluations suggested that the students greatly valued the small-group work, but considered the large-group didactic session to be less useful. Despite our efforts to make the large-group session more interactive, the evaluations continued to show that the students preferred the small-group time. Hence, in 2016, we moved all the content into a 2.5-hour workshop composed of small groups. Although presenting Choosing Wisely

and the web resources in a large group session appeared to be more efficient, we began to appreciate the individualization that can occur in a small-group setting. For instance, when we discussed Choosing Wisely in the large group, we had the students log on to the Choosing Wisely page for cardiology, whereas in the small groups, they log on to the Choosing Wisely pages that represent their individual disciplines. Suddenly, the material was relevant to the students as future providers in their specialties. This activity has been presented as a poster at several regional meetings.[11–13]

Lessons Learned

One of the primary lessons learned is the power of small grants to enhance and improve the medical school curriculum. At BCM, the fiduciary responsibility for executing even modest grants in accordance with the spirit and intent of the original proposal is paramount. Although some of the aims of this grant were being planned prior to receiving the award, those discussions were stymied. It took the incentive of the grant to bring them into being and sustain them through the formative years. The legacy of the "Educating and Training to Professionalism" grant is readily evident in the grant-sponsored, sustainable educational interventions that enhance the landscape of the profession and continue to inspire new and dynamic professional initiatives to this day.

References

1. Kusnoor AV, Stelljes LA. Interprofessional learning through shadowing: Insights and lessons learned. *Med Teach* 2016;38(12):1278–84.

2. Gill, AC, Stelljes L, Teal CR, Nelson EA. Exposing the hidden curriculum through narrative writing and reflective practice. Poster presented at: 2012 Regional Conference of the Southern Group on Educational Affairs (SGEA, in the Division of Medical 10. Education of the Association of American Medical Colleges); April 19–21, 2012; Lexington, KY.

3. Gill, AC, Stelljes L, Teal CR, Nelson EA. Exposing the hidden curriculum through narrative writing and reflective practice. Digital Poster presented at: Association of American Medical Colleges 2013 Annual Meeting; November 5, 2013; Philadelphia, PA.

4. Gill AC, Stelljes L, Teal CR, Nelson EA. Exposing the hidden curriculum through narrative writing and reflective practice. https://www.mededportal.org/icollaborative/resource/302. AAMC I Collaborative, May 2, 2012.

5. Kohn J, Hergenroeder G, Bhattacharya P, Polson G, Lupo P, Gill A. Factors associated with reporting of professionalism violations by medical students. Poster presented at: Southern Group on Educational Affairs; April 20, 2017; Charlottesville, VA.

6. Kohn J, Hergenroeder G, Bhattacharya P, Polson G, Lupo P, Gill A. Factors associated with reporting of professionalism violations by medical students. Institute for Healthcare Improvement (IHI) National Forum; December 4–7, 2016; Orlando, FL.

7. Hergenroeder G, Kohn J, Bhattacharya P, Polson G, Lupo P, Gill A. Factors associated with medical student non-reporting of professionalism violations: Year two data. Academy of Distinguished Educator's Showcase of Educational Scholarship; September 30, 2016; Houston, TX.

8. Kohn JR, Armstrong J, Taylor R, Whitney D. Gill AC. Student-derived solutions to encourage reporting of professionalism violations. *Med Educ* 2017;51(7):708–17. doi: 10.1111/medu.13271.April 18, 2017.

9. Ismail NJ, Hatfield CL, DelloStritto RAD, Nelson EA, Teal CR. Shared error: A bridge across interdisciplinary bias. *Med Sci Educ* 2014;23(3 Suppl):436–37. doi: 10.1007/BF03341665.

10. Tolleson SR. Ismail N, Gill AC, et al. Changes in pharmacy students after experiencing interprofessional education activities. *J Res Interprof Pract Educ.* 2016; 6(1):1–18.

11. Gill AC, Nelson EA, Fisher J, Kumar S. Teaching Quality and Value Care as an expression of professionalism. Poster presented at: 4th Annual Baylor College of Medicine Quality Improvement and Patient Safety Conference; May 14, 2015; Houston, TX.

12. Gill AC, Nelson EA, Fisher J, Kumar S. Teaching Quality and Value Care as an expression of professionalism. Poster presented at: Spring Educational Symposium; May 1, 2015; Houston, TX. Award for Outstanding Poster Presentation; Third Place.

13. Gill AC, Nelson EA, Fisher J, Kumar S. Teaching Quality and Value Care as an expression of professionalism. Southern Group on Educational Affairs Annual Meeting; April 25, 2015; Charlotte, NC.

COMMUNITY FACULTY DEVELOPMENT ON MEDICAL ETHICS AND PROFESSIONALISM: DESIGNING AND IMPLEMENTING AN OBJECTIVE STRUCTURED TEACHING EXERCISE (OSTE)

Stony Brook University
Author: Wei-Hsin Lu, PhD[*]

Project Background

As our students are expected to develop competency in professionalism and medical ethics, our faculty are also expected to facilitate medical students' learning and understanding of such areas. One of the main challenges of these expectations has been whether or not faculty members know what competencies to teach and how to teach them. This challenge is heightened in clinical settings where faculty are expected to achieve multiple learning objectives while at the same time manage the care of their patients. The overall purpose of this project at the Stony Brook University School of Medicine (SB SOM) was to develop an effective way to provide our clinical faculty with the opportunity to review, practice, and receive feedback on their teaching of medical ethics and professionalism.

Specifically, we aimed to:

- Promote clinical faculty awareness and understanding of the learning objectives of the SB SOM professionalism, ethics, and personal values competency in order to be able to incorporate these objectives into their teaching;Develop clinical faculty members' abilities to identify professional and medical ethical issues during students' clinical learning

[*] Principal Investigator: Elza Mylona, PhD

experiences, encourage students' professional behavior, and foster students' medical ethical reasoning skills; and

- Enhance clinical faculty members' observation and feedback skills with regard to students' professional and medical ethical decisions and actions.

Learners

Table 1: Faculty Development OSTE Workshops: Characteristics of Participants (N=31)	
	Number (%)
Gender	
Male	14 (45%)
Female	17 (55%)
Specialty Area	
Emergency Medicine	4 (13%)
Family Medicine	5 (16%)
Internal Medicine	21 (68%)
Pediatrics	1 (3%)
Roles/Responsibilities	
Chief Resident	4 (13%)
Clinical Preceptor	22 (71%)
Program/Clerkship Director	5 (16%)
Affiliated Institution	
Stony Brook Medicine	15 (48%)
SUNY Downstate Medical Center	5 (16%)
Winthrop University	3 (10%)
Private Practice	4 (13%)
Northport VA Medical Center	4 (13%)
Formal Training on Professionalism	
Yes	8 (26%)
No	23 (74%)

Results

Major accomplishments since the inception of the grant project are the following:

- Creation of eight OSTE case materials (see Appendix A for the case overviews).

- Completion of five half-day faculty development workshops using OSTEs in which 31 faculty physicians attended (see "Learners" for participant characteristics). Faculty participants reported a gain in confidence and attitudes about teaching professionalism and medical ethics from before participating in the workshop to after (see Appendix B for results).

- Awarded the 2012 Northeast Group on Educational Affairs Collaborative Research Grant in which we offered the same faculty development OSTE workshop on professionalism to faculty from SUNY Downstate Medical College. [Project Title: Teaching Professionalism and Medical Ethics in the Clinical Setting: Effects of Training the Trainers. PI: Lu, W-H].

Ongoing Implementation of the Project

We are in the process of putting together our submissions of our OSTE cases onto MedEdPortal.

Additionally, time and resources permitting, we will continue to offer OSTE workshops to our clinical faculty.

Project Dissemination

- Lu W-H, Mylona E, Lane S, Wertheim WA, Baldelli P, Williams PC. Faculty development on professionalism and medical ethics: The design, development and implementation of objective structured teaching exercises (OSTEs). *Med Teach* 2014;36(10):876–82.

- Lu W-H, Rinnert S, Lane S, Wertheim WA, Chandran L. Training the trainers using OSTEs: A comparison between faculty self-assessments and performance checklists ratings on teaching professionalism. Poster presented at: 2014 Annual Spring Conference of the Association of American Medical Colleges (AAMC) Northeast Group on Educational Affairs (NEGEA); April 2014; New Haven, CT. Nominated for best poster award.

- Lu W-H, Baldelli P, Chandran L. Creating and Implementing an objective structured teaching exercise (OSTE) on professionalism and medical ethics. Workshop presented: 2015 Annual Spring Conference of the Association of American Medical Colleges (AAMC) Northeast Group on Educational Affairs (NEGEA); April 2015; Worcester, MA.

APPENDIX A: OSTE Case Overview

Compassionate Care Case

In the video, the patient is a 55-year-old heavy smoker with COPD and HTN who has waited almost an hour past his scheduled appointment time. He is very angry about waiting and complains about poor treatment in the clinic. He says he can't give up cigarettes, because they calm his nerves. In the video the student's appearance is somewhat unprofessional (e.g., slightly unshaven, rumpled shirt, dress very short, too much décolletage). She uses the patient's first name and mentions her own heavy schedule, instead of responding to the patient's anger about waiting. She scolds the patient about "not taking care of himself" and suggests he is responsible for his own illness.

In the feedback session, the student is defensive about her performance and comments negatively about the patient. The student says, "I don't see why we keep treating him. It's no use. He won't take his meds. He smokes like a fiend. What we need to do is teach him a lesson, tell him he either stops smoking or finds himself another clinic to abuse."

Cultural Competency Case

The patient is a 48-year-old Hispanic woman with type II diabetes whose current complaints are "being thirsty all the time" and "going to the bathroom every hour, even at night." Her prescribed medications include metformin and insulin, but she has not been taking them. Instead, she uses a mixture of herbal infusions called "te de nopales" (cactus drink) and "te de elote" (cornsilk tea), which she believes will relieve her diabetes and strengthen her kidneys. Moreover, she is afraid of insulin because a friend told her that

it causes blindness, She is convinced of this because two of her relatives who took insulin later went blind.

In presenting the case, the student emphasizes the patient's "noncompliance" and "ignorance" about diabetes. He gave her an informational booklet (in English) and plans to send her to an evening diabetes class at the clinic. He told her to stop drinking the herbal teas because "they may be dangerous" and warned her against accepting "old wives' tales." He also told her that the booklet explains the relationship between diabetes and "retinopathy."

Medical Error Case

The patient is a 50-year-old mail carrier who suffers from recurrent left knee pain and dysfunction caused by degenerative joint disease (DJD). On this occasion he came to the clinic with a swollen, slightly warm left knee. He previously had two similar episodes. In each case joint aspiration revealed clear fluid containing only a small number of white cells, and his symptoms were relieved by an intra-articular steroid injection.

This time the attending permitted her medical student to give the injection under her close supervision. The procedure was successful, although very painful because the student had difficulty entering the joint space. Afterward, they learned that there was a pharmacy mix-up, and the wrong medication was injected. The vial had contained 30 mg of progesterone, rather than 30 mg of prednisolone. The attending was upset, but explained that informing the patient about the error would only make matters worse. She reasoned that DJD flare-ups often resolve with NSAIDS alone, and the injection itself may have a strong placebo effect. Admitting the error will only cause the patient to lose confidence. Moreover, it is unlikely the progesterone will do any harm. The

attending prescribed NSAIDS and asked the patient to return in a week. On follow-up the knee is somewhat better, but remains mildly swollen and painful.

Medical Decision-Making Case

The patient is mildly demented, but fully functional in terms of activities of daily living. Thus far he has been making his own medical decisions. The patient was admitted for rectal bleeding and found to have sigmoid carcinoma. Surgical intervention will not be curative, but will probably relieve symptoms and prevent future bowel obstruction. However, the patient refuses surgery because, he says, "I've lived a good life, and what will be, will be." The patient's wife supports his decision, but seems ambivalent.

The resident has told the student that a patient who refuses beneficial treatment is usually incompetent. He advised getting a psychiatry consult because, in cases like this, the liaison psychiatrist usually "gets with the program" and decides the patient lacks decision-making capacity. The resident said he was sure that the patient's wife could be convinced to give her consent.

Conflicts of Error Case

The student expresses enthusiasm about Dr. A's office because it runs so efficiently and patients are "in and out" in 15 minutes. She also like the fact that pharmaceutical representatives provided lunch in the office on two occasions, each time in association with a presentation about a new drug. She had also heard that one pharmaceutical representative periodically sponsors an evening educational program for Dr. A's diabetic patients. (Dr. A is an endocrinologist.) The student also liked Dr. A as a preceptor because he makes hospital and nursing home rounds in the mornings and only has office hours in the afternoons. He doesn't require his students to attend morning activities, so she is able to stay home and study most mornings.

Abuse of Patients and Students Case

The student is concerned about the attending she worked with the last time she volunteered at the clinic (Dr. A). Dr. A is a very popular young physician who often entertains students with caustic jokes and stories about patients. On that occasion Dr. A spent all afternoon making rude comments about the patients she presented. In one case he gave a patient a large supply of samples of two expensive anti-hypertensive combination medications, rather than a prescription for inexpensive generics, because he said, "These people won't spend a dime on their meds, but they'll come here in a fancy new car." In another case he said, "Oh, yeah, I remember her… Has she started taking baths yet?" The student also complains of how uncomfortable Dr. A makes her. He stands very close when they talk and tends to punctuate his points by putting his hand on her arm or shoulder.

APPENDIX B: Faculty Workshop Participants Confidence Gained

Ratings on the Pre/Post Confidence and Attitudes in Teaching Survey by Faculty Physicians who participated in the OSTE Workshop (N=31)

Survey Item	Pre OSTE Workshop Mean Rating (SD)	Post OSTE Workshop Mean Rating (SD) *
Professionalism can be taught.	4.33 (.96)	4.74 (.45)*
Teaching medical students about professionalism is important.	4.70 (.95)	5.00 (.00)**
Concepts of professionalism should be included in required coursework for medical students.	4.70 (.95)	4.81 (.40)
I have an obligation to enhance medical student's understanding of professionalism including discussing with them about professional/ethical qualities and behaviors.	4.73 (.94)	4.87 (.34)
Faculty are adequately trained to discuss and teach about professionalism issues with medical students.	2.63 (1.25)	3.06 (1.26)
I feel confident with my understanding of the professional/ethical qualities and behaviors of others in the medical profession.	3.50 (1.01)	4.10 (.79)**
I feel confident with my ability to recognize UNPROFESSIONAL/ UNETHICAL behaviors of others in the medical profession.	3.87 (1.04)	4.23 (.62)*

Continued

Survey Item	Pre OSTE Workshop Mean Rating (SD)	Post OSTE Workshop Mean Rating (SD) *
I feel confident with my ability to communicate my concerns/feedback related professionalism/ethical issues with medical students.	3.40 (1.00)	4.21 (.57)**
I feel confident with my ability to handle a professionalism problem/issue in which a medical student is involved with.	3.37 (1.03)	4.10 (.65)**
I feel confident with my ability to teach medical students on how to provide culturally competent care.	3.30 (1.05)	4.10 (.79)**
I feel comfortable with approaching my peers and colleagues regarding problems/issues related to their professionalism and professional/ethical behavior.	2.77 (.97)	3.80 (.89)**
Wilcoxon signed rank test; two-tailed significance, * $p < .05$, ** $p < .001$		

DEVELOPMENT OF A PHYSICIAN COMMUNITY LEADERSHIP CURRICULUM

University of California, Davis
Principal Investigator and Author: Ronald L. Fong, MD, MPH*

Project Background

Prior to the 2010–2011 academic year, the University of California, Davis (UC Davis) received a grant from the Health Resources and Services Administration to fund two additional family medicine residents. To accommodate the additional house staff, a community leadership track was initiated to recruit medical students who self-identified as leaders and to develop a process for leadership growth. The design of the track attempted to delineate and to balance the components of family medicine and community medicine within the residency program. The leadership residents were encouraged to disseminate their discoveries among their fellow residents and to the communities they served. The track sought to instill into its residents the identity of leader from the inception of their training as family physicians. The structure of the program was geared to be interactive. Residents were asked to share their perceptions of leadership and outline their means of navigating from their current position to their desired one as physician leaders. They had the responsibility of designing a project by the beginning of the second year to incorporate the track's didactics regarding physician advocacy.

Learners and Teaching Team

The primary targets were the residents recruited for the track; the secondary ones were those in the family medicine residency. The members of the teaching team were Tom Balsbaugh, Tom Riley,

and Ronald Fong. Balsbaugh was residency program director. Riley is the CEO of the Cal Capitol Group, a government relations consulting firm. The California Academy of Family Physicians (CAFP) had retained the services of his group for its lobbying efforts. Tom Riley designed a curriculum specifically for the track, drawing upon his experience as a lobbyist for CAFP and from working with corporations on leadership development. Fong served as the faculty advisor for the track and was the direct contact for the residents. In 2013, Kay Nelsen replaced Balsbaugh as residency director.

Project Modifications: Barriers and Insights

The track was housed within the UC Davis family medicine residency. The default was for the residents to utilize their elective time for work on personal projects. Unfortunately, there was no elective time in the first-year curriculum and this impeded building momentum for the subsequent two years. The track was originally designed to accommodate two residents. However, the residency director made the decision to recruit four additional residents into the track. Thus, resources that were allocated for two residents had to be scaled for a total of six.

Drawing upon his lobbying experiences, Riley developed a curriculum emphasizing how to advocate for family medicine and how to navigate through the California legislature. Four of the six residents from the first class were from outside California. He planned a tour of the state capitol, viewings of legislative sessions, and meetings with elected officials who were on key health policy committees. The Trait Emotional Intelligence Questionnaire Short Form (TEIQue-SF) was used as a pre-assessment tool to evaluate emotional intelligence. Riley and Fong prioritized awareness and advancement of emotional intelligence as a vital component for leadership growth. The curriculum began with an overview of

California politics, legislative governance, and demographics to give the track residents an understanding of the communities of California. Then, the value of emotional intelligence was articulated through facilitating conversations with elected officials. Residents were taught that building relationships was as important as fact sheets. Although there was not enough time for the dedicated legislative tour, a joint legislative day was held for all residents, with one of the leadership residents taking part. Faced with limited time and resources, the track was subsequently scaled back to two residents after the first year. The six original members were still accommodated as second- and third-year residents.

Resident feedback indicated that the first class of the track did not find the legislative component compelling. They were more interested in pursuing projects that worked directly with communities without governmental intermediaries. Based on these dynamics, meetings were held to draw out the residents regarding details for their desired pursuits. Much of the meetings were spent on the scope of projects given their remaining two years of residency. Moreover, the residents wanted access to financial resources for their projects that exceeded the track's budget.

The post-TEIQue-SF assessments were not completed because of lack of resident interest. Two of the six members of the first class went on to take academic positions. One member of the second class went into an academic position. One resident wanted to bring a federally qualified health center (FQHC) to the community of Walnut Grove, which is situated south of Sacramento in the delta region and is home primarily to farm workers and ranchers. The resident hosted town hall meetings to gain the trust of these groups; she recruited the local Rotary Club for additional support. She worked with a local nurse to start fundraising efforts and hired a consultant to manage the FQHC application process. Currently, the community is attempting to raise funds for the center.

Results

The curriculum has been reconfigured to fit into the general resident education. There is no longer a designated track for specific residents. In 2014, Fong enrolled in the UC Davis Graduate School of Management's MBA program to obtain a more global perspective of leadership. He incorporated the lessons of relationship dynamics and decision making to the redesigned curriculum. Now, the curriculum focuses on negotiations, team building by emphasizing the incomplete information each team member possesses, and the value of clear articulation. Instead of lectures, the team exercises are emphasized as a platform for demonstrating leadership skills. The distribution of the materials to the residency has been more global through the portal of the residents' longitudinal block time.

The Harvard Business Leadership and Team Simulation, a computer simulation of a team attempting to reach the summit of Mount Everest, teaches collaborative skills to build effective teams. Another exercise is a murder mystery in which each team member is given a different transcript of the events. To solve the mystery, the team must recognize that individually they have incomplete information. However, by sharing information, they can complete the discussion. Also, this aims to empower junior members on teams since their input is necessary for seeing the larger picture of a situation. A formal session in negotiations has been incorporated. It explores the expectations most people have regarding negotiations as being a zero sum game. These exercises are designed for the residents to actively seek win-win situations. This has been linked to their clinical experiences involving conversations with patients that can be delicate and potentially hostile, such as chronic opioid prescriptions. A teamwork exercise (the "marshmallow challenge," which involves building a tower with dried spaghetti, string, tape, and single marshmallow) has been incorporated, and Fong

designed a scavenger hunt that emphasizes group decision-making over the rush to complete tasks.

Ongoing Implementation of the Project

The formal leadership track was not sustained because of a change in the residency director position, and the feedback from the track's residents that they did not feel the track delivered on its premise. These results were shared with the UC Davis Family Medicine Residency Network. The Network consists of seven affiliate programs with UC Davis. Avenues of dissemination included monthly program directors' meetings, quarterly chief residents' meetings, and yearly faculty development sessions.

Lessons Learned

The following lessons were learned from this effort:

- Deemphasize leadership as something for the select and promote leadership skill building among all residents.

- Communicate expectations that leadership development is a core component of postgraduate training.

- Forego lectures and shift lessons toward team exercises.

- Demonstrate the value of adapting processes from other disciplines, especially outside of the medical field.

Perhaps the most important lesson learned was the need to align resources with expectations. When the entering cohort was expanded from two to six, there should have been more detailed discussions regarding the limitations and parameters of the track. The track was meant to augment the training of a family medicine

resident in Sacramento, where advantage could be taken of the proximity of the state capitol. The curriculum was aligned to work with CAFP to foster a culture where the residents would develop their voices and narratives for community advocacy. Unfortunately, the time and patience required for residents to navigate the legislative process was underestimated and they were unable to feel as if they had answered a calling instead of fulfilling a curriculum.

The increase from two to six residents reduced the time available to build the necessary mentoring relationships. Group e-mails were used instead of setting aside time for individual conversations that would have provided better insight into the residents' mindsets.

CLINICAL INTERPROFESSIONAL PROFESSIONALISM CURRICULUM

University of Massachusetts Medical School
Principal Investigator and Author: Melissa Fischer, MD, MEd

Project Background

The Clinical Interprofessional Professionalism Curriculum (CIPC) promotes development and application of individual and team-based professionalism skills for learners across health professions. Core faculty and student participants are enrolled in the University of Massachusetts Medical School (UMMS) and the Graduate School of Nursing (GSN). Learners and faculty from partner programs in pharmacy, behavioral medicine, physical and occupational therapy, laboratory science, and social work participate periodically to further enhance diversity.

Originally, the CIPC focused on three principles of professional behavior: advocacy, promoting a just distribution of finite resources, and putting patients' interests first. While these remain at the core, their application has been adapted to contemporary topics as guided by an interprofessional faculty advisory team. The program is structured as a series of three interactive small-group sessions with interprofessional faculty and learners. Learning activities include case-based problem solving, team-building activities, reflective writing and discussion, and simulation. Learners complete the "readiness for interprofessional learning scale" (RIPLS) pre- and post-tests.

Learners and Teaching Team

The majority of our learners are practicing graduate nursing students in the first year of the Master of Science (MS) program and

all medical students in their core clinical year. As noted above and below, this expanded over time to meet both diversity objectives and to keep pace with small group teaching facilitation needs. Other learners include PharmD residents and doctoral students in physical and occupational therapy, laboratory science, DNP students, and social work. Groups are facilitated by pairs of faculty from any of the participating disciplines and basic science.

Project Modifications: Barriers and Insights

As noted above, the core principles of the CIPC have been maintained through the curriculum; however, the advisory team has implemented a number of changes over time, as noted below.

Learners and faculty: Engaging interprofessional teams in teaching and learning is a core goal of the CIPC. The UMMS and GSN are fortunate to be co-located on our campus and have a strong history of collaboration, which supported initial CIPC development and ongoing improvement. However, in practice, clinical teams include members of many other disciplines and, over the years, we have worked to include those from smaller on-campus programs, off-campus partner institutions, and our sister campus, UMass Lowell, to broaden the range of participating disciplines to pharmacy, behavioral medicine, and physical and occupational therapy. Expanding faculty from other disciplines, including basic science, supports both learning about those fields and small-group teaching with increasing class sizes.

Session topics: Our original series of sessions had topics focused on building effective teams, practical and ethical considerations of clinical resource distribution, and utilizing interprofessional teams to promote patient care. Over time, we have tailored exercises and cases to be more clinically relevant while remaining in the same general areas. For instance, the effective teamwork session

began with a small-group discussion based on literature related to teamwork and members' experiences on clinical and non-clinical teams. This approach has expanded to incorporate hands-on teamwork exercises, including the "helium stick" and the "room of horrors." The former is being replaced with a clinically based "zoom" exercise.

Just distribution of resources was initially based on readings and case-discussion related to resource utilization in clinical cases, such as ventilator utilization in an epidemic of respiratory compromise. This session was broadened to include readings related to resource distribution during recent disasters (hurricanes Katrina and Sandy); a medication reconciliation exercise addressing both pharmacy resources and patient safety; and, most recently, an exercise based on triage decision-making in a busy emergency department (ED) and hospital at full census.

Finally, the session on putting patients' interests first continues to be based on learners' reflective writing about their observations of interprofessional teams functioning with regards to patient care. While this component has remained, we have included response to an active shooter in a hospital setting as well as disaster management to teach relevant practical skills. In addition, our learners repeatedly shared that they wanted more time to get to know colleagues from other programs in their small groups and this was implemented in the first session. These changes have been driven by the desire to include contemporary topics, respond to student and faculty feedback, and integrate more effectively with coordinated curricula on CIPC days.

Enhanced technology utilization: Learner feedback from our first year was consistent with literature in advocating for hands-on experiential learning using authentic cases with clear application to real practice. Added technology has ranged from video review

to simulation, and we are now in the early stages of testing 3D virtual reality. Simulation experiences begin with the static "room of horrors" in which teams identify patient safety risks in a patient room within our simulation center. The medication reconciliation exercise uses labeled pill bottles, and the ED triage exercise requires learners to "move" patients on a white board. Our next phase of clinically realistic teamwork is exploring 3D virtual reality video imaging that would have learners experience teamwork in an operating room setting. These changes have been incorporated to provide hands-on, experiential learning and explore methods to utilize resources effectively in a curriculum that is resource-intensive. We have also embraced technology by allowing faculty to participate in development sessions for each CIPC remotely or by viewing a recording of the in-person session.

Clinical system engagement: Our advisory team has built a strong relationship with our major clinical partner, UMass Memorial Healthcare and their Schwartz Center for Compassionate Care rounds. This relationship has led to a standing Schwartz rounds in which our learners share their reflections on teamwork and patient care with clinical system members and participate in a facilitated discussion of how positive behaviors can be promoted, and how we can all learn from the more challenging reflections. This connection was an original goal of our CIPC; however, the focus changed from providing feedback to the clinical system to engaging learners and practitioners in collaborative learning through shared experiences.

Results

The CIPC is now in its seventh year at UMMS and has engaged over 1,000 learners and faculty from nursing, medicine, pharmacy, physical and occupational therapy, laboratory medicine, social work, behavioral medicine, and basic science. The curriculum has several evaluation components and overall it has been positive.

Pre-Mid-Post evaluation of key principles and skills

AY 16–17 SOM students scale 1–5, n=118–136	mean (SD)		
	Pre	Mid	Post
Can apply effective teamwork principles in practice	3.71 (.78)	4.13 (.59)	4.15 (.6)
Roles and responsibilities of IP team members are clear	3.34 (.88)	4.02 (7)	4.09 (.61)
Confidence in my ability to communicate my role to other members on IP team	3.48 (.88)	4.08 (.63)	4.13 (.57)
Can communicate effectively in IP setting	3.67 (78)	4.15 (.58)	4.17 (.57)

AY, academic year; SOM, School of Medicine; IP, interprofessional; SD, standard deviation

Evaluation of component sessions

Overall ratings of component sessions are strong. In the most recent academic year (2016–17), disaster management yielded the highest evaluation up to 4.24 (scale of 1–5), and all ratings were above 3. Interestingly, GSN students tend to rate their experiences more highly than UMMS students. For example, in the most recent academic year, GSN students reported that the initial teamwork session was relevant to their training with a mean of 4.13, while the UMMS student mean on the same parameter was 3.78 (scale 1–5). Similar differences were found in responses to many questions, including the impact of the curriculum on identifying issues of professionalism (4.16 vs. 3.66) and improved comfort working with interprofessional teams (4.10 vs. 3.53). Other populations were too small to allow for comparison.

Readiness for interprofessional learning scale (RIPLS)

We have hypothesized a number of potential causes for these consistent differences between the response of our UMMS and GSN learners. One relates to their attitudes towards interprofessional learning and practice in general. In order to explore this further, we have implemented periodic completion of the RIPLS to determine whether these differences exist at the time of enrollment or appear during training.

Ongoing Implementation of the Project

The CIPC has strong support from both our GSN and UMMS leadership and has been fully integrated into the curricula of both schools. It was our first required curriculum to engage learners and faculty from our sister campus UMass Lowell. This interprofessional curriculum strengthened our cross-school collaboration and contributed to support for institutional creation of an interprofessional education coordinating committee (IPECC) for UMMS on which our CIPC leadership had membership. This IPECC has since transitioned to a liaison committee for interprofessional curriculum, which has an expanded role in facilitating interprofessional curricula. Faculty effort is recognized in our educational efforts process, and original leadership is transitioning from educational administration to a new faculty member. Our primary clinical partner has earmarked an annual Schwartz rounds for this collaborative work.

Project Dissemination

We have disseminated information about the CIPC through the following activities.

- Dinh A, Barrett S, Miller K, Fischer M, Zanetti M. Differences between medical and nursing students in perceived benefits of a clinical interprofessional professionalism curriculum. AAMC Research in Medical Education (RIME) Proceedings, 2013.

- Hale J, Terrein J, Seymour Route P, Fischer M. Climbing to new heights in NP interprofessional education: Step by step. National Organization of Nurse Practitioner Faculties; April 3, 2014; Denver, CO.

- Biswas M, Poisson-Irani A, Fischer M. Nursing and medical student reflections on patient care and advocacy—a qualitative comparison. Short communication. Northeastern Group on Education Affairs (NEGEA), 2015.

Lessons Learned

The lessons of CIPC development and implementation are similar to those encountered in other efforts to develop interprofessional curriculum, but also fall into areas considered by some as outside the traditional.

Partnership

The development of strong relationships with our collaborating schools and programs and our primary clinical partner has strengthened both the CIPC and our foundation for ongoing work in other areas. Opportunities to build relationships with

new colleagues and expand their field of knowledge and impact across schools and disciplines have energized participating faculty members. A strong advisory committee with representatives from school and program members provides key engagement, curriculum guidance, and ongoing support. Partnering with learners by providing mechanisms for feedback has also been critical to our efforts and has helped enhance engagement and improve programming.

Scheduling

Aligning the schedules of diverse programs within and across schools presents challenges. Developing a critical mass of faculty and interprofessional curriculum content and an infrastructure to support them can promote the institutional adjustments that may facilitate this work. Nevertheless, even the most careful scheduling plans can be disrupted by unpredictable and uncontrollable forces and events, such as weather, and because rescheduling is rarely feasible, creating back-up plans is important.

Authenticity

Developing meaningful and appropriate objectives and exercises for a diverse group of learners is important and difficult. Medical student learners outnumber others by approximately 3:1, which is not true in the clinical setting. Increasing program diversity can improve these ratios but add complexity. Composition and level of training of learners can create a context that makes existing materials less effective. We have tried to address challenges through creation or adaptation of exercises to meet our unique circumstances. We use challenges to help guide change. For instance, we linked inconsistency of small-group leaders and learners across sessions to real clinical practice in which teams change regularly and are nevertheless required to work effectively

together. Strong partnership and commitment as well as flexibility and ongoing curriculum improvement are important to address these challenges. Interestingly, our GSN learners seem to value these experiences more highly than their USSM colleagues. This finding has prompted further exploration and analysis that remain in process.

Resources

Small-group and experiential learning are highly valued and effective, and are also resource-intensive. Changes, such as increases in class size and engaging more diverse learners, add value and increase resource utilization. Technology can help meet some of these challenges by providing flexibility for faculty development and alternate methods that may require fewer faculty over time, and may support asynchronous participation in the curriculum.

EDUCATING AND TRAINING TO PROFESSIONALISM

University of South Florida Morsani College of Medicine
Author: Deborah Dewaay, MD, FACP*

Project Background

The University of South Florida Health Morsani College of Medicine (MCOM) initiative included creating, implementing, and evaluating a professionalism curriculum that focused on learners (medical students and residents) developing skills and strategies needed for modulating behavior and managing affect to put "patients' needs first." Participants enrolled initially included 120 third-year medical students; 78 residents across three specialties and two campuses; and 21 faculty who helped develop the six modules and/or teaching of these modules. The goal of this initiative was to extend professionalism training to learners across all clinical departments at MCOM.

Learners

This curriculum was designed for medical students and residents. The focus on undergraduate and resident education was chosen so that the attitudes, skills, and knowledge around professionalism would be instilled prior to becoming trained physicians.

Project Modifications: Barriers and Insights

The modules changed over the course of the grant as they became incorporated into undergraduate medical education doctoring courses (Doctoring One, Doctoring Two, Doctoring Three, MS

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* Principal Investigator: Alicia Monroe, MD

IV - Capstone TIPS) and residency training in internal medicine, pediatrics, and family medicine. As a high volume of faculty time was initially needed to execute the specific modules developed, the modules took on a more global approach to their use. Faculty development was created for each of the modules to allow for ease of use within the doctoring and residency training programs. This move allowed these six professionalism modules to reach a broader audience, begin the initial training in professionalism in the first year of medical school, and extend the training beyond the four years of medical school into initial residency training.

Barriers included initial faculty requirements, both a time commitment to develop and deliver the professionalism modules, as well the scheduling of the six modules to assure medical student participation in a significantly asynchronous curricular schedule. The additional burden of the coordination of module delivery between two campuses was an issue that had to be overcome. As a result of these challenges, it was decided to embed an adaptation of the six modules into existing medical student curriculum. The evolution of the adaptations made it easier to train faculty to support the delivery of the professionalism modules as well as ease in collecting specific data within the course content.

Specific faculty development included having the doctoring faculty complete the six modules themselves. Not having to rely upon recruitment of faculty removed one of the largest barriers initially faced in this project. It also provided a consistent delivery for the program as everyone was trained at the same time prior to delivery. All sessions were recorded (which was not in the initial phase of delivery), allowing the developers to observe directly how the individual small groups were handling the sensitive topics. Updates to reflect students' perceptions and reactions to the challenge questions were then integrated into the second iteration of the program.

Results

Learner assessment incorporated a developmental framework that included formative feedback to and from students and residents, the development of specific student learning contracts, and professional development portfolios. Student and resident assessment and evaluation included self-assessments; faculty feedback (face-to-face; electronically mediated); extensive incorporation of simulation into the modules; and surveys including pre/post measures of Jefferson Scale of Physician Empathy, the Maslach Burnout Inventory, and 360 degree evaluations—all collected on the initial cohort of learners. The most valuable outcome of the evaluations was to learn that the students wanted additional training time on the six modules. We used this outcome to embed these modules into the medical student curriculum in their doctoring course, allowing each of the four years of medical students to have multiple exposures to the developed professionalism modules.

Ongoing Implementation of the Project

Implementation of the six modules included an extensive review of the current doctoring curriculum to ascertain where the delivery would best meet the students' understanding and application of the materials. It was determined that the first module would be delivered in year one, a portion repeated in year two. The third module was delivered then in year two. Modules two, four, and five were incorporated into year three, where the doctoring curriculum focuses on difficult communications. Module six was incorporated into year four during the Capstone TIPS course, which is a graduation requirement that is completed at the end of the fourth year of medical school.

The residency program focused the continued delivery of the modules during the orientation of PGYI for internal medicine,

pediatric, and family medicine residents. The specific modules four and five have been incorporated into departmental grand rounds so that a broader audience can participate in the benefits the modules offer.

Support from the all the departments involved sustained the changes, and the department of educational affairs and the department of pediatrics absorbed the costs for the medical students and pediatric residency, respectively.

Project Dissemination

The project was disseminated through the following:

- Monroe ADH. Expanding our tool box for building professional and interprofessional competencies. 2012 Association of American Medical Colleges (AAMC); San Francisco, CA.

- Salinas-Miranda AA, Shaffer-Hudkins EJ, Bradley-Klug KL, Monroe ADH. Student and resident perspectives on professionalism: beliefs, challenges and suggested teaching strategies. *Int J of Med Educ* 2014;5:87–94.

Lessons Learned

First, departmental support is crucial. There needs to be financial support for the space, supplies, and faculty time. Second, adequate staffing must be available. These activities are complicated and have many moving parts. An expert simulation/standardized patient team is a must. Third, the project needs a champion. At our school, our director for simulation makes activities such as these possible with her expertise and efforts.

2012 GRANTEES

SOCIAL MEDIA AND PROFESSIONALISM: PERFECT MATCH OR PERFECT STORM?

Albert Einstein College of Medicine
Principal Investigator and Author: Elizabeth Kitsis, MD[*]

Project Background

Widespread use of social media has impacted health care in a variety of ways. Recent literature reviews highlight both the benefits and problems related to social media use in medicine. Several ethical issues may arise from social media use in medicine, one of which is professionalism lapses. Because of concerns about the risks of unprofessional behavior in using social media, several organizations have issued guidelines for the appropriate use of these platforms. Yet awareness of and consensus with these guidelines is unclear, and unprofessional online behavior continues. This project focused on educating faculty and medical students about how social media can be used to benefit patients without violating professionalism.

Learners and Teaching Team

The targets of this project were medical students and faculty. The teaching team included Elizabeth Kitsis, Felise Milan, Hillel Cohen, Daniel Myers, Patrick Herron, Mimi McEvoy, Jacqueline Weingarten, and Martha Grayson.

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[*] No representative of this program was able to attend the meeting.

Project Modifications: Barriers and Insights

This grant project was comprised of several components, including medical student and faculty social media surveys, faculty development, curriculum design, and medical student education. The program was ambitious and complex and, as a result, encountered numerous logistical challenges. As a result, a project management software program was used to help manage it. For a variety of reasons, the project evolved over the two-year period. For example, some of the students expressed the opinion that they knew more than the faculty about social media (and they were correct). Consequently, the project benefitted from their expertise by asking students to co-facilitate the social media sessions in their bioethics courses. The digital footprint exercise (described in greater detail below) was not as impactful as anticipated and was not continued beyond the grant period.

Results

The objectives of the medical student and faculty social media surveys were to evaluate and compare social media use by medical students and medical school faculty; assess and compare self-reports of medical student and faculty posting or viewing of unprofessional online content; and determine what actions were taken when unprofessional online content was observed.

The survey showed that medical students reported spending more time using social media and posting unprofessional content more often than did faculty. Three-quarters of medical students reported using social media "very frequently" (several times a day), whereas less than one-third of faculty did so ($p < .001$). Medical students reported using privacy settings more often than faculty (96.5 % v. 78.1 %, $p < .001$). Most medical students (94.2 %) and faculty (94.1 %) reported "never" or "occasionally" monitoring their online

presence (p = 0.94). Medical students reported self-posting of profanity, depiction of intoxication, and sexually suggestive material more often than faculty (p < .001). Medical students and faculty both reported peers posting unprofessional content significantly more often than self-posting. There was no association between year of medical school and posting of unprofessional content.

Since three medical school courses were targeted to include content on professionalism and the use of social media, the faculty for those courses needed to be educated first. Toward that end, three faculty development symposia were held, and session participants generally responded positively to the programs.

The first faculty development session was entitled "Professionalism in the Connected Age: Teaching Medical Students about Social Media." The audience for this session was the faculty of the "Introduction to Clinical Medicine" (ICM) course and the "Bioethics 1 and 2" courses. ICM and Bioethics 1 are required first-year courses, and Bioethics 2 is a required second-year course. Approximately 30 faculty members attended the half-day session. The symposium, given for continuing medical education (CME) credit, included lectures by David T. Stern, MD, PhD, Mount Sinai School of Medicine, who has written and lectured on professionalism in medicine for many years, and Allison H. Fine, BA, MPA, senior fellow at Demos: A Network of Ideas and Action, who is an author, speaker, and blogger on issues related to social media. Small-group discussions, led by faculty and student facilitators, were held after the lectures. The groups worked together on two challenging patient scenarios involving social media.

Using a Likert Scale (mean; very poorly=0, very well=5), participants in this workshop indicated that the session helped them identify potential breeches in professionalism (4.63), rated overall content well (4.63), rated their knowledge/skill level with social media better

after the workshop (3.04 vs. 3.88), and rated their comfort level with social media better after the workshop (3.04 vs. 4.04).

The second faculty development symposium was open to the faculty of all courses involved in the grant, as well as the greater Einstein and affiliates community. Entitled "Health Care Social Media in the Digital Age," the conference welcomed Farris Timimi, MD, medical director of the Mayo Center for Social Media, as the plenary speaker. The Timimi lecture also offered CME credit to attendees.

Using the same Likert Scale as described above, participants in the Timimi session indicated that it enhanced their ability to describe strategies for utilizing social media in medical practice (4.44), rated overall content well (4.60), believed their knowledge/skill level with social media improved after the lecture (3.04 vs. 3.72), rated their comfort level with social media better after the lecture (2.77 vs. 3.59), and rated their comfort level discussing social media with patients better after the lecture (2.54 vs. 3.13).

The third faculty development symposium featured Susannah Fox, of the Pew Foundation, and Kevin Pho, MD, of KevinMD, as the keynote speakers. Their lectures were followed by several small workshops on practical topics, such as how to use Facebook and Twitter, how physicians (and ultimately patients) can determine whether medical content on social media is accurate, and smartphone medical applications.

One of the grant project's curricular innovations—the Digital Footprint exercise—was introduced in Bioethics 1 and 2. Students and faculty created their own digital footprints by searching their names in Google and Google Images, and used a guide to analyze them for professional content. Each student and faculty member then used a similar guide to analyze a partner's digital footprint.

Students and faculty completed their digital footprint assignments as homework prior to the session, and analyzed their own and their partners' footprints in small groups, facilitated by one or two faculty members. A total of 170 first-year students in the Bioethics 1 course and 174 second-year students in the Bioethics 2 course participated in the digital footprint exercise, which was not as successful as we hoped. Most students had small footprints, and there was little content to evaluate. Some students had relatively common names and were unable to identify themselves on the Internet.

Another component of the project entailed adding a social media component to a clinical skills assessment (CSA) case for third-year students. The CSA is a formative, eight-case program using standardized patients (SPs). At the end of a session, the SP asked the student whether the SP could find and "friend" the student on Facebook if the patient had more questions. The SP then recorded whether the offer had been accepted, denied, deferred, or not asked because the SP really didn't want to be in touch with the student again.

In response to being asked to "friend" a patient on Facebook, 12.8% of students accepted the offer, 48.6% declined, 23.5% deferred the decision, and 15.6% of the students were not asked as the SP did not wish to befriend the student on Facebook. Of note, many of the students who accepted the Facebook offers were observed to be smiling or laughing during the session, leading the CSA faculty to wonder whether these students were not taking the offer seriously. Several faculty members speculated that these students—having not had any curriculum on social media (and therefore serving as the control group)—may have reacted differently if they had gone through the social media curriculum designed for this project.

Ongoing Implementation of the Project

Since the completion of the project in 2014, Einstein has continued to use curriculum components designed with support from the grant. These include the *Balance in the Practice of Professionalism* and *Health Behavior Change* sessions offered through the Introduction to Clinical Medicine course, and *Professionalism, Patient Stories, and Social Media* offered in the Bioethics course. In addition, our clinical skills assessment program includes an encounter that assesses students' ability to respond to a potential professionalism concern related to social media usage.

Project Dissemination

Information about this grant project was disseminated through the following:

- Milan FB, Herron PD, Myers D, & McEvoy M. Professionalism in the connected age: Teaching medical students about social media. International Conference on Communication in Healthcare; October 2013; Montreal, Quebec.

- Herron, Patrick. Social media & medicine: Perfect match or perfect storm? American Medical Student Association's Empowering Future Physicians Conference; October 2013.

- Kitsis EA, Milan FB, Herron PD, Myers D, McEvoy M, Grayson MS. Perceptions of online unprofessional behavior by medical students. Research in Medical Education, Association of American Medical Colleges Annual Meeting; November 4, 2013; Philadelphia, PA.

- Kitsis EA, Milan FB, Herron PD, Myers D, McEvoy M, Grayson MS. Perceptions of online unprofessional behavior

by medical students. Davidoff Day at Albert Einstein College of Medicine; March 2014; New York, NY.

- Herron PD, Myers D, Milan FB. Medical education 3.0: Exploring social media as a tool for educating medical students about health behavior change. Davidoff Day at Albert Einstein College of Medicine; March 2014; New York, NY.

- Herron PD. Professionalism in the digital era: Teaching faculty & students about the use of social media. The Academy for Professionalism in Health Care Conference; May 2014; Chicago, IL.

- Kitsis EA. Ethical Challenges Posed by Social Media. American College of Rheumatology Annual Meeting; November 16, 2014; Boston, MA.

- Kitsis EA. Social media and professionalism: Perfect match or perfect storm? Faculty Development Symposium, SUNY Downstate; March 15, 2017; Brooklyn, NY.

- Kitsis EA, Milan FB, Cohen HW, et al. Who's misbehaving? Perceptions of unprofessional social media use by medical students and faculty. *BMC Med Educ* 2016;16:67. doi 10.1186/s12909-016-0572-x, 2016.

Lessons Learned

The team involved in this grant learned that faculty members are less proficient with social media than students, and that educating faculty in this area is valuable. Our students helped us realize that they can provide some of that teaching. Our project also taught us that posting of unprofessional material does not appear to decrease during medical school, and that medical students self-post and notice peers' unprofessional posts more often than do faculty. Ongoing reports of unprofessional online behavior may reflect the struggle of the current medical student to develop a professional identity while trying to maintain a personal life that includes the type of active social media activity characteristic of the current generation.

The data also suggest that medical students and faculty may have different perceptions of social media professionalism, raising the question of what constitutes unprofessional online behavior, and who gets to define it. Further research could help determine whether these differences disappear as a result of students' professional formation, or whether they represent an evolving generational disagreement in the definition of professional behavior.

INNOCULATING AGAINST THE HIDDEN CURRICULUM: PROFESSIONALISM THROUGH ADVOCACY

Boston University School of Medicine
Principal Investigator and Author: Angela Jackson, MD

Project Background

The main teaching hospital at Boston University School of Medicine (BUSM) is Boston Medical Center, an urban safety net hospital with a diverse patient population. Many faculty, staff, and students come to BUSM, attracted to the mission of providing "excellent and accessible health services to all in need of care." Building on existing, successful programs at BUSM that highlight the importance of not only understanding but addressing the social determinants of health, we (myself and the members of the grant project team) proposed to address the hidden curriculum in medical school. By promoting professionalism through patient advocacy and integrating new activities into the existing medical school curriculum to emphasize the important role of the physician as **patient advocate**, we hoped to put in check some of the negative aspects of the hidden curriculum.

The main learning opportunities for students included the following:

- *Introduction to Advocacy – the Physician and Society*: Students were introduced to the concept of a physician's broader societal role and responsibilities, using advocacy as a platform to showcase *professionalism in action* during our White Coat ceremony on the first day of medical school. They were invited to write a "Time Capsule: A Letter to Myself," reflecting on their view of a physician's

responsibility to society, that they receive back in their fourth year for discussion in small groups. Additional reflective writing experiences were incorporated into the clerkships.

- *Faculty Development for Advisors*: Yearly retreats were (and still are) held for faculty advisors where faculty receive core education that addresses important skills, such as identifying students in distress, the specific characteristics of advising vs. mentoring vs. counseling, and coaching skills. In addition, the Office of Student Affairs still distributes a newsletter (via email) to all faculty advisors containing tips and suggestions regarding what to address based on where their assigned students are in the curriculum (exams, challenging anatomy section, etc.).

- *Human Connections*: In order to identify the importance of connecting with patients as individuals within the context of their community, first-year BUSM students were paired with an at-risk individual from one of a variety of clinical settings in "Human Connections," for a discussion focused on patients' life stories, communities, and experiences with the health care system, later debriefing with faculty facilitators in small groups of one-to-three students.

- *Scavenger Hunt for Health*: This experience allowed students to recognize the social determinants of health within patients' communities prior to their clerkships, through visits to surrounding neighborhoods where students travel in a patient's footsteps and complete tasks such as a) identify non-medical factors that impact health (e.g., housing, access and cost of transportation); b) identify available food resources in the neighborhood, contrasting with that in more affluent communities; c) identify

community resources available for patients; and d) discuss how the threat of urban violence may impact patients' ability to make healthy lifestyle choices (e.g., exercise).

Learners

Medical students, all four years.

Results

Survey results of the first cohort of first-year students, developed and analyzed by an outside evaluator, showed overwhelmingly positive feedback from the participating students. Preliminary results showed a trend—even after only one "intervention event"—for increased awareness of the importance and role of advocacy for physicians, comparing our first-year survey results with the third-year controls. Additional data are being collected in a longitudinal fashion, following students over the four years, to assess the impact of the different interventions, and the cumulative effect of the activities integrated throughout the four-year curriculum. While there have been unexpected delays in compiling and analyzing our formal evaluation data because of losing our project evaluator, advocacy and professionalism have been topics of ongoing discussion by faculty and students and shaped the redesign of our student advising program. Data analysis will resume in the fall, with new resources identified.

Project Modifications: Barriers and Insights

The "Human Connections" portion of the project was rolled out successfully, but was found to be very resource-intensive, and we did not offer the experience after the first two years. We are now re-implementing the opportunity for our incoming class, integrating the experience into the new professionalism sessions, run by the office of student affairs for our first-year class.

The "Scavenger Hunt for Health" exercise included facilitated, small-group discussions as well as trips to surrounding communities, exploring the realities of public transportation; access to affordable, healthy food; etc. Weather, safety concerns, and significant time requirements for the students' schedules posed challenges. Instead, first-year students selected a neighborhood and health-related problem to research during their first-year "Integrated Problems" course. Students visited the community, met with community leaders, and completed online research to identify the impact of and propose solutions to selected health concerns. Examples of student projects included cost of housing, access to transportation, access and cost of fresh vegetables, and so on, comparing several neighborhoods in Boston. Students presented their projects in their small groups, facilitated by the faculty advisor. Students then identified an advocacy project that they suggest would positively impact that community, reflecting on the important effects that physician involvement can have. In addition, an online, interactive module to replace the "Scavenger Hunt for Health" is planned, but development was delayed. The project will be moving forward as we have identified dedicated time for student participation.

The Academy of Advisors was identified as an important component of the project, but as we implemented the faculty development programs and heard from faculty and students, we identified the need to redesign our entire advisor program for students. Now the program is called the Advisor Network, and comprises peer advisors, student affairs deans, field-specific advisors, and core faculty advisors. Core faculty members were recruited from Boston Medical Center, who now, in addition to their clinical activities, facilitate the Integrated Problems curriculum. Students now have regular, longitudinal contact with their faculty advisors, develop mentoring relationships more organically, and hold core discussions around advocacy and other important issues

as part of the mandatory curriculum, and not scheduled as off-hours discussions.

Ongoing Implementation of the Project

The core experiences developed with this project continue, and others are temporarily on hold and being redesigned before being reinstated. Even more importantly, the project brought the importance of advocacy for student professional development to the forefront, and has influenced several new initiatives. Examples of some new initiatives, inspired by this IMAP/Macy Foundation grant project include the following:

- The project provided the impetus for continued faculty development for advisors and helped shape the reframing of the advisor programs for students.

- New this year is the implementation of portfolios for professional development, using an electronic platform to document and reflect on advocacy-related activities by the students, discussed with their dean and faculty advisors.

- The Office of Student Affairs was reorganized around four pillars that we call PATH. These include professional identity development; advancing to residency through advising and mentoring; technique acquisition in lifelong learning, resiliency, and wellness; and humanism and advocacy in medicine.

- Two sessions for professional identity formation will be incorporated into the core curriculum and overseen by the office of student affairs beginning this year.

- Our service learning activities expanded in this period from nine service-learning groups to 27 active student-run, faculty-supported groups, with discussions ongoing on how to integrate into the formal medical school curriculum.

- A leadership curriculum for all medical students is being developed, with a pilot scheduled for spring 2018

- The BUSM Center for Professionalism is under development and expected to be in implemented January 2018.

Project Dissemination

We continue to collect data and are reviewing our results to date. Two manuscripts have been outlined and we plan to also submit our experience in workshop form to the 2018 meeting of the Association of American Medical Colleges.

Lessons Learned

The timeline and complexity of integrating activities into a medical school curriculum, as compared with graduate medical education training, was underappreciated. Nonetheless, in our initial proposal, we stated that "This proposal will serve as the impetus to integrate concepts of advocacy throughout the medical school curriculum, grounding students' developing professionalism in real patient care issues." Though some of the interventions planned were not feasible to continue, the project has provided a platform for continued discussion with pre-clinical and clinical faculty as well as students, about the importance of advocacy, in a variety of forms, in the professional development of medical students. Mainstreaming concepts of advocacy linked to professionalism

and professional development into the standing medical school curriculum for the students and increasing awareness and focus on advocacy by the faculty have been clear results of this project. This effort is particularly important and timely, as the school is undertaking significant curricular review and redesign, and advocacy linked to professional development is firmly inserted into the conversation, because of, in great part, this IMAP/Macy grant project.

PROFESSIONALISM LEARNING COMMUNITY

University of California, San Francisco
Author: Maria Walmsley, MD*

Project Background

This grant project involved the formation of the University of California, San Francisco Professionalism Learning Community (UCSF-PLC), a group of faculty, trainees, and students who worked together to design a professionalism program employing the principles of workplace learning to develop a comprehensive and continuously renewing professionalism learning environment at UCSF. At its outset the program had two major goals: 1) plan and implement an educational program that fosters the development of skills to help students, residents, and faculty develop competence and confidence in self-regulation of professionalism in the clinical environment; 2) build and continuously renew and expand a supportive clinical work place community that advances professionalism through educational programs and self-regulation.

The UCSF-PLC focused on the professionalism competency of self-regulation in three domains: the physician as an individual, the physician as a member of a professional peer group, and the physician as a leader in the larger system of health care. In order to be competent in self-regulation, individual professionals must be skilled in **self-awareness and control**: they must understand how their own mental models impact the way they interpret and react to situations. Additionally, they need to develop methods to recognize when their instinctive thoughts or actions are counter to the values of professionalism and strategies to change directions before a professionalism lapse occurs. Second, they

must develop skills in **social awareness and control**: the ability to recognize potential or actual professionalism lapses in their colleagues and trainees and to take steps to prevent, interrupt, or mitigate the impact of a lapse. Third, professionals must develop skills in **system awareness and control**: they must be able to recognize and intervene when the system in which they are working is creating incentives for unprofessional behavior.

The UCSF-PLC met on a monthly basis and developed a series of interactive workshops, trigger cases, and reflections to be used in workshops and grand rounds, providing participants with the opportunity to practice skills in self-regulation. The core members of the PLC included two experts on professionalism, Drs. Catherine Lucey and Maxine Papadakis; two faculty with expertise in experiential learning, Drs. Maria Wamsley and Sandrijn van Schaik; Dr. Patricia O'Sullivan, UCSF director of faculty development; Dr. Mary McGrath, a surgeon with expertise in ethics and professionalism; Dr. Rachael Lucatorto, the professionalism competency director for undergraduate medical education; and Dr. Louise Aronson, a faculty member with expertise in reflection and a medical student education fellow. Additional members (faculty, residents, and staff) with interest in learning and teaching about professionalism were recruited to the group.

After the initial formation of the UCSF-PLC, we were fortunate enough to have a fourth-year medical student, Tess Lang, join the group. Ms. Lang took a year off from her studies to pursue a medical education fellowship. She provided an invaluable perspective and was able to assist in the development of realistic trigger cases by drawing on her own experiences and the experiences of her classmates. In the second year of the grant, a second medical student education fellow joined our team. After the first year of the grant, we reduced the frequency of our monthly meetings to bi-monthly meetings, given the challenges of finding time for busy faculty and trainees to meet.

While our offerings were targeted to the UCSF community and open to all, we were surprised at the positive response and interest from both medical center and administrative staff to participate in the workshops. This suggested a need that we initially had not anticipated and we worked to modify our materials for a broader audience.

Results

The UCSF-PLC developed a list of 10 offerings related to professionalism and met with educational leaders and department chairs to promote these offerings. We developed seven interactive professionalism case scenarios covering such topics as interprofessional conflict, unprofessional comments about a trainee, unprofessional comments about patients, and boundary issues. We developed two core skills workshops: 1) "If you see something, say something: managing professionalism lapses in the moment;" and 2) "Beyond he said, she said: debriefing after a professionalism lapse." Both workshops used trigger cases to facilitate skills practice.

For the workshop focusing on professionalism lapses in the moment, we trained standardized actors to enact cases of professionalism lapses with workshop participants. Workshop participants practiced skills taught in the workshop and received peer feedback. Both workshops were offered eight times through our Center for Faculty Educators both at UCSF and UCSF-affiliated sites (UCSF-Fresno in the Central Valley and Kaiser Oakland). Because of additional interest, we did a workshop for the staff in the medical student experience team and for the UCSF Health patient safety fellows, a group of staff nurses. In addition to workshop materials, we developed professionalism pocket cards that were distributed to UCSF-PLC members and workshop participants. Workshop participants completed post-workshop evaluations and workshop faculty modified subsequent workshops based on the participants' feedback.

Ongoing Implementation of the Project

UCSF continues to offer the core workshops on professionalism developed by the UCSF-PLC through the UCSF Center for Faculty Educators. While the UCSF-PLC no longer meets as a group, there has been a sustained focus on professionalism at our institution, with a new initiative "Differences Matter" recently launched by the UCSF School of Medicine. This initiative is multifaceted and seeks to diversify our disciplines and professions, create an inclusive and equitable work and learning environment, and eliminate disparities in patient care in clinical environments.

Project Dissemination

The UCSF-PLC was disseminated locally as a presentation at the UCSF Academy of Medical Educators Education Symposium in 2013 and regionally at the Association of American Medical Colleges Western Group on Educational Affairs meeting in 2013.

Lessons Learned

The UCSF-PLC provided a great opportunity to bring together faculty, trainees, students, and staff interested in learning about the many facets of professionalism and teaching others in the UCSF community. It also provided a centralized list of offerings on professionalism to the UCSF community and served as a resource to departments without local expertise. Student membership was invaluable and provided an important perspective in the development of curriculum. Staff (administrative and medical center) interest in these offerings was high and careful thought should be given to modifying any trigger cases to better meet the needs of staff. Finally, given the challenges of meeting regularly, quarterly meetings are more realistic than monthly meetings.

PROMOTING PROFESSIONALISM THROUGH FEEDBACK DRIVEN SELF-ASSESSMENT

University of Chicago
Principal Investigator and Author: H. Barrett Fromme, MD, MHPE

Project Background

Modern medical training as conceptualized by Osler can best be described as an apprenticeship: a novice learner becomes a clinician through practice under the supervision of a master. Practice is, in turn, informed by corrective instruction (feedback) wherein the master (faculty) corrects mistakes and reinforces accuracies. Unfortunately, feedback is often haphazard in today's training environment in part because of reluctance on the part of faculty to provide feedback and reluctance of the learner to accept feedback. A commitment to competence is a key tenet of professionalism as outlined by the American Board of Internal Medicine's physician charter:

> *"Commitment to professional responsibilities.* As members of a profession, physicians are expected to work collaboratively to maximize patient care, be respectful of one another, and participate in the processes of self-regulation, including remediation and discipline of members who have failed to meet professional standards. The profession should also define and organize the educational and standard-setting process for current and future members. Physicians have both individual and collective obligations to participate in these processes. **These obligations include engaging in internal assessment and accepting external scrutiny of all aspects of their professional performance.**"

Similarly, the Pediatric Milestone Project, an arm of the Accreditation Council for Graduate Medical Education Milestone Project, specifically notes professionalism outcomes which are tied to "self-awareness (of one's own knowledge, skills, and emotional limitations) that leads to appropriate help-seeking behaviors" and "flexibility and maturity in adjusting to change, with the capacity to alter one's own behavior." There has been much written and studied in the area of providing feedback to learners in the literatures related to undergraduate and graduate medical education and faculty development. There are few resources, however, on how to teach a learner to *solicit* and *utilize* feedback. Not all teachers have been trained to utilize such skills thus contributing to an uneven learning experience. Additionally, not all learners are comfortable receiving feedback. Teaching learners how to solicit feedback may help them take more ownership of their learning experience, thus negating the variability of clinical learning experiences.

Goal

The goals of this project were to teach students and residents how to A) acquire meaningful external observations by soliciting specific feedback, and B) utilize that feedback to improve their self-assessment and promote change.

Methods

The project consisted of two phases. During the first phase, a needs assessment was conducted of students, residents, and faculty involved in teaching. Through the needs assessment, a conceptual framework was developed that identified barriers and facilitators to feedback.[1–3] This framework served as the foundation for the development of an intervention for students and residents

to improve their ability to solicit and utilize feedback from teachers. Kern's six steps for curriculum development were used to develop the curriculum. Trigger videos and faculty guides were developed to use for implementation of the curriculum. The curriculum was implemented at four institutions for third-year medical students and for pediatrics and internal medicine residents. To understand the impact of the curriculum, historical control data were collected from the medical students and residents in the year prior to the intervention regarding their practice of soliciting and utilizing feedback.

Learners

The target audience was medical students and residents.

Project Modifications: Barriers and Insights

Phase 1

Collaborating institutions (University of Oklahoma, Tulsa; Virginia Commonwealth University; and the University of Chicago) were accommodating and facilitated the assembly of focus groups. Four focus groups were conducted at each site: procedural specialty residents, non-procedural specialty residents, third-year medical students, and faculty. No significant problems with conducting the focus groups were encountered. Transcription and analysis took longer than expected because of the larger than anticipated amount of data. A highly capable medical student (M Zegarek) helped with qualitative analysis of the focus group data and a member of the grant project team (S Reddy) was in the midst of a masters level course on qualitative analysis. Qualitative analysis was completed on all of the data, and the results were submitted to one publication and presented in two venues.[1–3] Overall, the process of conducting the needs assessment and analyzing the data was more time-consuming than anticipated and a decision was made to focus

on developing the teaching material rather than focusing on writing further manuscripts.

Phase 2

The results of the needs assessment were used to develop a framework for asking for feedback and writing scripts for the trigger tapes. Trigger tape development was smooth once we identified the production committee and recruited students and faculty to serve as "actors" for each scenario. This phase, while time-consuming, was the most rewarding as there were tangible products at the end of the process. A two-part workshop was developed to implement the project. In addition to the two-part workshop, a component was added to the longitudinal curriculum in which students are sent an email approximately two months after the first workshop to encourage them to set new goals for the rotation based on prior feedback. This occurs again in January (approximately three months after the second workshop). Pediatric residents are "poked" similarly when they are creating their required Individualized learning plans twice/year. This is a way that they can actively use the skill of learning plan development to help focus how they solicit feedback.

Results

Facilitators were trained at each of the three sites and were able to conduct the workshops at each in the inaugural year. The workshops were easily conducted for medical students as there are built-in breaks in their curriculum. Pediatric residents were engaged through the support of their program director, embedding the two workshops in their core lectures series. Evaluations from these sessions were tremendously positive with learners demonstrating positive reactions to the curriculum and high likelihood of requesting feedback. Engaging the internal medicine residents was

more challenging as their primary focus was on knowledge-based sessions and attendance at the feedback workshops was poor.

The historical controls were compared with the intervention groups regarding how frequently learners from each group asked for feedback on rotation, when they asked for feedback on the rotation, when they received feedback on the rotation, how often they received feedback, and how often they changed based on that feedback. There were no significant differences between historical and control interns in any of these areas. Students demonstrated a significant increase in the frequency with which they asked for feedback. Results were limited by an overall low response rate from the historical controls (<40%).

Ongoing Implementation of the Project

Workshop sessions for the third-year medical students and pediatrics residents continue at University of Chicago and Virginia Commonwealth University. At both these sites, the programs/medical schools actively pursue us to deliver the sessions. The third site and all internal medicine programs have since stopped delivering the curriculum.

Dissemination

The curricular material was successfully submitted to a peer-reviewed online repository of curricular material: the Association of American Medical College's (AAMC) MedEdPortal. Material on this site is available to any medical educator who is a member of the AAMC.[4,5] The first workshop has been downloaded 89 times since publication in October of 2015. The second workshop has been downloaded 69 times since publication in July of 2015.

Lessons Learned

Institutions planning to implement a curriculum on professionalism skills, such as asking for feedback, are advised to select individuals who are considered professionalism role models to deliver the content. The project team also recommends that there be a longitudinal element to the curriculum to continue to activate learner self-reflection, including interval email communication to remind them to self-reflect and set goals. Finally, it is essential to have a champion for the curriculum in each setting—whether that is a residency program or a medical school—to consistently deliver the content and advocate for it.

References

1. Reddy ST, Zegarek MH, Fromme HB, Ryan MS, Schumann SA, Harris IB. Barriers and facilitators to effective feedback: A qualitative analysis of data from multispecialty resident focus groups. *J Grad Med Educ* 2015;7(2):214–9.

2. Mariani A, Fromme HB, Schumann S, et al. Asking for feedback: Helping learners get the feedback they deserve. MedEdPORTAL Publications; 2015. Available from: https://www.mededportal.org/publication/10228; http://dx.doi.org/10.15766/mep_2374-8265.10228.

3. Zegarek MH, Fromme HB, Ryan MS, Schumann SH, Reddy S. Can I get some feedback? Student descriptions of barriers and enablers to formative feedback. University of Chicago Pritzker School of Medicine Senior Scientific Session; 2013; Chicago, IL.

4. Zegarek MH, Fromme HB, Ryan MS, Schumann SH, Reddy S. Can I get some feedback? Student descriptions

of facilitators and barriers to formative feedback. Oral presentation at: AAMC Research in Medical Education Proceedings; November 2013.

5. Fromme HB, Mariani AH, Zegarek MH, et al. Utilizing feedback: Helping learners make sense of the feedback they get. MedEdPORTAL Publications; 2015. Available from: https://www.mededportal.org/publication/10159 http://dx.doi.org/10.15766/mep_2374-8265.10159.

2013 GRANTEES

CHILD HEALTH ADVOCACY AND PUBLIC POLICY PATHWAY

Children's National Health System
Principal Investigator and Author: Lee Savio Beers, MD

Project Background

Physician advocacy is a key component of professionalism, which not only has a direct impact on the health and well-being of patients, but encourages the development and dissemination of many other principles of medical professionalism. At the time of this project's inception, the Patient Protection and Affordable Care Act was being implemented across the country in the face of significant health inequities both nationally and globally. There are additional, daunting challenges now facing health reform; in particular, the impact that changes to the health system may have on poor and vulnerable families. Even more so than when this project was initiated, it is critically important to ensure that the current generation of physicians develop the skills and knowledge to be effective and professional advocates.

While this is true for all physicians, pediatricians carry a special responsibility to advocate for children—a vulnerable group for whom psychosocial determinants of health have enormous impact and for whom early intervention is key. According to the American Academy of Pediatrics' *Policy Statement on Health Equity and Children's Rights*, "Integrating the principles and practice of child health equity—children's rights, social justice, human capital investment, and health equity ethics—into pediatrics will address the root causes of child health disparities . . . The American

Academy of Pediatrics and pediatricians can move the national focus from documenting child health disparities to advancing the principles and practice of child health equality and, in doing so, influence the worldwide practice of pediatrics and child health . . . Integration of these principles into competency-based training and board certification will secure their assimilation into all levels of pediatric practice."[1]

In response, the Child Health Advocacy and Public Policy Pathway (CHAPP) was created at Children's National Health System (Children's National) to train pediatric residents as child health advocates in order to impact child health through the advancement of other core concepts of professionalism, including enhancing social justice, physician advocacy, putting patient interests first, and promoting a just distribution of finite resources. The Accreditation Council for Graduate Medical Education has charged residency programs with creating opportunities for residents to develop and implement an individualized learning plan with their advisors. Particularly given our location in Washington, DC, many of our residents are interested in child health advocacy and/or health policy. The CHAPP Pathway was created to help these residents develop individualized learning plans that are meaningful to their future careers.

The overall goals of this pathway were to:

1. Create individualized curricula for interested residents to address core advocacy competencies.

2. Create an opportunity for residents participating in the community health track—which teaches mastery of competencies related to patient- and community-level advocacy—to achieve mastery of legislative-level advocacy.

3. Strengthen advocacy education for all program residents.

Teaching Team

Members of the teaching team include faculty at Children's National from several divisions, including the Goldberg Center for Community Pediatric Health, the Child Health Advocacy Institute, medical education, and hospital medicine. Several members of the teaching team, led by Dr. Lee Savio Beers, were graduates of the master teacher certificate in medical education program through The George Washington School of Education and Human Resource Development.

Project Modifications: Barriers and Insights

The main goals of the project remained consistent through the project period, though minor adjustments were made as the grant period progressed in response to resident feedback and availability of resources, particularly focused on the development of new rotations and recruitment and enrollment in the pathway. For example, there were some anticipated partnerships that did not develop as hoped; however, new partnerships and opportunities emerged in their place. Additionally, while the project team initially anticipated a "rolling" admission into CHAPP, it found that, based on resident and chief resident feedback, enrollment at the start of each academic year—to create cohorts of learners—was more effective. Lastly, a diverse group of mentors and additional faculty were recruited to expand the teaching pool.

Results

The CHAPP was successfully implemented in June 2014 and is in its third year. The pathway offers a "picklist" of educational opportunities—residents may choose to complete the whole pathway or may utilize selected components of it to meet their own individual educational goals. Resident educational opportunities

include both elective rotations and self-study options. Participants do not need to be planning a career primarily focused on advocacy and/or policy to benefit from the opportunities laid out through this pathway. Advocacy and public policy are components of all careers in pediatrics, whether inpatient or outpatient; primary or specialty/subspecialty care; or patient, lab, or administratively focused.

There are three levels of participation in the CHAPP Pathway:

- *Pathway Participant:* Choose one or more educational opportunities to supplement your graduate medical education, incorporating them into your own individualized education plan (developed in consultation with your advisor). There is no minimum level of participation. A CHAPP mentor is not required for this option of participation.

- *Pathway Certification:* Complete four educational units from the CHAPP Pathway, with at least two-and-a-half of those units in the area of legislative advocacy. A CHAPP mentor is required for this option of participation.

- *Pathway Certification with Honors:* Complete six educational units from the CHAPP Pathway, with a minimum of four of these units in the area of legislative advocacy. This is the most intensive option for pathway participation, and most appropriate for those who are interested in incorporating advocacy or public policy into their careers. A CHAPP Pathway mentor is required for this option of participation.

Ongoing Implementation of the Project

Now under the leadership of Dr. Danielle Dooley of the Child Health Advocacy Institute and Dr. Ankoor Shah of the Goldberg Center for Community Pediatric Health, and under the mentorship of Dr. Beers, the CHAPP continues to grow and expand. Additional educational offerings and experiential learning opportunities continue to be developed. The Child Health Advocacy Institute at Children's National has identified advocacy education as one of its key three-year strategic priorities, and has dedicated in-kind faculty and administrative resources to advocacy education activities, including the CHAPP, ensuring sustainability.

The CHAPP has also served as a model for emerging projects in faculty advocacy education and resident education in population health. For example, Dr. Lanre Falusi, a new faculty member in the Child Health Advocacy Institute and a CHAPP mentor, has just been awarded a grant from the Health Resources and Services Administration to develop an interactive and multi-modal training curriculum on child poverty for pediatric residents and medical students. After several years of experience with implementing the CHAPP, using feedback attained from qualitative interviews and resident rotation evaluations, the CHAPP leadership is currently re-evaluating the existing curriculum and requirements, and is in the process of making recommendations for potential changes, as a part of the process of continuous quality improvement.

Project Dissemination

Presentations about the CHAPP and other local advocacy education activities have been made at the Association of Pediatric Program Directors meeting and the Academic Pediatric Association's annual meeting. Members of the teaching team also participate in the Advocacy Education Special Interest Group of the Academic Pediatric Association and the American Academy of Pediatrics Community Pediatrics Training Initiative activities.

Lessons Learned

There were several key lessons learned from this project. First, experiential learning appears to be most effective and engaging. Second, consistent with principles of adult learning, advocacy education needs to be flexible, multi-modal, and longitudinal in order to reach residents of varying skills and interests across the course of the training. Lastly—an emerging area of focus for our institution—supporting faculty development in advocacy education is key to ensuring adequate teaching and mentorship opportunities for residents. The project team found that faculty often felt inadequately equipped to support residents' interest in advocacy activities; however, it also found that there was great interest among faculty in obtaining additional training and support in these topics. The CHAPP leadership is currently seeking collaborators and funding opportunities to develop enhanced models of faculty education.

Overall, the implementation of the Child Health Advocacy and Public Policy Pathway, through the support of the Educating and Training to Professionalism grant, was successful, sustainable, and replicable. In addition, it can serve as a model for expanding advocacy education opportunities to additional groups or settings, recognizing a particular need for interdisciplinary collaborations and faculty development. The coming years are likely to be a time of great change in health care, both locally and nationally, and the voices of the medical community need to be influential in shaping these reforms. Now more than ever, it is important for the physician community to be strong and effective advocates for their patients as well as expand opportunities for providers at all levels of medicine to acquire and improve their skills as physician advocates.

Reference

1. Council on Community Pediatrics and Committee on Native American Child Health. Policy statement – health equity and children's rights. *Pediatrics* 2010;125(4):838–49. doi: 10.1542/peds.2010-0235.

AN INTEGRATED APPROACH TO ENHANCING RESIDENT AND MEDICAL STUDENT PROFESSIONALISM

Saint Louis University

Principal Investigator and Author: Stuart Slavin, MD, MEd

Project Background

Professionalism is often seen as synonymous with good character—you either have it or you don't. This conceptualization is both simplistic and inaccurate as illustrated by a vignette from Malcolm Gladwell's book, *The Tipping Point*. Gladwell describes a study in which seminarians were given an hour to prepare a talk to give to students. As the hour came to a close, half were told that they had just received a call and that they needed to rush to the lecture hall to give the presentation, while the other half were told in a relaxed fashion that their hour was up. On the path to the lecture hall, an actor playing the role of a homeless man lay moaning by the side of the path. Of the group that was rushed, 10% stopped to help the man while, of the group that was not rushed, 63% stopped to help. The study demonstrates that environment and context can have a powerful effect on ethical behavior. One question that the study didn't address, however, is what was different about those who stopped. Particularly for those who were pressured and rushed, how did they overcome those stressors to be able to see and help the person on the path?

This project focused on what we, the project team, postulate are important contributors to medical student and resident professionalism: well-being and resilience. Studies have shown that medical trainees who suffer from depression and/or burnout have lower levels of empathy and altruism, both important components of professionalism. Burnout itself is characterized by

depersonalization (seeing people as objects rather than as people) and emotional exhaustion—psychological outcomes that are obviously deleterious to professional behavior.

Our project operated from a model that views professionalism as a multi-factorial construct. To act professionally, medical students and residents need to:

1. Avoid burnout, anxiety, and depression and instead find meaning in their work;

2. Possess mindfulness and emotional self-regulation when confronted with high-stress situations;

3. Recognize personal biases (unconscious or implicit stereotypes) that can threaten professional behavior with some patients;

4. Possess skills in ethical decision-making when confronted with difficult problems and potential ethical conflicts; and

5. Work in supportive environments in which unnecessary stressors and non-value-added work is minimized or, where possible, eliminated.

Our project aimed to address all of these potential contributors to professionalism and unprofessionalism in first-year residents and third-year medical students.

Learners and Teaching Team

The targets of this project were first-year residents in pediatrics and Internal medicine and third-year medical students at Saint Louis University School of Medicine. The members of the teaching

team included Stuart Slavin, MD, MEd, who focused his teaching on resilience skills and managing stress; Matthew Broom, MD, who focused on instruction related to solving ethical dilemmas; and Mindy Shoss, PhD, who worked with residency administration to try to help reduce unnecessary stressors and improve the educational environment for residents.

Project Modifications: Barriers and Insights

The biggest changes were related to challenges in expanding the program beyond the two residency programs and creating a train-the-trainer model for other programs. We were able to implement the program in one additional department, obstetrics and gynecology, but productivity pressures on clinical faculty and a relative apathy in terms of introducing change in other clinical departments prevented us from expanding beyond the three residency programs. A second major challenge was in evaluating program efficacy. We distributed year-end surveys to residents in the program and hoped to compare them to historical control groups in each department, but other than in pediatrics, we could not get sufficient numbers of residents to complete the surveys. The project faculty really had no leverage in getting residents to complete the surveys.

Results

Our plan was to measure depression, anxiety, and burnout in residents and third-year medical students and compare them with historical control groups not exposed to the intervention. For residents, the only department for which we obtained adequate survey response rates was pediatrics. Residents in this department who were exposed to the intervention reported lower depression symptoms, and a significantly lower number had moderate to severe symptoms for depression compared with the historical

control group. Residents exposed to the intervention also reported significantly lower anxiety symptoms, and a lower number had moderate to severe symptoms for anxiety compared to the historical control group. A significantly lower number of residents also met criteria for burnout than did the historical control group (see Table 1 on next page). We also assessed empathy, emotional intelligence, and ethical decision-making; however, no change was seen in these outcomes.

Third-year medical students were evaluated for depression and anxiety symptoms, but no significant changes were seen compared with previous cohorts of students. This was likely due to two main factors: 1) historical control groups varied widely in their depression and anxiety levels from year to year, so a consistent baseline could not be reliably established; and 2) the toxicity of the learning environment in the clerkship year exceeded the potential advances in resilience that we hoped to help students develop.

Ongoing Implementation of the Project

Three program components continued in the years after funding ended: resilience training and follow-up conducted by Dr. Slavin for pediatrics and internal medicine; ethics education by Dr. Broom in pediatrics; and the program for third-year medical students. Dr. Shoss moved to another institution and could not continue her work with the residency programs.

Project Dissemination

An article describing the efforts and outcomes with pediatric residents was published in Academic Pediatrics.[1] In addition, Dr. Slavin has included the educational approach and results from the project in talks he has given at 12 medical schools in the past year and a half as well as at three national medical education meetings and two international meetings. *(continues on page 110)*

Table 1

	Historical control group (n=18)		Intervention Group (n= 17)		
	Mean	Std. Dev.	Mean	Std. Dev.	T-statistic
Maslach Burnout Inventory Emotional Exhaustion	29.6	9.3	21.8	8.1	2.64 (p < .05)
Maslach Burnout Inventory Depersonalization	10.2	4.2	6.4	3.9	2.77 (p < .01)
Maslach Burnout Inventory Overall Burnout[a]					
State-Trait Anxiety Inventory	50.8	8.3	42.8	6.7	3.11 (p < .01)
Center for Epidemiologic Studies Depression Scale	21.2	12.8	13.9	9.7	1.90 (p = .07)

Note. The left side of the table provides average scale scores for study variables for the historical control group as compared with the intervention group. The right side of the table indicates the number of residents in each group that met criteria for various severity categories, and the

Severity Category	Corresponding Cutoff Score	Historical control group (n=18)	Intervention Group (n= 17)	Chi-Square Statistic
		No. of residents (%)	No. of residents (%)	
High	>=27	12 (67)	4 (24)	6.92 (p < .05)
Moderate	19-26	5 (28)	9 (53)	
Low	0-18	1 (6)	4 (24)	
				7.22 (p < .05)
High	>=10	11 (61)	3 (18)	
Moderate	6-9	4 (22)	6 (35)	
Low	0-5	3 (17)	8 (47)	
Positive		14 (78)	5 (29)	8.24 (p < .01)
Negative		4 (22)	12 (71)	
High	>=55	6 (33)	1 (6)	4.88 (p = .09)
Moderate	40-54	10 (56)	11 (65)	
Low	20-39	2 (11)	5 (29)	
	> 22	8 (50)	2 (12)	6.91 (p < .05)
Moderate/ Severe				
Mild	16-21	3 (17)	1 (6)	
Not signif.	< 16	7 (41)	14 (82)	

corresponding cut-off scores used to determine severity following common uses of each measure.

[a] *Individuals were identified as having high overall burnout if they met criteria for high emotional exhaustion and/or high depersonalization.*

Lessons Learned

The main lesson learned is that—with a relatively modest investment of financial resources and curricular time—rates of depression, anxiety, and burnout in first-year residents can be significantly reduced. Critical components of the program were introducing residents to resilience techniques such as cognitive restructuring, cultivating positive emotions, and overcoming or avoiding negativity bias and learned helplessness. Ultimately, we were likely too ambitious in terms of the assessment instruments and the length of the survey probably contributed to the difficulty getting residents to complete the evaluation.

Reference

1. Slavin SJ, Shoss M, Broom MA. A program to prevent burnout, depression, and anxiety in first-year pediatric residents. *Acad Pediatr* 2017;17(4):456–58.

CASE-BASED PROFESSIONALISM EDUCATION FOR INTERNAL MEDICINE RESIDENTS AND FELLOWS

**SUNY Upstate Medical University and the
American College of Physicians
Principal Investigator and Author: Kathy Faber-Langendoen, MD**

Project Background

State University of New York Upstate Medical University (SUNY Upstate) partnered with the American College of Physicians (ACP), the national professional society for internal medicine, to develop a professionalism curriculum that provides internal medicine trainees practical skills for living out professional commitments to 1) promote a just distribution of finite resources and 2) promote the regulation of the profession by peer-monitoring. This curriculum includes four simulation cases focused on these commitments using objective structured clinical examination (OSCE)-based encounters. These professionalism OSCEs were integrated into a well-established communications curriculum for internal medicine residents and subspecialty fellows called "Learning to TALK (Treat All Like Kin)."

Our team used a three-tiered process to provide formative feedback to trainees: grouped faculty assessment, individualized standardized patient (SP) checklists and oral feedback, and trainee self-assessment by individualized video-review. SP evaluations were done in-person immediately after the encounter (focused on telling the learners how they made the SPs feel during the encounter) as well as on paper (focused on the content of the interchange and emotions). Faculty assessments were done immediately after the training exercises, with debriefing led by the residency program director (co-principal investigator), principal investigator (PI), and

Case #	Year	Domain	Case description
1	2013–2014	Promoting just distribution of finite resources	**Patient** with low risk for breast cancer asks resident to order medically non-indicated screening breast MRI
2	2014–2015	Promoting self-regulation of the profession	**Departing resident** refuses to follow policy for communicating patient information to oncoming resident as departing resident leaves for the day
3	2014–2015	Promoting self-regulation of the profession	**Intern** posts sexually harassing comments about medical student on his personal Facebook page, and student complains to supervising resident
4	2014–2015	Promoting just distribution of finite resources	**Patient** with osteoporosis refuses generic drug and asks resident to prescribe name-brand, non-formulary drug for convenience

Red indicates role played by actor ("standardized patient")

Green indicates role played by learner (resident or fellow)

medicine department chair. Based on faculty observations and trainee self-reflections, debriefing sessions include explication of the core professional concepts, legal and ethical aspects of these concepts, and group discussion of other clinical situations where these professional concepts were operative. Finally, trainees viewed

their own taped encounters accompanied by a faculty member and completed a self-evaluation.

ACP staff developed these cases for dissemination through its Medscape continuing medical education ethics case study series, and as components of a new program in ethics and professionalism education focused on residents.

Learners and Teaching Team

All residents and fellows in the department of medicine were required to participate as part of their educational program in professionalism and communication, subject to availability. Residents were to attend the sessions and complete a post-encounter video review. Fellows were required to attend the sessions (including encounter and group feedback) and were encouraged, but not required, to view the videotape of their encounter and complete a self-assessment. Approximately 80% of the eligible trainees completed the program each of the two years.

SUNY Upstate Medical University: Teaching Faculty from the Project Team

Kathy Faber-Langendoen, MD (PI)
*Chair, Center for Bioethics and Humanitie*s

Stephen Knohl, MD (co-PI)
Residency Program Director, Medicine

Michael Ianuzzi, MD
Chair, Department of Medicine

Additional Teaching Faculty

Center for Bioethics and Humanities

Jay Brenner, MD

Amy Caruso Brown, MD

James Dwyer, PhD

Rebecca Garden, PhD

Deirdre Neilen, PhD

Joel Potash, MD

Department of Medicine

Emily Albert, MD (Attending)

Emerald Banas, MD (Chief Resident)

Omair Chaudhary, MD (Chief Resident)

Peter Cronkright, MD (Attending)

Amit Dhamoon, MD (Attending)

Joshua Harrison, MD (Chief Resident)

American College of Physicians Project Team

Lois Snyder Sulmasy, JD
Director, Center for Ethics and Professionalism

Morganna Freeman-Keller, DO
ACP Resident Representative, Moffitt Cancer Center

Project Modifications: Barriers and Insights

For the domain of promoting self-regulation, we recognized that our proposed case of confronting a senior physician about practice competency was not well-suited to the OSCE methodology. This sort of problem is unlikely to be optimally or realistically resolved by direct confrontation between a junior physician (i.e., resident or fellow) and a senior physician. Instead, we developed a case that could be addressed by the resident; specifically, a case where the resident needs to confront an intern regarding a Facebook post a medical student finds to be sexually harassing (case 3).

In the first year, we noticed that when non-project faculty members observed the cases along with us, they were not always fully aware of the project's objectives or more subtle issues around professionalism. This sometimes this resulted in mixed messages to the residents and fellows when formative group feedback was given collectively. In the second year, we developed more comprehensive faculty guides (including faculty tools for making observations) and systematically distributed these materials to all faculty.

A challenge for the second year cases regarding promotion of self-regulation was adapting a "standardized patient" methodology to scenarios where the actors, who normally played patients, play resident physicians instead. We held additional training sessions with the actors to address this challenge.

Results

Project faculty observed and provided feedback at all teaching sessions over the two years of the project. Resident, fellow, chief resident, and residency program director feedback was very positive, with an appreciation of the opportunity to develop and practice approaches to dealing with requests for medical

non-indicated interventions and confronting peers regarding professional lapses.

In the both of the cases on resource allocation, trainees were generally more comfortable talking about the medical risks and benefits of the intervention in question and practice guidelines, while being more hesitant to talk explicitly about the physician's responsibility regarding resource allocation. This reflects a tension, we believe, between respecting patient self-determination and the physician's responsibility to allocate finite resources justly (albeit in a system that is often perceived as fundamentally unjust). Approximately one-third (38%) of trainees acceded to patient requests for a medically non-indicated, low-risk diagnostic test in year one, decreasing in the second year to 16% being willing to prescribe a brand-name vs. generic drug for osteoporosis at patient insistence.

Faculty debriefing sessions after case 3 (sexually harassing Facebook post) revealed substantial learner confusion as to the definition of sexual harassment, something that was then immediately clarified. We quickly recognized a pattern in the two cases of self-regulating the profession (cases 2 and 3), where the residents were inclined to treat the professionalism failure as a private matter and not bring it to the attention of the program director or chief resident (e.g., while 54% of residents initially told case 3's intern that the resident would need to bring the sexually harassing Facebook post to the attention of a supervisor, only 37% ultimately decided to do so after the intern protested). This resulted in further discussion regarding the ineffectiveness of a resident taking on this responsibility going forward and the parameters for informing superiors of professionalism lapses.

Ongoing Implementation of the Project

The four cases became part of a bank of cases that are used in the larger "Learning to TALK" required graduate medical education (GME) curriculum in the department of medicine, and the four cases are rotating back into the curriculum every three years beginning in 2017, covering all residents during the three years of their training. As cases rotate back in, we are reviewing them and revising as needed to incorporate any clinical or policy changes.

The department of medicine was given permission to adapt the materials from case 1 (request for a medically non-indicated breast MRI) for a similar exercise for physician assistant students.

The human resources and legal offices at SUNY Upstate were given permission to adapt the case materials on sexual harassment (case 3) for a more general employee population.

Project Dissemination

The cases and materials developed for this project became the basis for a variety of educational and policy projects of the ACP, which was our means of external dissemination. Cases 1 and 4, on the just distribution of finite resources, were the subjects of a very popular and highly rated session at ACP's 2015 annual meeting (May 2, 2015; Session PN020). The session, *Patient Requests for Care that is not Clinically Indicated*, featured a role-playing exercise in which faculty acted out the scenarios and engaged audience members in a lively discussion period. ACP's Center for Ethics and Professionalism worked with its ethics, professionalism, and human rights committee and its council of residents and fellows to develop the program and encourage attendance by residents and fellows.

Questions addressed at this session were:

1. What sort of small, marginal benefits justify substantially more costly clinical interventions?

2. What are professionally responsible and effective approaches to responding to patient requests for tests or interventions that are more costly, but no (or minimally) more efficacious?

3. To what extent—and how—ought financial considerations be discussed by physicians with their patients?

Our experience from the ethical challenges role-play session and the other project materials helped provide a foundation for self-directed, case-based educational content for the ACP's very successful Medscape CME ethics case study series (see https://www.acponline.org/clinical-information/ethics-and-professionalism/ethics-case-studies). These case studies are routinely used not only for CME by practicing clinicians, but also for teaching residents and medical students. Tens of thousands of physicians do the case study activities for credit, and others also participate, including nurses, pharmacists, residents, and medical students. Links to the three case studies arising from this project are:

- Addressing a Colleague's Unprofessional Behavior During Sign-Out (case 2) http://www.medscape.org/viewarticle/883046

- Addressing a Colleague's Sexually Explicit Facebook Post (case 3) http://www.medscape.org/viewarticle/845411

- Patient Requests for Specific Care: 'Surely You Can Explain to My Insurer That I Need Boniva?' (case 4) http://www.medscape.org/viewarticle/865078

The four cases are also being adapted for use in a new curriculum for residents on medical ethics under development at ACP. Finally, the work from this project will contribute to further ethics policy in these areas, especially as the seventh edition of the *ACP Ethics Manual* is currently being developed and we further implement ACP's commitment to education and training to professionalism.

Lessons Learned

We were able to successfully adapt an OSCE methodology generally used for clinical skills to engage learners in reflection on two concepts within professionalism (promoting the just distribution of finite resources and promoting the self-regulation of the profession). Our review of resident/fellow interactions shows that trainee behavior and choices were not uniform, indicating opportunities for fruitful education and reflection about how physicians might best navigate these issues.

One of the program's greatest strengths is that the combination of immediate face-to-face feedback from the actors (standardized patients), written individualized feedback from the actors, group feedback from faculty immediately after the sessions, and self-assessment based on videotape review allows for reflection and further education on practical skills for addressing these issues in simulated but realistic clinical situations. However, the program relies on dedicated and trained program faculty and actors, a capable clinical skills/standardized patient center, and a supportive structure within the GME residency or fellowship that makes this education program part of learners' educational expectation.

AN ADVOCACY AND REFLECTIVE PRACTICES CURRICULUM: CHANGING THE CULTURE IN A PEDIATRIC DEPARTMENT AND RESIDENCY TO ADVANCE PROFESSIONAL IDEALS AND PRACTICE

University of Colorado
Principal Investigator and Author: Meghan Treitz, MD

Project Background

The members of our grant project team developed, implemented, evaluated, and revised a partially individualized advocacy curriculum for pediatric residents designed to create "reflective practitioners." Concurrently, we worked to engage residents and faculty in creating a culture that supports physician reflection—which is a culture change for our department of pediatrics.

Advocacy Curriculum

Advocacy is essential to being a pediatrician and a critical aspect of professional development. The residency review committee requires that pediatric residents receive one educational unit of advocacy and community pediatrics training. Our partially individualized curriculum involves 1) foundational components completed by each resident (including community windshield survey and scavenger hunt; medical home discussion; cross-cultural care and health disparities workshop; legislative advocacy/ Day at the Capitol; health care policy and financing training; and leadership exercises); and 2) individualized components (including development of individualized learning goals, planning of an advocacy project, and creation of a fact sheet). Storytelling and reflection are integral to both portions of the curriculum.

Storytelling and Reflective Practices

Storytelling is a technique for advocating and is also a basis of reflection. Experiences and a desire to advocate can both fuel storytelling. Storytelling and reflection can drive advocacy efforts. However, reflection is not consistently valued in our department of pediatrics. In an attempt to change the culture of our department, we started small by incorporating reflection into the required advocacy rotation for pediatric residents. To increase visibility of reflective practices within the department, we conducted digital storytelling workshops in which participants created short videos using an audio narrative combined with images and music. These videos were premiered as departmental movie nights. In addition, we produced a book of written reflections—a peer-reviewed collection of reflections by our pediatric community.

Learners and Teaching Team

Core Curriculum in Advocacy for Pediatric Residents

All pediatric interns participate in the curriculum as part of a required advocacy rotation. Sessions are taught by faculty members and community leaders, including the following core group:

- Meghan Treitz, MD
- Janice Hanson, PhD, EdS
- Steven Berman, MD
- Shale Wong, MD
- Meg Tomcho, MD
- Antonia Chiesa, MD
- David Keller, MD
- Steve Poole, MD
- Marcia Cateret, MEd
- Sheilah Jimenez, BS, CTAGME
- Judy Zerzan, MD (director of state Medicaid program)

- Zach Zaslow, Ellen Stern, Erika Zierke (hospital governmental affairs team)
- Ruth Aponte and Sara Odendahl (lobbyists for Children's Hospital Colorado and Colorado chapter of American Academy of Pediatrics)

Reflective Practices

All residents who completed the advocacy rotation also participated in reflective practices. Digital storytelling workshop participants included academic and community pediatricians, pediatric residents, child psychologists, physician assistants, medical educators, and administrative staff. Subsequent digital storytelling efforts have included students. *Roots*, our book of written reflections and visual art, involved a wide range of people. The editorial board consisted of several pediatricians, an ethicist, a physician assistant, a medical educator, a pediatric nurse, several pediatric residents, and a medical student. These individuals are all committed to promoting reflection and humanism in our department. The pieces featured in the book were written/created by academic and community pediatricians, pediatric residents, medical students, medical educators, hospital staff, an ethicist, parent, child life specialist, and others.

Project Modifications: Barriers and Insights

The advocacy curriculum was designed with discrete modules and successfully implemented as a required one-month advocacy rotation. Then, because of residency program restructuring, we redistributed the curriculum in a longitudinal format, spanning three months, in conjunction with two other pediatric rotations. After this trial, we returned to the original one-month rotation structure to facilitate scheduling of the off-campus activities.

Results

Core Curriculum in Advocacy

To date, 156 residents have completed the core curriculum during a required advocacy rotation. Through qualitative and quantitative program evaluation, we have shown that:

- Residents were overwhelming positive about the experience,
- An individualized approach teaching advocacy led to meaningful learning,
- Residents acquired knowledge and skills to advocate and a belief that they should and could advocate, and
- All participants created a personal short-term advocacy plan.

Full results (including qualitative and quantitative data) are available upon request.

Reflective Practices – Implementation with Residents

Qualitative data from resident focus groups and faculty field notes revealed:

- Providing adequate time for the reflection experience was key;
- Offering, but not requiring, a specific structure for writing was helpful;
- Sharing and discussing reflections added to the value of the experience; and
- Publication of reflection pieces validated resident effort and provided positive feedback.

Detailed results are available upon request.

Reflective Practices – Book of Reflections

Our new pediatric literary journal is titled *Roots: Artistic Expressions of the Care of Children*. The editorial board felt that "roots" symbolize the children we care for and their potential for growth, as well as the providers who care for children, and the growth from their reflections. Submissions were received from pediatricians (academic and community), medical students, pediatric residents, psychologists, a parent on the ethics board, a child life specialist, a music therapist, administrative assistants, and more. Forty-five pieces (including essays, poems, 55-word stories, and images) were chosen for inclusion in the book.

Reflective Practices – Digital Storytelling

To date, our digital storytelling workshops have resulted in the creation of 28 digital stories—an amazing collection of heartfelt stories about people, patients, and medicine. The stories explore fears and successes, lessons learned, reminders for advocacy, and illustrate moving experiences in pediatrics and medical training. Topics included neonatology, kids with special needs, global health, pediatric training, immunizations, culture, and race. For examples of the digital stories and written reflections created through this project, please visit https://tinyurl.com/Treitz-IMAP-Macy.

Ongoing Implementation of the Project

Alumni from two digital storytelling workshops provide a cohort of faculty who are working on logistics for running workshops from within our institution. We are considering alternatives to the standard three-day workshop, including a one-day, one-picture workshop. A related project explored the one-picture digital stories with groups of medical students.

Reflective practices have begun to grow in our Department of Pediatrics. Some examples of new curricula integrating reflective practices using the lessons we learned in our project include the following:

- Reflective practices (reflection on action) in the pediatric clerkship as part of a new approach to teaching the pediatric history and physical exam. This is now an ongoing part of the clerkship curriculum.

- The University of Colorado is one of four institutions exploring competency-based education in pediatrics, known as Education in Pediatrics Across the Continuum (EPAC). The EPAC program committee has committed the two reflection teaching sessions (reflective writing and digital storytelling) in the long-term plans for the curriculum.

- A new high-value care curriculum for pediatric sub-interns has incorporated reflective writing and discussion.

The residency program has integrated the advocacy curriculum into the overall residency curriculum to ensure its continuation. Ample time has been allotted for this curriculum.

The medical education office restructured administrative staffing such that there is a designated individual to serve as the advocacy coordinator part-time.

The Children's Hospital Foundation has expressed strong interest in the project, viewing it as a means of communicating the humanistic side of the medical profession. They are considering funding this project in the future.

Funded grants building on this project include the following:

- Lown Foundation Grant – Principal Investigator: Daniel Nicklas, MD. Medical students and residents as ambassadors: Using reflection and digital stories to counteract the culture of overuse in medicine and enhance the patient/physician relationship. (2014–2015, $6,547).

- Enhancing Education Program Grant – Principal Investigator: Meghan Treitz, MD. Teaching the Art of Pediatrics: A curriculum for teaching the reflective student practitioner a pediatrics-specific history and physical exam. (2014–2016, $170,000)

Project Dissemination

Advocacy Curriculum

- Treitz M, Forte A, Lane JL, Hanson J. A partially individualized advocacy rotation for pediatric residents: A mixed methods curricular study. Poster presented at: Pediatric Academic Societies Meeting; May 2014; Vancouver, BC.

- Forte A, Treitz M. Infographics: Using technology to create innovative personal vision statements. Poster presented at: Pediatric Academic Societies Meeting; May 2014; Vancouver, BC.

- Treitz M, Forte A, Lane JL, Hanson J. A partially individualized advocacy rotation for pediatric residents: A mixed methods curricular study. Poster presented at: Symposium at University of Colorado Academy of

Medical Educators Educational Scholarship and Innovation Symposium, February 2014; Aurora, CO.

Reflective Practices

- O'Hara K, Soep J, Treitz M. Reflection as a tool to educate and learn about resource stewardship. Poster presented at: Pediatric Hospitalist Medicine conference; July 2017; Nashville, TN.

- O'Hara K, Burch A, Baca M, Ziniel S, Soep J, Treitz M. A high value, cost-conscious medicine curriculum for pediatric sub-interns. Poster presented at: Pediatric Hospitalist Medicine conference; July 2017; Nashville, TN.

- O'Hara K, Burch A, Baca M, Ziniel S, Soep J, Treitz M. A high value, cost-conscious medicine curriculum for pediatric sub-interns. Poster presented at: Pediatric Academic Societies Meeting; May 2017; San Francisco, CA.

- O'Hara K, Burch A, Baca M, Ziniel S, Soep J, Treitz M. A high value, cost-conscious medicine curriculum for pediatric sub-interns. Platform presentation at: Council on Medical Student Education in Pediatric Conference; March 2017; Portland, OR.

- Treitz M, Hanson J. Promoting a culture of reflection in a department of pediatrics. Oral Presentation at: Association for Medical Education in Europe; August 2015; Barcelona, Spain.

- Treitz M, Heavilin N, Soep J, Owens J, Hanson JL. Reflection-on-action in the pediatric clerkship. Poster

presented at: Council on Medical Student Education in Pediatric Conference; March 2015; New Orleans, LA.

- Treitz M, Lane JL, Hanson JL. Structuring reflective practices for pediatric residents. Platform presentation at: Association of American Medical Colleges Education Conference; November 2014; Chicago, IL.

- Treitz M, Lane JL, Hanson J. Structuring reflective practices for pediatric residents. Poster presented at: University of Colorado Academy of Medical Educators Educational Scholarship and Innovation Symposium; February 2014; Aurora, CO.

Invited Presentations

- Pediatric storytime: Reflective practices in medical education and professional development. Pediatric Grand Rounds at Children's Hospital Colorado; February 2015.

- Reflection in medicine. Pediatrics 2015: American Academy of Pediatrics (AAP) Colorado Chapter Annual Meeting; May 2015.

Papers to Date

- Nicklas D, Lane JL, Hanson J, Owens J, Treitz M. Using digital stories to reflect on the culture of overuse, misuse, and underuse in medicine and enhance the provider-patient relationship. *Academic Pediatr.* 2017;17(6):694–6.

Lessons Learned

Model for reflective writing

Addressing barriers identified in our needs assessment, we developed a model with three key components: protected time for writing, specific structures for writing (optional), and discussion of reflections in small groups. We successfully implemented a reflective practices component using this model in the advocacy rotation for pediatric residents, and then spread the model to reflective practices in the pediatric clerkship and pediatric sub-internships.

Workshops led to strong base of reflective practitioners and faculty facilitators

The digital storytelling workshops allowed small groups of people who were genuinely interested in reflecting and storytelling to come together for an intense three days of writing, discussing, and creating. This has resulted in a base of individuals within our community to aid us in building the culture of reflection in general. Several faculty members who participated in a workshop then attended subsequent workshops as assistant facilitators. This core group is well-equipped to facilitate additional digital storytelling workshops at our institution.

Tangible examples allow increased visibility of reflective practices in the department, demonstrate reflection as a norm, and engage other individuals interested in reflection

Digital story premieres ("movie nights") used tangible examples of reflection that could be experienced by a large group simultaneously to reach a variety of people in our department as our first step to pull people on board with the concept of reflective practices. Each time, the audience was composed of a diverse

group of individuals—pediatricians, physician assistants, an artist, community members, residents, students—who laughed and cried together, clearly touched by the stories. The chair of pediatrics and other leaders were present to support the event. There were others in attendance who voiced interest in creating a digital story or other forms of reflection. After the event, numerous individuals have inquired about how they can become involved in these efforts. Other leaders have stepped up to start thinking about how this project can be made more visible.

The publication of a new book of reflections resulting from the project, *Roots*, has involved additional writers and supporters of reflection and engaged them in our efforts for culture change. Like the movie nights, the book serves as a tangible example of the power of reflection.

BREATHING NEW LIFE INTO AN OLD TRADITION: TEACHING PROFESSIONALISM AT THE BEDSIDE

Wake Forest University
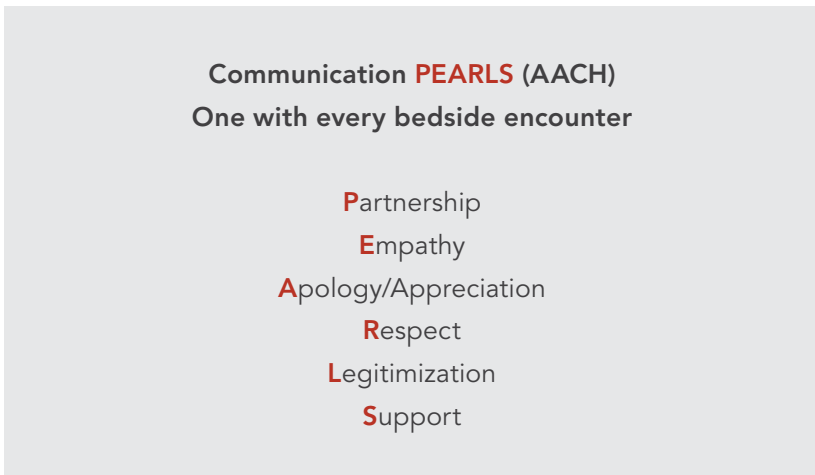**Principal Investigator and Author: Peter Lichstein, MD**

Project Background

We (myself and my colleagues) proposed an educational intervention that re-envisioned morning hospital rounds as an opportunity to practice patient-centered care at the bedside. The project prepared attending physicians, house staff, and students for bedside—rather than conference room or hallway—presentations of patients newly admitted to the general internal medicine and geriatric services at Wake Forest Baptist Medical Center (WFBMC). The project design reflected our hypothesis that bedside patient presentations (BSPPs) are a unique venue for attending physicians and their teams to embody professional interactions with patients and families. As a corollary, we predicted that bedside presentations would increase opportunities for attending physicians to observe and assess the professionalism and communication skills of students and house staff. We anticipated that weaving the teaching to professionalism curriculum into the existing fabric of morning rounds would maximize its impact and sustainability.

The professionalism curriculum created with the IMAP/Macy grant taught communication skills that convey respect for the patient's personhood, enhance patient-centered care, and improve patient experience of the professionalism of their medical team. We adopted a model for morning rounds that brought teams to the bedside (patient-proximate) and invited active patient and family engagement during every bedside encounter (patient-centered). Participants learned bedside communication approaches that

demonstrate interest and respect for patients (and families) as unique human beings and that incorporate patients' values and preferences into medical decision making. The project viewed each bedside encounter as an opportunity to build rapport and connection with patients in addition to the more traditional tasks of information exchange. The project set a goal of using at least one of the communication PEARLS developed by the American Academy on Communication in Healthcare (AACH) during every bedside interaction (see Figure 1).

Figure 1.

Communication PEARLS (AACH)
One with every bedside encounter

Partnership
Empathy
Apology/Appreciation
Respect
Legitimization
Support

Learners and Teaching Team

The IMAP/Macy curriculum spanned undergraduate medical education, residency training, and faculty development. Medical students were taught relationship-centered communication approaches during their first- and second-year clinical skills courses, where they also practiced BSPPs as early as the first semester. Bedside presentation skills in the context of team rounds were further refined during the third-year internal medicine clerkship.

Interns learned relationship-centered communication approaches, including PEARLS, during weekly skills-based seminars on ambulatory rotations.

Upper-level residents were entrusted with promoting bedside presentations on the general internal medicine and geriatric services. A suggested "choreography" for effective bedside rounds was introduced during resident orientation workshops. Forty-one faculty from the department of internal medicine attended three two-hour interactive workshops and a follow-up "refresher" session several months later (see Appendix). The workshops covered topics in patient-centered communication, bedside teaching, and strategies to teach and assess communication skills and professionalism in the context of morning rounds. During the third workshop, faculty practiced communication strategies to address common challenges in bedside rounding. For each scenario, medical residents assumed the patient and family roles. Videos of these sessions were edited for use during subsequent workshops.

Our teaching team was uniquely positioned to impact both medical student and residency education and held leadership positions on the clinical units where the educational intervention was conducted.

- Peter R. Lichstein, MD, project director and a former residency program director (see participant biographies for more details).

- Hal Atkinson, MD, current residency program director and former director of the geriatrics fellowship at Wake Forest.

- Ramon Velez, MD, former director of the "Bedside Teaching Course" and a general medicine service medical director.

- Cynthia Burns, MD, director of the internal medicine clerkship

- Project staff: Karamie Bringoff, MPH; Emily Ansusinha, MA; and Kelly Lynn Kuykendall, MS

Project Modifications: Barriers and Insights

The initial focus of the project was on medical student education and faculty development. However, we quickly realized that implementing BSPPs on morning rounds required buy-in from upper-level supervising residents. To accomplish this, we developed interactive training sessions on bedside rounding during resident orientation workshops. We explicitly addressed resident concerns regarding the efficiency of morning rounds. We introduced the concept of an "educational contract" between house staff and attending physicians to ensure that rounds would be conducted efficiently and end in time for house staff to complete patient care tasks and still attend morning report.

We discovered that the efficiency of bedside rounds was improved when attending physicians read admission notes prior to rounds. In response to resident concerns, we provided more focused instruction on avoiding medical jargon during presentations and how to conduct care discussions in a manner that increased patient trust and engagement.

The faculty workshops evolved to be more interactive with greater emphasis on skills practice.

We learned that bed geography, locating a team's patients on one hospital unit, is key to efficient bedside rounding and interprofessional collaboration. Near 100% bed geography was

implemented through successful collaboration with the hospital admissions office and clinical leadership.

Over the course of the project, the principles of patient- and family-centered care were increasingly embraced by leaders of the medical school and the health system. In collaboration with the AACH, WFBMC launched a train-the-trainer initiative for faculty development in communication. The Program to Enhance Relationship-Centered Communication (PERCC) augmented the IMAP/Macy grant project's communication skills curriculum.

Results

The project was a non-randomized feasibility pilot running from September 2013 through December 2014 on five inpatient services a Wake Forest Baptist Hospital, the core teaching hospital of Wake Forest School of Medicine. The patient-centered communications curriculum touched over 260 first- and second-year medical students and 278 third-year medical students in clinical clerkships. Communication skills seminars were conducted with 212 Internal Medicine residents. Forty-one faculty from general internal medicine, geriatrics, hospital medicine, and infectious diseases completed all four faculty workshops.

The project was successful in promoting a culture of bedside rounding. Of the more than 6,600 patients admitted to the five participating services, the majority of them were presented at the bedside. Bedside, rather than conference room or hallway, presentations became the rule rather than the exception. Most teams reported bedside presentations on over 75% of newly admitted patients. Patient acceptance of bedside presentations was excellent. Although not statistically significant, the 291 patients with BSPPs rated the professionalism of their teams higher or equal on

9 of 10 CARE measures when compared with 262 patients without BSPPs (see Table 1).

Table 1.

CARE Survey (553)
>6600 admissions

Overall Results (1 – Poor, 2 – Fair, 3 – Good, 4 – Very Good, 5 – Excellent)

Question **Medical Team**	Results of those **with** bedside presentations (n=291)*	Results of those **without** bedside presentations (n=262)
1. Making you feel at ease?	4.30	4.25
2. Letting you tell your 'story'?	4.32	4.28
3. Really listening?	4.30	4.30
4. Being interested in you as a whole person?	4.18	4.20
5. Fully understanding your concerns	4.21	4.16
6. Showing care and compassion	4.32	4.28
7. Being positive	4.34	4.34
8. Explaining things clearly	4.31	4.23
9. Helping you take control	4.23	4.18
10. Making a plan of action with you	4.26	4.20

*n varied if survey response was left blank or 'Does not apply'

Faculty assessment of the initiative was overwhelmingly positive. Ninety percent of faculty reported increased opportunities to directly observe and assess the professionalism and relationship and communication skills of medical students and house staff. Forty-three percent of faculty reported that BSPPs improved the efficiency and accuracy of patient presentations and management discussions. We were gratified that many faculty experienced renewed joy in teaching medicine at the bedside. Although not directly assessed, many faculty members reported decreased burnout after completing the workshops.

Medical student preparation for bedside presentations was easily achieved through the team's influence on the communication skills curriculum and the internal medicine clerkship. Medical student acceptance of BSPPs was mostly positive. They rated the humanistic impact of BSPPs higher than house staff on the Modified Humanistic Teaching Practices Effectiveness Questionnaire (M-HTPE). The most frequently selected "top box" item on the M-HTPE was "*BSPPs provided a teaching opportunity to illustrate patient-centered care.*"

House staff assessment of BSPPs and bedside rounding in general was mixed but mostly positive. Sixty-two percent of house staff rated BSPPs as less efficient than hallway or conference room presentations compared with 43 percent of faculty who found BSPPs more efficient. Compared with students and attendings, house staff expressed greater concern that bedside discussions of patient management could negatively impact patients and families. A representative narrative from a medical resident suggests the positive impact:

> *"I was reminded as to why I entered medicine to begin with—to interact with patients and provide comprehensive care . . . I was skeptical leading into this experience, but I now believe that the art and science of medicine is best served by bedside rounds."*

Ongoing Implementation of the Project

The project facilitated culture change within the department of medicine that has persisted since completion of the grant. Medical center leadership views the approach as a "best practice" for patient-centered rounding. Most faculty graduates of the workshops continue to practice BSPPs during inpatient assignments. However, attendings recognize that the daily calls

they received from the project office provided encouragement to round at the bedside. The department of internal medicine provided $5,000 bridging funds to sustain the program for a third year. These funds were used for a final round of workshops, a part-time project coordinator, and statistical support.

The success of the grant project was a major factor in promoting interprofessional bedside rounding. Two of the original services have adopted structured interdisciplinary bedside discharge rounds into the daily clinical routine with positive impact on patient experience and early indications of positive impact on transitions of care metrics. Additional clinical services are experimenting with bedside presentations (nephrology and cardiology in 2017).

We have applied the philosophy of bedside presentations to "in-room" presentations in the general medicine ambulatory clinics. Rather than hearing patient presentations in the precepting room, faculty are asking residents to do in-room presentations, particularly for Medicare patients, with similar advantages to bedside presentations in the hospital.

Project Dissemination

- The principal investigator, Dr. Lichstein, introduced the project to Wake Forest medical students, house staff, faculty, and key medical center leadership during internal medicine grand rounds November 2013.

- Lichstein PR. Breathing new life into and old tradition: Teaching professionalism at the bedside. Oral presentation at: International Conference on Communication in Healthcare; October 2015; New Orleans, LA.

- Lichstein PR. Returning to the bedside: Notes from a clinician educator. *N C Med J* 2015;76(3):174–9.

- Bedside Teaching Model. A workshop on bedside rounding and presentations. Society of Hospital Medicine; March 2016; San Diego, CA.

- Dr. Lichstein was invited to give a presentation on "Patient-centered bedside rounds" in collaboration with Johns Hopkins University and the Society for Bedside Medicine; October 2016; Baltimore, MD.

- Lichstein PR, Sliwka D. Communication and Patient Experience. In: Chou C, Cooley L, eds. *Communication Rx: Transforming healthcare through relationship-centered communication*. New York, NY: McGraw-Hill Education; 2017.

- Drs. Atkinson and Lichstein have been invited to contribute a chapter on "Patient-Centered Bedside Rounds and the Clinical Examination" to the *Clinical Examination in Medical Clinics of North America* (Garibaldi BT, ed.)

- High-quality teaching videos of challenges in bedside patient presentations enacted by medical residents and attendings have been filmed but not yet disseminated.

Lessons Learned

Morning rounds can be successfully re-envisioned to embody patient-centered values. Culture change was relatively easy because learners and faculty discovered (or rediscovered) the intrinsic rewards and joy of bedside rounding. Initial concerns about barriers to implementing bedside rounding and case presentations

turned out to be overblown. In only 18 months, the center of gravity for rounding on the general medicine and geriatric services moved from the hallway or conference room to the bedside. Patient acceptance of bedside presentations was high, in keeping with reports in the medical literature. Both the IMAP/Macy grant project and PERCC demonstrate that, with encouragement and adequate preparation, the vast majority of students, house staff, and faculty find meaning and joy in bedside patient interactions. We learned that bed geography is essential to efficient bedside rounding and interprofessional team care. It was also evident that successful implementation of bedside rounding requires flexibility and adaptation to the unique context and realities of each clinical service. Process change is not a "one size fits all" endeavor. Support from senior leaders is essential to program change and we found that inviting clinical leaders to observe rounds was more convincing than any podium presentation.

Appendix

Choreography for Bedside Patient Presentations
~15 minutes

- **Prepare the team:** Get buy-in and address concerns; "What can be learned best at the bedside?"
- **Set Expectations:** Patient selection; positions at the bedside; amount of time allowed for bedside presentation (5 minutes); total time at bedside (<15 minutes); decide who opens the computer and enters orders
- **Prepare the patient:** Permission from patient in advance; assure confidentiality; what to expect; size of the team; teaching
- **Begin well:** Introductions including family and visitors; attention to etiquette
- **Communication pitfalls:** Limit medical jargon and avoid pejorative labels
- **Bedside teaching:** Engage all learners; limit the number of teaching points (e.g. one each from history, physical examination, and clinical reasoning); less is usually more
- **PEARLS:** Use at least one of the communication PEARLS with each patient encounter
- **Ask about the patient's perspective:** *"How has this illness impacted your life?" "We're interested to hear your perspective regarding the treatment plan."*
- **Confirm patient's understanding (teach back):** *"Doctors aren't always good at explaining things—so what is your understanding of the plan?"*
- **Ask for questions and concerns:** "What are your questions and concerns?"
- **Check back with patient:** A team member checks back with the patient after rounds to ask about response to rounds and any additional questions
- **Debrief and feedback:** Team reflects on the interaction

2014 GRANTEES

AN INTERPROFESSIONAL CURRICULUM OF COLLABORATIVE SKILLS: ADVANCING RELATIONAL COORDINATION AND PROFESSIONALISM

The Pennsylvania State University College of Medicine
Principal Investigator and Author: Peter Dillon, MD, MSc

Project Background

Physicians and nurses are typically well-educated in separate academic settings, and as such, interprofessional collaboration requires diligent effort. The goal of this grant program was to introduce to early-career physicians and nurses team-based communication and relational skills inherent to the concept of coordination and imperative for today's team approach to patient-centered care. We—my colleagues and myself—purposefully targeted new practitioners for an interprofessional education experience where medical and surgical graduate nurses and interns together received interactive instruction in collaborative competencies. These competencies were advocated for by the Accreditation Council for Graduate Medical Education (ACGME) Milestones and the Interprofessional Education Collaborative and taught by teams of diverse faculty who modeled interprofessionalism.

To enhance interprofessionalism and improve relational coordination, we developed and implemented a five-session curriculum that shifted the authority gradient away from physician-focused care to patient-centered teamwork by providing practical training in interprofessional collaboration. Focused on team-based

communication and relational competencies—such as negotiating a transparent plan, soliciting the perspective of others, and speaking up the hierarchy—the curriculum introduced the new physician residents and graduate nurse residents to practical skills with which to become effective members of a well-functioning care team.

It has long been recognized that medical and nursing education frequently occurs in silos emphasizing individual knowledge and skills in a hierarchical framework. However, this is at odds with how practitioners function as part of an interdependent and interprofessional team where success depends upon collaboration, teamwork, and communication.[1,2] To change the culture of health care from silos of expertise to one of teamwork, innovative models of health care education that are focused on team-based competencies are critical.[3]

We hypothesized that an interprofessional education series on collaborative competencies would improve relational coordination and attitudes toward interprofessional learning.

A total of 71 nurses and interns participated in the curriculum to some degree. Service turnover and off-campus assignments disrupted consistency of participation. A total of 17 registered nurses (RNs) and 24 physicians (MDs) completed the pre- and post-intervention evaluation tools, including a modified "Readiness for Interprofessional Learning" survey and the "Relational Coordination" survey. Collaborative competencies were chosen to correspond with Milestones, the Interprofessional Education Collaborative, and the concepts of "teaming"[4] and relational coordination. Teams of diverse faculty who modeled interprofessionalism taught the following five collaborative competencies:

- Active listening for meaning to build collaboration;

- Soliciting others' perspectives to clarify the clinical picture;

- Negotiating a transparent plan of care to blend silos of knowledge;

- Attending to non-verbal communication to enhance team relations; and

- Speaking up, which transcends hierarchies in support of patient-centered care.

We used a paired t-test to compare the overall cohort's pre- and post-intervention measures of relational coordination and determined that participation in the interprofessional curriculum was associated with increased relational coordination ($p=0.0232$). We also compared physicians' and nurses' relational coordination pre- and post-intervention, and found that nurses achieved a greater rise in relational coordination post-intervention than did physicians ($p=0.0055$). We also compared the relational coordination pre- and post-intervention for medicine and surgery, combining nurses and physicians within each discipline, and found medicine had greater gains in relational coordination than did surgery ($p=0.0286$). There was stronger correlation between our curriculum and relational coordination for medicine over surgery and for nurses over interns. While not statistically significant, relational coordination increased more for medical nurses over surgical nurses and for participants who attended three or more sessions.

Participants stated that the curriculum allowed them to cultivate both interprofessional relationships and intraprofessional relationships. By providing opportunities for interprofessional interactions outside of the work environment, participants felt that the curriculum positively impacted team dynamics because of their improved understanding of the other profession. The program broadened the perspectives of the RNs and MDs and created opportunities for acknowledging the others' responsibilities and viewpoints. Importantly, both MDs and RNs found value in gaining an understanding of each other's roles and workflow issues.

Project Modifications: Barriers and Insights

The MDs and RNs had different barriers, which limited their engagement during the interprofessional curriculum sessions. Bringing together participants from two professions and two disciplines, it was not surprising that we received negative feedback about the timing of the sessions. For the RNs, the timing of the sessions immediately after nightshift prevented them from engaging with complete attention. The medicine MDs mentioned that the curriculum added more stress to their busy workday. Most notably, the surgical MDs brought up the hierarchy of the surgical environment as a barrier. To promote true communication and teamwork, these MDs wanted their attendings and senior residents to participate in the interprofessional education sessions. Attending physicians were not the only senior staff members whose "old school" attitudes detracted from surgical residents' engagement in the sessions. Some senior nurses were also to blame. In addition, role-play activities as part of the curriculum were beneficial to some and frustrating to others. Participants were dissatisfied with the difficulty playing roles that were not their own, citing that they did not have the relevant knowledge of the different profession nor did they know the priorities, particularly roles such as therapists and pharmacists.

Results

This pilot study provided evidence that interprofessional education in collaborative competencies is a successful means to improving relational coordination among early-career providers. Whether this is directly related to the curriculum or to the opportunity for early-career professionals to share the same space and learn about each other's roles and daily challenges could not be definitively established.

The curriculum demonstrated its strength in creating opportunities for social relationships between physicians and nurses that served to enhance communication and relational coordination, thereby promoting collegiality and teaming. These observations have significant implications for developing team-based, patient-centered care in terms of both education and clinical practice. Those educators who develop clinical interprofessional programs should consider the importance of shared experiences for participants. The opportunity to discuss real workflow issues with all professionals involved at every level of care and away from the actual work unit appears to be successful in nurturing a collegial relationship. In order to enhance relational coordination within and between professions on clinical units, department heads of all professions may want to increase intra-unit social opportunities for their staff in an effort to increase a sense of unit membership. Our study provides evidence that social opportunities allow for a sharing of workflow challenges and an opportunity for unstructured problem solving. Relationships that are grounded in empathy for one another and stimulate approachability will augment the teaming required of today's mode of health care delivery. High levels of collaboration cannot be achieved without such a relational component.

It is important to realize that our curriculum not only provided participants with tools to enhance interprofessional communication, but also provided a safe space for mutual exploration of each other's roles and workflow challenges. When nurses can say they are no longer intimidated to propose an idea during team rounds because they got to know the interns first on a more social level during the training sessions, then we have made progress toward creating an atmosphere of mutual respect and true collegiality.

Educating early-career professionals is a good starting place for instilling collaborative practice. Nevertheless, barriers still exist, and the hierarchy within professions may pose challenges when these new practitioners return to their units to practice. Additional oversight and coaching by receptive senior practitioners may help novice practitioners retain their collaborative goals.

Ideally, we would have had the entire cohort together for these educational sessions. Nursing was extremely flexible in getting nurses and physicians to learn together, but getting the medical and surgical residents together was beyond our best efforts because of scheduling conflicts. Despite not having the medicine and surgery groups together, we did have medicine RNs and interns together and likewise for surgery. These are the groups who now work together. We also did not have comparison groups, either an interprofessional group that socialized but had no curriculum, and/or a group that had neither socialization nor education. These alternative groups may have helped us differentiate the value of socialization or education in evaluating relational coordination.

Ongoing Implementation of the Project

We have continued our efforts to improve collaborative relationships among our early-career physicians and nurses and have developed several programs as a result of this grant. As part

of our orientation program for new surgical residents, they receive an introduction to relational coordination and to the structural and work processes of collaborative care already in place. As part of the program, nurses, social workers, clerical staff, and the new residents meet for a lunch and an activity to learn interesting facts about other people on the various surgical units. Nurses and new interns then shadow each other for two hours, three times during the course of the year. We are in the second year of a project in which the five categorical general surgery interns are paired with five graduate nurses. They receive an overview of the five collaborative skills presented in this study. They then meet for coffee five times over the course of the year to discuss how those skills are evolving as well as any other relational issues that come up organically. Conversation ground rules apply. We hypothesize that periodic semi-structured conversations within the context of relationship building and relational coordination will have a positive effect on both relational coordination and attitudes toward interprofessional collaboration.

Project Dissemination

We presented our curriculum as a poster at the annual conference of the Academy for Professionalism in Health Care (April 28–30, 2016; Philadelphia, PA), and as a workshop at the annual research forum of the American Academy on Communication in Healthcare as a workshop (June 16–19, 2016; New Haven, CT), where we replicated a version of the session on Speaking Up. We have submitted the final product, including a written report and all educational materials, to MedEd Portal, a peer-reviewed resource for educational materials. The didactic portion of the curriculum, a set of video-recorded lectures, will be digitally bundled for access via the portal. Practice activity suggestions, along with detailed instruction on how to replicate these activities, will accompany the videos on the portal. This will allow interested educators

easy access to all our educational resources for replication of our curriculum. These materials will also be available on the Penn State College of Medicine website.

References

1. Fraher EP, Knapton A, Sheldon GF, Meyer A, Ricketts TC. Projecting surgeon supply using a dynamic model. *Ann Surg.* 2013;257(5):867–872. doi: 10.1097/SLA.0b013e31826fccfa.

2. Ricketts TC and Fraher EP. Reconfiguring health workforce policy so that education, training, and actual delivery of care are closely connected. *Health Aff* (Millwood). 2013;32(11):1874-80. doi.org/10.1377/hlthaff.2013.0531.

3. Thibault GE. Reforming health professions education will require culture change and closer ties between classroom and practice. *Health Aff* (Millwood). 2013;32(11):1928-32. doi.org/10.1377/hlthaff.2013.0827.

4. Edmondson AC. Teaming: How Organizations Learn, Innovate, and Compete in the Knowledge Economy. San Francisco, CA: Jossey-Bass; 2012.

THE USE OF THEATER TO FOSTER EMPATHY AND TOLERANCE OF AMBIGUITY

Thomas Jefferson University
Principal Investigator and Author: Salvatore Mangione, MD

Project Background

The premise of this project was that theater may foster important traits in health professionals, such as empathy, tolerance for ambiguity, and emotional appraisal of self and others. In fact, these qualities are, together with wisdom, fundamental components of *professionalism.* Theater may also provide catharsis by proxy, and thus foster resilience and prevent burnout—a true menace in today's medicine. With these goals in mind, my team and I collaborated with the Lantern Theater Company of Philadelphia to develop a 15-session program that could help students and faculty of the health professions to both develop and act drama. Sessions took place during the academic years 2014–2015 and 2015–2016, spanned the January-to-April months, were offered both on Sundays and Mondays, lasted 2.5 hours each, and were taught by two directors/dramaturges of the Lantern Theater Company.

The endpoint of this program was to help participants prepare a 10-minute play related to their medical experience. This was achieved through a series of improvisational (improv) exercises designed to build confidence and safety within the class, followed by a more structured program on playwriting. Each participant had to write and edit, under supervision, a short play, which was then read and acted by the other participants, ultimately resulting in guided revisions. Some of the topics tackled by the plays included medical error, medical school burnout, the hurdles of being a patient, end-of-life issues, and the emotional impact of the first anatomical dissection. For each year of our project, six short plays

150

were eventually selected by the instructors and then presented in a Reader's Theater end-of-year performance carried out by professional actors.

Learners and Teaching Team

Since one of our goals was also to foster collegiality and cooperation, we intentionally offered this program to anyone within the Thomas Jefferson University (TJU) community who might have had an interest. During year one we were able to recruit 34 participants across the various TJU health professions schools. Of the 18 who chose the Sunday sessions: 11 were medical students (three first years, six second years, one third year, and one fourth year); one a first-year nursing student; one a second-year master student in couples/family therapy; one a second-year student in couples counseling; one a psychiatry resident; one a second-year occupational therapy student; one a family medicine attending; and one an internal medicine attending physician.

Of the 16 who instead attended the Monday sessions, seven were medical students (one first year, three second years, one third year, and two fourth years); one was a master in public health student; one a second-year nursing school student; one a first-year physical therapy student; one a second-year physical therapy student; one a family medicine resident; two psychiatry residents; and two internal medicine attending physicians. Of these 34 total participants, seven dropped out (20.6%): one fourth-year medical student, one second-year master student in couples/family therapy, one second-year student in couples counseling, one psychiatry resident, two physical therapy students, and one second-year nursing school student. Hence, 27 participants completed the program.

During year two, we were able to recruit 27 participants. Of the 13 who attended the Sunday sessions, eight were medical students

(six first years, two second years); two were nursing students (a first year and a second year); two were nurses; and one was a psychiatry attending. Of the 14 who attended the Monday sessions, six were medical students (five first years, one second year); one was a PhD candidate in the Graduate School of Biomedical Sciences; three were medical attendings; one was a nurse; one a senior resident in anesthesia; one a first-year occupational therapy student; and one a nurse practitioner. Of these 27 participants, 11 dropped out (40.7%): two nurses, two nursing students, one attending psychiatrist, one medical attending, four medical students, one senior resident in anesthesia. Hence, 43 of 61 (70.5%) of our participants were able to complete the program over the two years of the grant.

All participants were asked to complete a pre- and post-intervention measurement of personal qualities, including empathy, tolerance for ambiguity, wisdom, creativity, emotional intelligence, emotion recognition, spatial ability, and burnout. Participants also completed a feedback questionnaire on their experience.

Project Modifications: Barriers and Insights

Mechanisms for Recruitment and Problems with Retention

Participants were recruited across the various Thomas Jefferson University Schools of Health Professions by a combined strategy of 1) presentations to the deans of the various schools; 2) direct presentations to the students; and 3) mass emails to both students and faculty.

Our goal was to have at least 12 participants per group, meaning 12 for the Sunday sessions and 12 for the Monday sessions. In this sense we were successful in year one because 27 participants completed the program, but less successful in year two since

only 16 participants completed the program. An even lower number completed our program during a third year offered outside the grant. Hence, one major limitation we encountered was participation and interest: both were relatively modest. This is especially true if we consider the overall "n" targeted by our program (just the medical school comprises 1,000 students). Still, this is not surprising considering that both admission to schools of health professions and in-school education neither require nor foster extracurricular activities such as playwriting. In fact, many of our participants (but not all) had a preexisting interest in theater, which then motivated them to participate.

Another difficulty we encountered was the capacity to sustain interest among allied health professionals. In fact, half of our dropouts were from nursing and other allied health professions. Conversely, most medical students remained in the program (28/33, i.e. 85%), although we did lose two-fifths of residents and one-quarter of attendings.

Lastly, given the length of our online pre- and post-test measurements (which took 30–40 minutes) we were unable to recruit controls. Moreover, since our university has now launched a wide series of humanistic activities for medical students, we were indeed unable to find controls who had not engaged in some sort of humanistic intervention. Hence, to measure the impact of our theater program we chose not only to compare pre- and post-measurements of participants, but also to compare their scores to those of medical students enrolled in our drawing program. Since this activity is mostly carried out independently, these students provided a control to our group.

Results

As can be seen in Table 1, results indicate that the theater group improved on nearly all outcomes of interest and showed no undesirable changes. Still, fatigue, emotion recognition, and spatial ability remained essentially unchanged. Conversely, tolerance for ambiguity and creativity showed the largest improvements. Although a sample size >30 is acceptable for repeated measures, these results should be interpreted with caution because of our relatively small sample size.

Table 1

Means, Standard Deviations, and Repeated-Measures t-Test Results Comparing Pre and Post of Theater

Outcome of Interest	Time 1 M(SD)	Time 2 M(SD)	t	df	p
Creativity	5.31(3.82)	6.86(3.73)	3.80	35	<.01
Fatigue	32.44(13.87)	28.72(13.56)	1.83	35	.08
Empathy	113.53(12.95)	118.86(9.18)	3.19	35	<.01
Humanistic Index	28.08(4.84)	29.83(3.63)	2.32	35	.03
Others Emotion Appraisal	21.06(3.39)	22.19(3.29)	2.18	35	.04
Emotion Recognition	28.17(5.45)	28.94(3.39)	1.11	35	.28
Self Emotional Appraisal	18.47(4.82)	20.86(5.20)	3.41	35	<.01
Self-Efficacy	30.94(3.61)	32.36(4.00)	2.54	35	.02
Spatial Ability	20.61(6.02)	22.00(5.29)	1.93	35	.06
Intolerance of Ambiguity	49.89(10.65)	45.75(10.06)	4.07	35	<.01
Wisdom	74.75(9.05)	78.86(10.00)	3.12	35	<.01

Results also suggest that the visual arts group showed significant improvements in emotional appraisal of others, self-emotion appraisal, spatial ability, and wisdom, yet this group also worsened in fatigue, empathy, and tolerance of ambiguity. Similarly, the

group had no significant changes in creativity, burnout, emotion recognition, or self-efficacy.

In summary, these results suggest that the theater intervention elicited more positive outcomes than the visual arts intervention. They also suggest that neither intervention significantly improved emotional recognition.

Feedback by Participants

When we first embarked on this project, we were looking to theater as a way to foster empathy and tolerance for ambiguity. These were not new concepts, of course, since the Greeks themselves, who were pioneers in the medium, were the first to notice its function not as entertainment but as a tool to understand the human condition. Yet, we were totally unprepared for this program's impact on participants. More than any other humanistic activity offered at Jefferson, this acting/playwriting class was able to create community, provide catharsis, and nurture creativity. This is a tribute to the quality of the instructors, but also to the enthusiasm of participants and the effectiveness of the medium. Enthusiasm among participants was, in fact, huge. Many asked for the program to continue. Here are some quotes:

- "After the first few theater classes, I realized that I started perceiving patients differently during my hospital visits. I was thinking about them like you would think about a character in a play. It was exciting to notice, and something that I hope will make me a good doctor."

- "I feel very grateful for having been part of this class. It opened my eyes to a new way to think while also allowing me to have fun and relax in a life that otherwise can be

very stressful. The few measly morsels of sanity that I have retained over the past few months are thanks to this class."

- "As someone with an arts background, I've often felt I've had to suppress these passions of mine in exchange for science. Have even questioned if I belong here and in this field. But science is an art, and exploration in the arts has only confirmed that for me."

- "Participation in this theater program helped me to feel a little *less* like a medical student, and a little *more* like a human being again. And that's a very good thing."

- "I think that theater was a more cathartic medium than other forms of art. This is because instead of seeing a snapshot or single cross-section of one experience, as you might in a drawing, you can follow the entire trajectory of a character."

- "I think this course fostered a sense of community that is otherwise a challenge to find in the busy medical school environment."

- "I thought this program showed me that fellow medical students and physicians struggle with common issues that our training fails to teach, and that we have to simply learn by experience. A definite highlight of my first year."

Lessons Learned

The major accomplishment of this project was to convey the idea within the university that drama and theater may actually be important ingredients in that unique cocktail that makes for a well-rounded clinician. The fact that our dean for professionalism

and the director of our women's health program both took the program surely contributed to this awareness. Also, the fact that both the university provost and president attended the first final performance, and that the local PBS station provided coverage, all lend further validation to the program. We are now planning to submit our data for publication and we hope this study will further support the conclusion that dramatic arts can foster important physicians' traits. Our ultimate goal is to demonstrate that a program of this sort can indeed be beneficial for the medical curriculum, so that other schools might want to implement it.

In terms of successes and hurdles, the most rewarding part of the project was probably the idea of cross-sectional and interprofessional participation. This included faculty, students, and residents from all the Thomas Jefferson University schools of health professions. As a result, participating students got the beneficial impression that "we are all in the same boat." In fact, that we are all "broken," and that it's perfectly normal and indeed acceptable to be wounded and vulnerable. Many participants commented on this concept (see above).

Others commented instead on how insightful the instructors were, and how they made it easy to tackle very difficult topics. In fact, some students commented on how the two instructors were actually more skilled that some of the medical school preceptors they normally work with. This eventually prompted us to arrange for an improv session for our own preceptors, which was implemented by faculty from the Alan Alda Center for Communicating Science at Stony Brook. The main barrier to the project remained cultural (i.e., the entrenched perception that schools for health professions are trade schools, and that health professionals are mostly technicians who don't really need any skill outside of technical knowledge and competence). Looking at the background of most participants, I'm afraid we might have indeed preached to the choir, with very

few if any being without some theater experience. Yet, even in this case our program achieved an important function: it provided humanistic nurturing and support to people who otherwise might have suffered. Many of the participants' comments seem to confirm this conclusion.

Ongoing Implementation of the Project

Lastly, our home institution has shown significant support to the program, which is now continuing in two forms. The first is a four-year, co-curricular, longitudinal track called *College within the College* (CwiC), which—through workshops, seminars, and active research experiences—enables a small group of students to gain insights and skills in various humanistic domains. These include visual arts, music, reflective writing, history of medicine, and drama and theater. In addition, TJU's Sidney Kimmel Medical College is also changing its curriculum to best produce physicians who are not only knowledgeable, but also empathetic, creative, and collaborative. This will require exposure of all freshmen to the foundations of medical humanities, including a selective course in theater and playwriting.

A CONSTRUCTIVIST APPROACH TO THE DEVELOPMENT OF AN ADVOCACY AND SOCIAL JUSTICE CURRICULUM FOR PEDIATRIC RESIDENTS

University of California, San Francisco, Fresno Campus
Principal Investigator and Author: Renee Kinman, MD, PhD

Project Background

The American Academy of Pediatrics (AAP) has defined pediatricians' responsibilities to include not only individual patient care, but also involvement with community-based activities in areas such as education and public health, serving as advocates to improve the health of the local community and beyond. It is, thus, essential that our pediatric residents learn to 1) understand the social determinants of health and how they can negatively impact patient and family health; 2) advocate for social justice to improve the health disparities that are pervasive in the local community; and 3) recognize that advocacy can occur at multiple levels (individual, community, state, national/international) and need not always be political in nature.

However, the practice of medicine cannot be done in a silo. Instead, health professionals need to learn to collaborate with others outside their own narrow sphere of medicine, including community members in other areas independent of medicine. The University of California, San Francisco (UCSF)-Fresno pediatric residency program, therefore, utilized this grant to create a partnership with educators in the local community to develop and implement a longitudinal child advocacy and social justice curriculum for trainees along a health professions pipeline to promote the health of students, their families, and the local community in the impoverished city of Fresno, CA.

Learners and Teaching Team

These partnerships have primarily included the faculty and students of both Fresno Unified School District and Fresno State University. Members of the teaching team have included UCSF-Fresno pediatric faculty; teachers and students within Fresno Unified School District; Fresno State honors students; and faculty from University of California, Merced and from Fresno State. Target learners have included adolescent middle and high school students, medical students, pediatric residents, Fresno Unified faculty and staff, and Fresno State and University of California, Merced faculty and college students. Some individuals served simultaneously as both learners and members of the teaching team.

Project Modifications: Barriers and Insights

While the overall goal of the project remained the same over the course of the grant and subsequent years, the specific members of the community originally targeted for this project changed over the last several years because of barriers that arose during this project. The original community that was targeted for partnership was the newly built Gaston Middle School—a science, technology, engineering, and math (STEM) school located in an impoverished area of Fresno, and the first new middle school in this area in 35 years. The principal of this school was a key team member of the project. However, shortly after Gaston opened, he had to retire for health reasons and the new principal, faculty, and staff became overwhelmed with multiple issues, many of which were related to students' behavioral and mental health. Faculty and staff efforts were thus focused primarily upon improving student behaviors rather than on developing external partnerships.

The initiation of a biomedical pathway at Edison High School, the high school associated with Gaston Middle School, led instead to

initial implementation of this partnership at Edison High School, utilizing pediatric residents, Fresno State honors students, and high school students. However, efforts there were ultimately impeded when the lead teacher associated with this project became burnt out and moved to a different high school at the end of the first year. Other barriers to implementation of this project included a relative lack of support from Fresno Unified administrative personnel, as those who initially were quite enthusiastic about this project either retired or resigned. This led to the forging of relationships with individuals within schools (including school nurses and teachers) and local leaders within that specific community to more quickly move the project forward.

Throughout this process, pediatric residents, faculty, and medical students continued to work with at-risk students at Fresno High School, utilizing both constructivist and "youth as partner" approaches. Successes achieved from this partnership allowed participants to learn how to work more productively not only with students, faculty, and administrators, but also with an expanded network of educational partners, including both Fresno State Kremen School of Education and University of California, Merced faculty and students. Further progress was made when key members of our faculty were invited to become members of the Fresno Unified medical advisory committee, and then last year, to become members of the newly developed Fresno Unified health careers advisory committee and the Fresno Unified career technical education advisory committee. These committees were convened after Fresno Unified received grant funding from the California Endowment to develop health career tracks at every school within Fresno Unified.

The initiation of the health career tracks has been crucial to the expansion of this project, as it has markedly increased requests for the continuing development of health care/educator partnerships

within the local community, including requests for teacher training as well as the creation of yet more student-initiated community health action research projects. The Fresno Department of Public Health has representatives sitting on these committees, resulting in additional interprofessional collaborative efforts. Medical students and pediatric residents have been involved with these committees as their time permits to further their involvement in advocacy efforts. They have also partnered with our new preventive pediatric cardiologist and members of the local community to obtain resident grant funding from the AAP to develop further health advocacy projects within the community.

Another major barrier has involved trying to fit social justice and advocacy efforts into the third-year medical student core curriculum. Through collaborative efforts with the San Joaquin Valley Prime Program, operated jointly by UCSF-Fresno and UC Davis, the recent introduction of pediatrics into a longitudinal core curriculum for UC Davis third-year medical students will now finally allow us to consistently place our medical students into classrooms in Fresno Unified on a bi-weekly basis beginning this fall. Further collaborative efforts are currently ongoing with leaders of the Fresno State Kremen School of Education faculty to potentially initiate and develop teacher education programs that focus on teacher preparation for these types of curricular partnerships, and with the California Teaching Fellows Foundation and the Safe and Healthy Kids Department at the Fresno County Office of Education. The California Teaching Fellows Foundation places undergraduate college students as volunteers into afterschool programs run by the Safe and Healthy Kids Department to develop their teaching experience, which also focuses on improving the health of students enrolled in these afterschool programs. Both these programs have expressed interest in joining forces to develop further partnerships to improve the health of students enrolled in them.

The final barrier that was encountered was political in nature and involved the distracting reality of a major change in the structuring of the UCSF-Fresno pediatric medical education program. For many years, the program had been associated with two major academic facilities: Community Regional Medical Center and Valley Children's Hospital. Unfortunately, Valley Children's Hospital chose to disassociate itself from UCSF-Fresno about halfway through the grant period, resulting in much tension between the two institutions, extra work and anxiety for all faculty and residents involved in this process, and job changes for key personnel involved in this grant. Although the grant team persisted in working through these issues, they did prove to be a distraction from pursuing collaborative efforts in a timely fashion because of the multiple competing demands placed on the key personnel involved in this grant.

Results

The outcomes of this project can be divided into two primary categories: those accomplished in conjunction with our community partners and those accomplished by our medical students, pediatric residents, and faculty independent of these collaborations.

Outcomes that resulted from collaboration with community partners have primarily been in the form of community health action research projects utilizing our residents, medical students, college students, and middle and high school students in a "youth as partner" approach so that the students effectively become peer educators for health. These have included presentations by high school and college students at community health fairs, student health fairs, university research showcases, and other types of presentations within their own classes and schools. Although the original plan was to have a new student project for every resident

rotating through these sites, this approach was too ambitious and was scaled back to one new project for every academic school year. For the middle school students, even this expectation was too ambitious, and instead the goal was scaled back to serving as a general guide to these students, answering their health questions and serving as mentors to help them succeed in school and beyond as they often do not have successful role models in their lives.

Other outcomes that have resulted from collaboration with community partners have included memberships in Fresno Unified School District committees and task forces, one master's thesis in education, one champion provider fellowship, two AAP visiting professorship grants, presentations at regional and national meetings, and a growing number of community partners who are interested in partnering with us to ultimately establish a youth health corps in Fresno County to engage children and adolescents as change agents in their own community.

Advocacy and social justice outcomes that have been resulted from increased focus on social justice and advocacy by pediatric residents and faculty independent of these collaborative partnerships have included residents being awarded two "Community Access to Child Health" grants by AAP, media interviews and publications, participation in annual legislative day events in the state capital, faculty and resident participation on Fresno County health-related task forces, invited workshop presentations, and various educational symposia.

Ongoing Implementation of the Project

This project has continued despite the ending of the grant, with the key to its sustainability lying in the strength of relationships with community partners, the common mission of fostering the health and well-being of youth in Fresno, and the emphasis from the

beginning on building a low-cost, sustainable program. Learners from the academic programs of UCSF-Fresno pediatrics, Fresno State, and Fresno Unified have continued to participate in joint curricula that reinforce the teaching goals of our program, and are trying to expand the project in conjunction with grants received by Fresno Unified from the California Endowment, by utilizing student volunteers (either to gain experience in their field of interest or completing class projects for school credit), and by combining resources with community partners for faculty development.

The continuance of this project has also been largely dependent upon structural changes in the medical education program. As stated previously, the restructuring of the academic department that resulted from dissociation of Valley Children's Hospital from the UCSF-Fresno pediatric residency program resulted in increased work for the key personnel involved in this grant project, but it also led to the creation of an associate residency program director position designed to focus specifically on curriculum development and evaluation. As a result, the program is now able to provide protected faculty time for the continuing development of this program.

The recent hirings of an adolescent medical director and a preventive pediatric cardiologist have provided additional faculty support as both their areas involve working with the community to improve public health. The initiation of the longitudinal core curriculum for third-year medical students for the UC Davis-associated San Joaquin Valley Prime Program has provided dedicated time within the curriculum for medical student participation. Finally, the program has developed much stronger ties with the Fresno County Department of Public Health, thus providing pediatric residents with more exposure to resources that they can draw upon in their future careers as advocates for children

and the community, and providing the Department of Public Health additional medically educated advocacy spokespersons.

Project Dissemination

Results from this project have been disseminated through presentations at both regional and national medical and medical education meetings, applications to obtain visiting professorship grant funding, reports in local media, and publication as a thesis for a master's degree in education. These results have also been used for continuing accreditation of a local high school in Fresno.

Lessons Learned

The lessons that our program has learned from this project include the following:

1. Be flexible, recognize that there is usually more than one way to get to the desired result(s).

2. Be persistent, recognize that it often takes 6–8 years for these projects to really come to fruition.

3. Work with individual "champions" within a school (in other words, develop projects from the ground up, rather than the top down).

4. Never give up; instead, go with the least obstructive approach.

5. Opportunities can come from anywhere and may occur at relatively inconvenient times. If so, still seize upon the opportunity.

6. Utilize a constructivist approach: recognize that individuals construct their own knowledge and understanding of the world via their own life experiences. This is especially true

when building community partnerships with individuals not in the medical field.

7. Medical students and pediatric residents are often quite afraid of adolescents and unsure of how to work with them.

8. Most medical students and pediatric residents are quite interested and want to become more involved in social justice and advocacy efforts, but are often unsure of how to begin.

9. When working with youth, use a "youth as partner" approach rather than a "youth as object" or "youth as recipient" approach.

10. Don't tell middle and high school students what to do; instead, work with them to gently guide them, but let them make the final decision.

11. Teachers know how to work with students, but do not necessarily know how to conduct participatory action research projects or even project-based learning.

12. Adolescents may utilize social media, but are not experts in social media; that being said, the more visual and less wordy, the more interested and involved they will become.

13. The more one knows about how to use educational technology and social media, and the more innovative the ideas, the easier it is to get students and faculty interested and involved.

14. With adolescents, the goal is to provide education that lets students *make their own informed decisions*. The same can be said for working with community partners.

15. Students can often do more than you think they can, even those at high risk for not succeeding.

QUANTITATIVE AND QUALITATIVE ANALYSIS OF THE IMPACT OF ADOPTION OF A MOBILE APPLICATION FOR THE ASSESSMENT OF PROFESSIONALISM IN MEDICAL TRAINEES

University of Central Florida College of Medicine
Principal Investigator and Author: Juan Cendán, MD

Project Background

The project, at University of Central Florida College of Medicine (UCF COM), focused on capturing lapses or excellence in medical professionalism behaviors by developing a mobile application and the necessary supporting faculty development tools. The project consisted of several distinct phases: 1) acceptance of an internally validated framework for the evaluation of professionalism behaviors in medical students; 2) construction of a mobile application, called PROMOBES (for Professional Mobile Monitoring of Behaviors), that would permit near-real time capture of the observed behaviors and the requisite web-based inquiry platform needed for data query and reporting; 3) running a pilot project with objective and subjective data capture; and 4) analysis of the data to inform iterative development of the application.

Learners and Teaching Team

The targets of the project were the faculty and trainees in two clinical settings: pediatrics clinical clerkship and internal medicine residency programs. The team members included the chairman of the UCF COM department of medical education (Juan Cendán, MD), who envisioned the building of the application and had previously led a professionalism task force at the COM; two internal medicine physicians (Analia Castiglioni, MD, and Caridad

Hernandez, MD) with extensive clinical skills education experience who are directly involved in training and remediation of students with clinical skills deficiencies; an expert in psychometrics and performance behavior (Teresa R. Johnson, PhD) with extensive assessment and statistics experience; the UCF COM associate dean for students (Marcia L. Verduin, MD), who served as a reference for the procedural requirements of professionalism reporting in medical students; the program director of the UCF internal medicine graduate medical education (GME) program (Abdo Asmar, MD), who provided logistical support and access to the GME trainee population; and two experts in the technological components of mobile data capture (Mike Eakins and David Metcalf, PhD).

Project Modifications: Barriers and Insights

Unanticipated issues that led to changes in the project included the need to secure wi-fi access in the hospitals. The mobile application (app) was designed to be a web-based app that appears to the user as a standard app. That is, the user sees a modern and graphically engaging application that is easy to interact with and records information safely. Unlike many apps, though, PROMOBES stores highly personal information and the need for data security pushed the project team to develop the app such that no personal data were stored in anyone's mobile device. As such, wi-fi access in hospitals needed to be secured. In some cases, this was not a challenge; however, in one particular institution, provision of access was a prolonged and intense interchange between the project's IT team and the hospital security experts. All issues were resolved, but doing so took longer than anticipated and forced the pilot study into a holding pattern until resolved.

The project developed and delivered on all but one of the anticipated aims of the initial project proposal. The only aim that

was not pursued involved a 360° evaluation pilot trial whereby trainees could also evaluate faculty. The team thought that this would be a good idea; however, senior level trainees (at both the student and GME level) voiced concerns when they learned that this may occur. The team crafted and delivered a survey to the GME trainees and the data from this survey pointed to a need to have the process in place and confirmation of the anonymity of the app before trainees would be able to comfortably use the system in a 360° evaluation. Plans for such are in place, but only after there is widespread adoption of the process, in general.

The team anticipated that the faculty development component of the process would be critical. An orientation session complete with printed materials was developed and a presentation to the involved faculty was made. Because of the complexities of clinician scheduling, these sessions were repeated at two sites, and the video materials were made available for access. Reaching a common understanding of the language and behavioral anchors for the judgment of professionalism required a lot of to-and-fro between the research team members and the faculty.

Results

A professionalism framework consisting of six domains (reliability, adaptability, peer relationships, upholding principles, team relationships, and scholarship) encompassing 25 sub-elements underpins the reporting structure. The pilot study involved 26 faculty supervising 93 medical trainees at two sites from January 12 to August 8, 2016. Notable professionalism behaviors were linked to the framework domains and elements; narrative details about incidences were captured on mobile devices.

Assessment Process

Surveys gauged the technological functionality and impact of PROMOBES on faculty assessment of professionalism. Qualitative focus groups were employed to elucidate user experience. A mixed-methods analysis approach was used to reach the study conclusions.

Results

Although users anticipated PROMOBES utility would be for reporting lapses in professionalism, 94.7% of reports were for commendation. Comfort among faculty members assessing professionalism (p = .04) and recognition of the reporting procedures for professionalism related concerns (p = .01) improved. PROMOBES, the application, attained high acceptance ratings as measured in a validated technology acceptance instrument. Focus group analysis added the explicit connection to the professionalism framework as powerful; similarly, the near real-time reporting capability, multiple observer inputs, and positive feedback facilitation were found to be strengths of the reporting process and application.

Conclusions

Making the professionalism framework visible and accessible via a mobile platform significantly strengthens faculty knowledge and behaviors regarding assessment. The strong desire to capture positive behaviors was an unexpected finding.

Ongoing Implementation of the Project

Institutional support has been tremendous. Curricular leadership recognized the value of the app not only for the capture of professionalism behaviors, but also for narrative capture of other

behaviors (i.e., not "professionalism"). The office of the associate dean for academic affairs (ADAA) matched the initial grant funding and has continued to support additional development. Further development has included the following:

1. Addition of a "green light:" In the original vision of the app, the faculty member would choose between a gold, yellow, or red level to register the observed behavior using a mixed metaphor of the typical "gold star" and the soccer analogy of a yellow warning, or a red critical error. However, in real use, the faculty needed to capture simply "good" professionalism acts. Thus, a new green level was added to the system.

2. A simple narrative capture box was added based on the feedback from faculty. At times, the faculty member did not feel that a narrative fit into a professionalism framework, but warranted capture in the organization of the PROMOBES system. A simple textbox with dictation capability was added to the system.

3. Adoption of the system into the current workflow: The PROMOBES app is now going to be used in the ongoing workflow of the entire COM. With leadership from the research team, and support from the ADAA and curricular assistant deans, a comprehensive set of instructions, examples, and training sessions have been prepared and delivered to the faculty. PROMOBES will be available for faculty use starting AY 2017–18 and encompassing all 480 students at the COM. The reporting structure for observed behaviors has been tested and investigated in the relevant curricular committees, and the faculty members have had several opportunities to participate in demonstrations. Student representatives have been present and involved in these meetings.

Project Dissemination

The research was submitted to the American Association of Medical Colleges' Annual Research in Medical Education meeting and was accepted for presentation November 7, 2017, in Boston. The meeting papers are to be published in the journal *Academic Medicine*, and the research team has been working with the editorial office to finalize that submission. Currently, the paper is accepted for publication and final editing of the data tables is in process. The AAMC is a highly impactful forum for presentation, and the accompanying article will be published in a journal that is among the highest in impact in the academic medicine sphere.

Lessons Learned

The need for faculty development cannot be overemphasized. The PROMOBES app serves as a tool to force the dialogue about professionalism. When faced with having to make a professionalism judgment that is anchored to a framework, faculty members want to be fair and accurate. However, they have not had to think about the sub-components of professionalism before; therefore, there is a hesitancy to simply use the tool without an opportunity to consider its impact and validity. For example, faculty need and want an opportunity to share their ideas about what is exemplary behavior, or simply an expected level of professionalism in any given case. The exchanges that followed from these discussions informed the structure of the system and the organization of the reporting.

With regards to the latter, reporting of excellence in professionalism is not particularly problematic; but, reporting breaches in professionalism can be. Thus, crafting a reporting process that is stable and fits within the mandates of your college, and overarching licensing and legal bodies is important. PROMOBES accepts observations from trained faculty members and these observations are moved to a supervising faculty member (e.g., a module director or

assistant dean) for corroboration prior to actual registry of the event. The student is notified upon registry of the event. A discussion with the student then ensues. The data can then be packaged, per student, in order to inform the dean of students for letters of reference, notes to progress committees, etc. These steps must be considered locally; the system can deliver the information to the appropriate individuals, but the data flow must be agreed upon at the college level.

By allowing for feedback in the context of first-hand learning within a community of practice, PROMOBES addresses many of the critical items identified at the start of this project. The system has the capacity to track performance over time. The factors considered critical for professionalism were identified through a rigorous literature review and community agreement process, the outcome of which paved the way to operationalizing the domains of professionalism, thereby linking these to specific behaviors. Professionalism represents a complex, dynamic, and multidimensional construct encompassing individual factors, learned behaviors, and sociocultural norms, and has interpersonal and contextual dimensions. Professionalism requires first-hand learning, over time, in an authentic environment within a community of practice. Operationalizing the domains of professionalism and linking these to specific behaviors is critical.

In summary, PROMOBES served as an excellent tool to open the dialogue regarding the need to be more specific in the way faculty think about professionalism. The app is easy to use and the data reveal that faculty members are more apt to capture good or exemplary behaviors than we had anticipated. The discussion around the app has now prompted the larger topic of capturing simple narrative, and perhaps even psychomotor behaviors, in future iterations of the mobile platform. Cooperation with our IT colleagues at a separate campus unit allowed the COM to develop this product at a low cost, with high quality, and a student/faculty-centric sensibility that could have been a challenge for a commercial app builder.

ENHANCING COMMUNICATION & PROFESSIONALISM IN SURGICAL CARE: PILOTING PEER-BASED COACHING & FEEDBACK SKILLS

University of Rochester Medical Center
Principal Investigator and Author: Lauren DeCaporale-Ryan, PhD

Project Background

There is growing recognition of the importance of patient-centered communication to effective, compassionate care, and of the need to teach that skill to physicians, particularly surgeons. Training in communication and professionalism is often not reinforced in residency, fellowship, or continuing medical education. The ongoing development and cultivation of such skills requires consistent role modeling and careful observation and feedback. This project, "Enhancing Communication & Professionalism in Surgical Care: Piloting Peer-Based Coaching & Feedback Skills," substantially extends existing University of Rochester Medical Center (URMC) coaching resources by applying a peer-based intervention in inpatient and outpatient surgical settings to support faculty development and improve patient- and team-based communication. The project aimed to provide education and training toward best practices in patient-family-centered care and professionalism to surgeons who can now facilitate enhancement of colleagues' and residents' professional self-management and learning.

The pilot project involved 10 surgeons. The curriculum consisted of the following:

1. A two-hour didactic with three core components:

   - Instruction in evidence-based patient-communication skills and identified best-practice approaches for providing patient-family-centered care;
   - Training regarding how to observe these behaviors, utilizing a structured tool that has been implemented by our expert coaches; and
   - Training regarding how to effectively provide constructive verbal feedback.

2. Surgeons were then paired and met with an expert coach on two occasions:

   - Sessions included a process of briefing, observation, and debriefing; and
   - Each surgeon was observed/received feedback on communication skills, and served as an observer/facilitator in the feedback process.

In addition to the development of an instructional model, a structured assessment tool was created to measure the quality of peer-based feedback delivery.

Learners and Teaching Team

Learners for this project were faculty surgeons. Specifically, the project targeted surgical teaching faculty who had not received formalized training to be medical educators, but who provide learning opportunities every day for residents. Ten surgeons who are part of the department's teaching faculty were recruited to participate in this initiative. These surgeons were equally divided

male and female, junior and senior clinicians. They also came from multiple subspecialties, allowing us to pair clinicians with different surgical expertise, ensuring that during the training they would focus on one another's communication skills rather than attending to technical skills required for a case.

The project was led by Lauren DeCaporale-Ryan, PhD; Susan H. McDaniel, PhD; and Sarah Peyre, EdD. Project leaders facilitated an initial didactic session, introducing core principles of effective communication with patients/families and how to observe for these behaviors. The teaching team also included URMC's Physician Faculty Communication Coaching Program: three clinicians with specialized training in coaching and feedback delivery, identified as "expert coaches" for this program. Expert coaches worked with surgery faculty pairs to promote improved observational skills (of communication/interpersonal behaviors) and ability to deliver effective feedback.

Project Modifications: Barriers and Insights

Scheduling

The greatest barrier pertained to scheduling. Many participants encountered emergencies that delayed the start of the coaching sessions, often resulting in their cancellation for weeks at a time. In response to this challenge, many of the surgeons then began to contact their expert coach anywhere from one day to one hour in advance of their availability; however, our expert coaches were doing this work as an add-on to their normal schedules, often making them unavailable on such short notice. Therefore, to accomplish such a teaching model and ensure sustained learning, it is recommended that an expert be embedded in a department (at least part-time) to accommodate this type of scheduling. Alternatively (or perhaps additionally), we strongly advise that an

administrator be made available to coordinate scheduling; working with different administrators from two different surgical divisions and another for our coach often resulted in lag times for scheduling that could be better managed.

Though timing was often a challenge, it also provided a unique teaching opportunity: surgeons were given space by expert coaches to reflect on the experience of acute stressors and the frequency with which they encounter traumas/unexpected hurdles in their day and were able to explore how such stress influenced their mood and behaviors. The project's expert coaches anecdotally reflected that surgical faculty seemed to have increased appreciation for how their behaviors might influence the learning environment and how residents might also be influenced by a stressful clinical environment.

Change in Location

For ease of access and allowing for briefer periods of observation, the project team had previously recommended that observation and coaching sessions take place on inpatient units. However, many of the participating surgeons suggested that, instead, the project team consider applying this training in the ambulatory setting (as able) because this is where they tend to struggle in communication more (finding ways to have effective conversations with patients in a brief period). As a result, each pair was allowed to determine what was best for their learning and schedule. However, the ambulatory setting requires far more time from coaches and peer observers in order to see an effective number of patients. Additionally, because some of the ambulatory settings were not on site at the hospital, participants were required to travel. Surgeons who opted for this model were required to block greater time than anticipated (as were coaches).

Anxiety

The intervention was also met with some resistance in the context of some surgeons' anxiety about being evaluated. Having the department chair's support for this endeavor was critical for overcoming this. Conversations revealed that, for some, there was fear that this process was intended to assess their appropriateness to be resident educators. Greater frontloading about the purpose of this initiative would have been helpful, specifically to remind participants that their information was for their personal professional development only and that their evaluations would not be shared with departmental leadership.

Moreover, some expressed concern about how the expert might view them, articulating that this was more uncomfortable than having the peer coach present. This is an incredibly valuable point as, moving forward, this could mean establishing a network of peer coaches especially skilled in communication, which might reduce fear of evaluation and support increased access to this type of training. As surgeons have built rapport with expert coaching staff, they have reported that they think this is important work for both their engagement with patients and how they work with learners. In letting their guard down, they have been increasingly able to express how this training is benefiting them, and in some instances have asked for more.

Feedback Skill

During the first cycle of training, participating surgeons (peer coaches) noted that their approach to feedback was quite different than that of the expert. In all instances, surgeons started feedback by identifying a problem and immediately offering solutions. After observing the expert, they recognized that they had not allowed the learner to articulate their own areas for improvement, rationale

for behavior, or develop their own plan for improvement. Moreover, they observed when the expert gave feedback, it was a "narrative" that told a story about what was observed *in context* with what was important to the learner. During the second cycle of training, the expert coaches anecdotally noted some improvement in the surgeons' approaches when reviewing audio recordings of the feedback sessions.

Results

Data analyses are still underway for this project. Data to be evaluated include the following:

1. Pre- and post-self-evaluation of feedback skills (e.g., ability to effectively deliver feedback using evidence-based communication techniques);

2. Observational data to explore differences in evaluation between expert and peer coaches on two separate occasions and across multiple patient encounters;

3. Feedback data, including expert, peer, and self-appraisal in real time, regarding delivery of feedback effectiveness;

4. Qualitative information from audio recordings of feedback sessions; and

5. Written feedback reports from expert coaches regarding observational data for qualitative analyses.

Regarding the pre- and post-evaluation of feedback skills, McNemar's tests were run to allow for comparisons of 20 behaviors for the 10 participants. It was hypothesized that surgeons might over-endorse their perceived skill in the pre-evaluation and, after

training, actually recognize areas where they could improve their feedback delivery skills. Therefore, the project team asked if as many participants changed their score from 0 to 1 in the pre-to-post evaluation as changed their score from 1 to 0 in the pre-/post-comparison. For each of the 20 behaviors, the analyses suggest that they did not, since the p-value associated with McNemar's test for each of the behaviors was >.05. Looking over all items combined, it appears that McNemar's p-value = .07, which is not significant but suggestive. Specifically, there were 33 instances of going from 1 to 0 and 20 instances of going from 0 to 1. This supports the hypothesis, but it fails to achieve significance. Further evaluation is underway to determine what behaviors demonstrated improvement and if these correspond with specific teaching.

Ongoing Implementation of the Project

URMC has demonstrated a long-standing commitment to providing physicians with ongoing communication training in the form of one-to-one coaching. As such, the institution has continued to provide coaching across departments and with individuals as requested. Because of this specific project and other initiatives at the institution, coaching is now expanding to address communication skills beyond the physician-patient interaction and to support additional skills training.

This specific initiative has resulted in the following within URMC's department of surgery:

1. Identification of the relation between clinical behaviors and physician wellness. In response, the department has established a wellness task force, has appointed an associate program director of resident wellness, and is beginning to develop and implement a wellness curriculum.

2. Identification of the need to train residents to become leaders. Faculty who participated in this program recognized that they were trained to be successful operatively, but had not learned (in a structured format) how to be educators or leaders. The department is now implementing and evaluating a program for chief residents to be leaders.

3. Implementation of a two-day retreat for residents and faculty to explore team-based communication and impact on relationships.

4. Continuing faculty education and coaching is being provided in a one-to-one format with those interested in improving their communication skills (with patients or learners). This coaching continues to be implemented by our expert coaches. However, it is also our hope that faculty who have been coached via this program will continue to model positive communication skills and, by example, encourage others to implement similar techniques.

Project Dissemination

This project has led to multiple additional initiatives related to surgical education in communication—both at the bedside with patients and families and on teams. As a result of this project, the following scholarly activities have been completed:

- DeCaporale-Ryan LN, Salloum R, Peyre S, Linehan DC. Coaching in general surgical training: A novel approach emphasizing wellness, professionalism, and patient-family-centered care. Poster presented at: American College of Surgery Scientific Forum; October 2017.

- DeCaporale-Ryan LN, Salloum R, Peyre S, Linehan DC. Decision making, communication, and professionalism: Does the service environment matter? Oral presentation at: American College of Surgery Scientific Forum; October 2017.

- DeCaporale-Ryan LN, Robinson J. Psychologists in surgery. In: Klonoff EA, ed., *Wiley Encyclopedia of Health Psychology*. In press.

- DeCaporale-Ryan LN. Surgical education: Coaching residents to be team-leaders & patient-collaborators. Innovation in Graduate Medical Education Northeast Regional Conference; May 2016; Boston, MA.

- DeCaporale-Ryan LN, Salloum R. Linehan DC, Burton R. Learners becoming leaders: Development & evaluation of a leadership curriculum for residents in surgery. Poster presented at: Association of American Medical Colleges' Northeastern Group on Educational Affairs; May 2016; Rochester, NY.

Efforts to further disseminate information regarding this project are still underway. At present, the teaching team involved in this project is working on a manuscript to share general details of the URMC coaching program, which it hopes will serve as a starting point for further scholarship. Specifically, the team hopes to disseminate more about 1) training surgeons in communication skills and behavioral observation techniques that will support improved patient encounters, including the specific methods used in this project; and 2) training faculty in evidence-based teaching practices that will promote improved resident education, including but not limited to faculty's ability to deliver feedback to learners. The team

intends to share both the quantitative and qualitative findings of this project upon full completion of the data analysis.

In addition to these scholarly efforts, the team plans to launch a website that shares the materials used in its coaching efforts. The team believes that sharing these materials will allow other programs to launch similar efforts.

Lessons Learned

The URMC Coaching Program has had great success in teaching communication skills that promote improved patient-physician relationships, but the team often worries about the sustainability of this model of teaching. Specifically, it is time-intensive and, because it is offered as a consultation service, it is unclear if the learning will be maintained over the long term. While this project was intended to expand the network of coaches by training a group of peers to be able to observe/evaluate and give feedback, such a model is not without shortcomings (as described above).

In recognizing the complexities of a peer-coaching model, the team recommends a multi-tiered coaching approach. For example, peers may be able to provide coaching in the setting of common communication mistakes, but an expert may be best able to respond to a clinician severely struggling and who requires greater intervention. Moreover, while there is value in increasing comfort of surgeons (or others to be coached) by having them work with a peer who understands their culture, there is also value in having an expert in communication provide feedback and teach the skills required to foster positive patient and team relationships. Just as a surgeon can continue to learn and improve upon their technical skills from another clinician expert in the field, so too can they learn from someone with expert understanding of communication and systems/team dynamics.

In addition to a multi-tiered approach, this effort has demonstrated the importance of flexibility when teaching in medicine. The project team encourages those implementing coaching programs to be mindful of creating structure (to ensure an objective and consistent approach to 1:1 teaching), but to apply this structure in a manner that allows for flexibility in the when/where (e.g., inpatient/outpatient/OR/etc.) that teaching can happen. It is this flexibility that, at least in part, promoted acceptance and comfort with the program as it was being implemented. Additionally, expert coaches' exposure to the variety of surgical settings increased their knowledge regarding surgery faculty's experiences in patient care and teaching, providing improved overall understanding of surgical culture. This knowledge base supported their ability to provide culturally competent feedback and earn the trust of the participants. The project team believes that this further suggests the importance of imbedding coaches within a department and would encourage other programs to do so.

MEETING PARTICIPANT BIOGRAPHIES

Lee Savio Beers, MD, is an associate professor of pediatrics and the medical director for municipal and regional affairs at Children's National Health System. She earned her medical degree from Emory University School of Medicine and completed a pediatric residency at the Naval Medical Center Portsmouth. She received her master teacher certificate in medical education through The George Washington School of Education and Human Resource Development. Dr. Beers has held numerous leadership positions in the American Academy of Pediatrics and serves in a wide variety of leadership and advisory positions. Her interests include vulnerable populations, improving health systems, and advocacy education.

Juan Cendán, MD, is a professor of surgery and chairman of the department of medical education at the University of Central Florida College of Medicine and a practicing surgeon at the Orlando Veterans Affairs Medical Center. Dr. Cendán has expertise in clinical skills and simulation and has published on the use of virtual humans and the use of virtual reality platforms for clinical and psychomotor skills training. An example of his lab's work produced through a grant from the National Library of Medicine is freely available for use at nervesim.com

Lauren DeCaporale-Ryan, PhD, is a clinical psychologist and assistant professor at the University of Rochester Medical Center

in the departments of psychiatry (psychology), medicine, and surgery. She is the associate program director in general surgery (resident wellness), associate program director of the primary care family psychology fellowship, and director of the adult psychology internship program. Her work emphasizes the integration of psychology into medicine and providing communication and wellness coaching to physicians. She completed her PhD in 2011 at the University of Missouri–St. Louis, did her internship at the Central Arkansas Veterans Healthcare System, and fellowship at the University of Rochester Medical Center.

Deborah Dewaay, MD, FACP, is associate dean for undergraduate medical education at the University of South Florida Morsani College of Medicine (MCOM). She received her medical degree from the University of Iowa Carver College of Medicine. She is board-certified in internal medicine and did her residency training at the Medical University of South Carolina (MUSC). After residency, she stayed on in the internal medicine department at MUSC as chief resident, then as a hospitalist and associate vice chair for education. In 2016, she joined the Morsani College of Medicine to oversee the MD curriculum at MCOM and practice hospital medicine.

Peter Dillon, MD, MSc, is the John A. and Marian T. Waldhausen professor of surgery and chairman of the department of surgery at the Penn State College of Medicine and the Penn State Milton S. Hershey Medical Center. In addition, he currently serves as vice dean for clinical affairs and president of the Penn State Health Medical Group. A graduate of Harvard University and Columbia University College of Physicians and Surgeons, Dr. Dillon did his general surgery training at Columbia Presbyterian Medical Center, where he also completed a fellowship in vascular surgery. He then did his training in pediatric surgery at Babies Hospital in New York. As vice dean for clinical affairs and president of the Penn State Health Medical Group, he oversees the clinical activity of over 1,200

physicians and advanced practice clinicians in the in-patient and ambulatory settings. His research and scholarship interests are in surgical quality outcomes, relational coordination, complexity in health care delivery, and medical innovation.

Kathy Faber-Langendoen, MD, received a BA in philosophy from Calvin College, and an MD from Washington University in St. Louis. She completed an internal medicine residency at Washington University and medical oncology fellowship (with a research focus in bioethics) at University of Minnesota. Since 1998, she has been the medical alumni endowed professor of bioethics at State University of New York (SUNY) Upstate Medical University, where she chairs the Center for Bioethics and Humanities. Her scholarly interests are in bioethics and professionalism education, physician advocacy and activism, and medical decision-making at the end of life. For 17 years, she directed SUNY Upstate's Ethics Consultation Service.

Melissa Fischer, MD, MEd, is professor of medicine and associate dean for undergraduate medical education, curriculum innovation, and the interprofessional Center for Experiential Learning and Simulation (iCELS) at the University of Massachusetts Medical School (UMMS). A general internist, she oversees the design, implementation, and ongoing quality improvement of the four-year UMMS curriculum. Recently, her work has focused on global health, effective use of educational technology, and interprofessional and experiential learning. She has presented her work at regional, national, and international conferences, and published in peer-reviewed journals, including *Academic Medicine*, the *Journal of General Internal Medicine*, and *JAMA*.

H. Barrett Fromme, MD, MHPE, is an associate professor of pediatrics at the University of Chicago Pritzker School of Medicine where she is the associate pediatric residency program director and the director of faculty development in medical education.

She holds numerous leadership roles in undergraduate, graduate, and continuing medical education at the local and national levels, including faculty director of the Advancing Pediatric Educator eXcellence (APEX) teaching program, an award-winning faculty development program for pediatric hospitalists, sponsored by the American Academy of Pediatrics and the Academic Pediatric Association.

Anne Gill, DrPH, MS, RN, is assistant dean of interprofessional education, associate professor of pediatrics, and associate professor of medical ethics and health policy at Baylor College of Medicine (BCM). She worked as a nurse before completing her doctor of public health degree and has served the last 17 years in medical education as both a teacher and course director. She continues to develop curriculum and teach ethics, professionalism, and public health to medical students. In addition to receiving numerous teaching awards, she is a member of BCM's Academy of Distinguished Educators. Nationally, she chairs the Association of American Medical College's (AAMC) Student Surveys Advisory Council and is a member of the AAMC Advancing Holistic Review Committee.

Eve J. Higginbotham, SM, MD, is the Vice Dean for Inclusion and Diversity at the Perelman School of Medicine at the University of Pennsylvania. She is also a Senior Fellow of the Leonard Davis Institute and Professor of Ophthalmology, as she continues to roles as clinical researcher and glaucoma specialist. Prior to joining Penn in August 2013, Dr. Higginbotham served as a Visiting Scholar for Health Equity at the Association of American Medical Colleges (AAMC) in Washington, D.C.,. Previous notalable leadership roles, include Senior Vice President and Executive Dean for Health Sciences at Howard University and Dean and Senior Vice President for Academic Affairs at Morehouse School of Medicine in Atlanta. She was also the first woman to head an

ophthalmology department at an academic medical center in the United States, serving as chair of the Ophthalmology and Visual Sciences Department at the University of Maryland School of Medicine in Baltimore. Prior to joining the University of Maryland, Dr. Higginbotham served as Assistant Dean for Faculty Affairs at the University of Michigan.

During her career, she has also held several leadership positions in professional organizations, including President of the Harvard Medical School Alumni Council, President of the Baltimore City Medical Society, President of the Maryland Society of Eye Physicians and Surgeons, Vice President for Women in Ophthalmology, and member of the Board of Trustees of the American Academy of Ophthalmology (AAO). As a member of the Harvard University Board of Overseers 2008-14, Dr. Higginbotham served on a number of committees, including the Visiting Committee for Harvard Medical School, Natural and Applied Sciences, Finance, Administration, and Management, and Alumni Affairs and Development. In 2011, she joined the MIT Corporation, where she served on the visiting committees on chemistry, political science, and the health sciences and technology program. She continues to serve as a member of the Visiting Committee of the Institute of Medical Engineering and Science (IMES) at MIT. Dr. Higginbotham is currently President Elect of the AOA Medical Honor Society, a Board member of Ascension and a member of its Executive Committee, and a member of the Defense Health Board, for which she is leading a review of the Deployment Health Centers in 2016-17.

Among her numerous honors, she received the Senior Achievement Award (2002) and a Life Achievement Award (2015) from the American Academy of Ophthalmology and the Women of Achievement Award in 2011 from the Young Women's Christian

Association, a group dedicated to eliminating racism, empowering women and promoting peace, justice, freedom and dignity for all.

Dr. Higginbotham has authored over 100 peer-reviewed articles and co-edited four ophthalmology textbooks and continues to remain active in health policy and patient care at the University of Pennsylvania.

Holly J. Humphrey, MD, is the Ralph W. Gerard Professor in Medicine and Dean for Medical Education at the University of Chicago. In this role, she oversees undergraduate, graduate, and continuing medical education. An honors graduate of the University of Chicago's Pritzker School of Medicine, Dr. Humphrey completed her internal medicine residency, pulmonary and critical care fellowship, and Chief Residency all in the department of medicine at the University of Chicago. Her 14-year tenure as Director of the Internal Medicine Residency Program created the foundation for her medical education career.

Serving as dean since 2003, Dr. Humphrey has launched numerous programs, including the Roadmap to Professionalism initiative to support and enhance the highest professional standards in the learning environment. She also led a major curriculum reform effort entitled The Pritzker Initiative: A Curriculum for the 21st Century. She is the editor of Mentoring in Academic Medicine (2010) and is the author of numerous peer-reviewed publications on issues related to medical education. Her vision for medical education as a discipline worthy of scholarship led to creating the MERITS fellowship program in medical education open to residents, nurses, and faculty, and she is currently supporting two initiatives in interprofessional learning.

Dr. Humphrey established the Pritzker Advising and Mentoring Societies to support students, and the Academy of Distinguished

Medical Educators to support faculty. She is the co-founder of the Bowman Society, which explores issues of health care disparities and provides mentoring for minority students, residents, and faculty. She also oversaw the development of new pipeline programs for under-represented minority students interested in careers in medicine. Most recently, she founded the school's Identity and Inclusion Initiative (i2i), a collaborative faculty/student committee that promotes an inclusive learning environment and respectful and effective communication with diverse patients and colleagues around issues of identity.

Dr. Humphrey is a national leader in medical education and serves as chair of the Board of Directors for the Kaiser Permanente School of Medicine. She is Chair Emeritus of the American Board of Internal Medicine, immediate past chair of the American Board of Internal Medicine Foundation, and a past President of the Association of Program Directors in Internal Medicine (APDIM). She serves on the Boards of Directors for both Alpha Omega Alpha and the Bucksbaum Institute for Clinical Excellence and is a member of the Gold Foundation's Research Institute. Awards and honors are many, and include the Dema C. Daley Founders Award from APDIM and selection as a Master by the American College of Physicians. Crain's Chicago Business featured her as one of their "Women to Watch" and the YWCA of Metropolitan Chicago honored her with their Outstanding Leader Award in the Professions. Her teaching honors and awards include her selection by graduating students 25 times as a favorite faculty teacher.

Angela Jackson, MD, is associate dean for student affairs at Boston University School of Medicine and a practicing general internist at Boston Medical Center. A former primary care residency program director, she has a special interest in developing skills for residents and students to care for vulnerable, medically

underserved patients, with many years as the principal investigator of successfully funded Title VII training grants. As associate dean of students, she emphasizes advocacy skill development as critical to the process of professional identity formation for medical students.

Renee Kinman, MD, PhD, also holds a master's degree in education, with an emphasis on social justice and educational technology. As a pediatric endocrinologist and member of the University of California, San Francisco (UCSF) Academy of Medical Educators, she is passionate about education. Renee is a member of several Fresno Unified School District advisory committees, and is currently serving as a champion provider fellow in a program jointly sponsored by UCSF and the California Department of Public Health to improve the health of communities beyond the clinic setting.

Peter Lichstein, MD, is a general internist actively engaged in ambulatory and hospital care and teaching at Wake Forest School of Medicine in Winston Salem, NC. He was the internal medicine residency program director from 2003–2011, and currently leads the doctor-patient relationship and communication skills curriculum for medical students and residents. He is medical director of the General Medicine Innovation Service at Wake Forest Baptist Hospital, where he also leads the Program to Enhance Relationship-Centered Communication. He also is governor of the North Carolina chapter of the American College of Physicians.

Wei-Hsin Lu, PhD, is director of evaluation & assessment and research assistant professor in the department of family, population, and preventive medicine at Stony Brook University School of Medicine (SB SOM). She is responsible for ensuring a comprehensive evaluation of SB SOM's new LEARN curriculum, including a rigorous continuous quality improvement process. Dr. Lu also has expertise in the collection and analysis of data in the

context of simulation exercises and is currently working on two funded projects on interprofessional training that are simulation-based.

Salvatore Mangione, MD, is a clinician-educator with a long interest in physical diagnosis, medical history, community service, and the role of the humanities in medicine. His innovative programs and engaging teaching style have been recognized by multiple teaching awards, and his work has been featured in the *New York Times*, the *Los Angeles Times*, the *Wall Street Journal*, the BBC, CNN, NPR, and *Forbes*. Dr. Mangione has been an invited speaker at many national and international meetings, especially regarding using visual arts to teach bedside observation. He is the author of the book *Secrets in Physical Diagnosis*.

David J. Rothman, PhD, is President of the Institute on Medicine as a Profession (IMAP), and Bernard Schoenberg Professor of Social Medicine at Columbia College of Physicians & Surgeons.

Trained in American social history at Harvard University, David Rothman first explored the history of mental hospitals, prisons, and almshouses. His 1971 book, The Discovery of the Asylum (new editions 1990 and 2003), was the co-winner of the Albert J. Beveridge Prize of the American Historical Association. Conscience and Convenience (1980), and the Willowbrook Wars (1984, new edition 2005, co-authored with Sheila M. Rothman) brought the history of caretaker and custodial institutions to the present.

David Rothman joined the Columbia College of Physicians and Surgeons faculty in 1983 and his subsequent work has examined the history of health care practices and health policy. He has published: Strangers at the Bedside: A History of How Law and Bioethics Transformed Medical Decision Making (1991); Beginnings Count: The Technological Imperative in American Health Care (1997),

and The Pursuit of Perfection: The Promise and Perils of Medical Enhancement (2003, co-authored with Sheila M. Rothman). His research on the history and ethics of human experimentation has appeared in the New England Journal of Medicine (1987), Health Affairs Quarterly (1990), Milbank Quarterly (1990), and Bulletin of the History of Medicine (2003).

David Rothman's other scholarly and policy interests include issues of human rights in medicine. Together with Sheila Rothman, he has explored trafficking in organs, how AIDS came to infect Romanian orphans, the ethics of research in third-world countries, and the right to health care. Their essays were brought together in Trust Is Not Enough (New York Review Books, 2006).

David Rothman is now addressing the place of professionalism in medicine. With an endowment from the Open Society Institute and George Soros, he established IMAP, dedicated to making professionalism a field and a force in medicine. His publications in this area include: "Medical Professionalism; Focusing on the Real Issues" (*NEJM*, 2000); "New Federal Guidelines for Physician-Pharmaceutical Industry Relations: The Politics of Policy Formation" (co-authored with Susan Chimonas, *Health Affairs*, 2005); "Marketing HPV Vaccine: Implications for Adolescent Health and Medical Professionalism" (co-authored with Sheila Rothman, *JAMA*, 2009). He co-chaired two task forces, whose recommendations appeared in *JAMA*: "Health Industry Practices that Create Conflicts of Interest: A Policy Proposal for Academic Medical Centers" (2006), and "Professional Medical Associations and Their Relationships with Industry: A Proposal for Controlling Conflicts of Interest" (2009).

In 2010, IMAP convened a task force of lawyers, physicians, and social scientists to address the professional challenges of physician involvement in torture in the post-9/11 period. The report of the task force was published November 2013.

Stephen C. Schoenbaum, MD, MPH, is Special Advisor to the President of the Josiah Macy Jr. Foundation. He has extensive experience as a clinician, epidemiologist, and manager. From 2000–2010, he was Executive Vice President for Programs at The Commonwealth Fund and Executive Director of its Commission on High Performance Health Systems. Prior to that, he was Medical Director and then President of Harvard Pilgrim Health Care of New England, a mixed-model HMO delivery system in Providence, RI.

He is an adjunct professor of healthcare leadership at Brown University; a founder of what is now the Department of Population Medicine at Harvard Medical School, formerly the Department of Ambulatory Care and Prevention; author of over 175 professional publications; associate editor of the Israel Journal of Health Policy Research; a longstanding member and former chair of the International Academic Review Committee of the Joyce and Irving Goldman Medical School, Ben Gurion University, Beer Sheva, Israel; and an honorary fellow of the Royal College of Physicians.

Stuart Slavin, MD, MEd, is associate dean for curriculum and professor of pediatrics. During his 13 years at St. Louis University (SLU), he has led two major curriculum reforms and championed other curricular changes and innovations, including development and implementation of the applied clinical skills series of courses; a one-week orientation to the third year; a three-week required capstone course; and new curricula in topics such as population health, statistics and epidemiology, health care quality and safety, health inequities, implicit bias, and cultural competence. A major focus of his efforts over the past eight years has been on understanding and addressing the problem of poor mental health of medical students and residents. Notably, the model that he developed produced an 80% reduction in rates of depression and anxiety of first- and second-year students at SLU that was accompanied by improved academic outcomes.

Kris Srinivasan, MD, is assistant professor and co-director, FCM Medical Student Education Program. After studying English and genetics at UC Davis and a brief diversion studying molecular biology at UC Berkeley, Dr. Srinivasan became interested in health care after learning of the work of Paul Farmer and Partners in Health—in particular the concept of treating poverty as a social disease with profoundly negative health consequences for people. He worked for Partners in Health briefly and then decided to pursue a career in primary care, mainly as a way to address the health disparities associated with social inequity. He learned how to be a family physician at UC Davis and is proud to join the terrific faculty that has provided mentoring for all these years. He works and teaches both at UC Davis and at the Salud Clinic in West Sacramento, which is a community health center serving those with public or no insurance. Dr. Srinivasan's medical interests continue to include social disparity, but more practically include full-spectrum primary care including procedures, non-operative obstetrics, and inpatient care of patients of all ages.

George E. Thibault, MD, became the seventh president of the Josiah Macy Jr. Foundation in January 2008. Immediately prior to that, he served as Vice President of Clinical Affairs at Partners Healthcare System in Boston and Director of the Academy at Harvard Medical School (HMS). He was the first Daniel D. Federman Professor of Medicine and Medical Education at HMS and is now the Federman Professor, Emeritus.

Dr. Thibault previously served as Chief Medical Officer at Brigham and Women's Hospital and as Chief of Medicine at the Harvard-affiliated Brockton/West Roxbury VA Hospital. He was Associate Chief of Medicine and Director of the Internal Medical Residency Program at the Massachusetts General Hospital (MGH). At the MGH, he also served as Director of the Medical ICU and the Founding Director of the Medical Practice Evaluation Unit.

For nearly four decades at HMS, Dr. Thibault played leadership roles in many aspects of undergraduate and graduate medical education. He played a central role in the New Pathway Curriculum reform and was a leader in the new Integrated Curriculum reform at HMS. He was the Founding Director of the Academy at HMS, which was created to recognize outstanding teachers and to promote innovations in medical education. Throughout his career he has been recognized for his roles in teaching and mentoring medical students, residents, fellows, and junior faculty. In addition to his teaching, his research has focused on the evaluation of practices and outcomes of medical intensive care and variations in the use of cardiac technologies.

Dr. Thibault is Chairman of the Board of the MGH Institute of Health Professions, Chairman of the Board of the New York Academy of Medicine, and he serves on the Boards of the Institute on Medicine as a Profession and the Arnold P. Gold Foundation. He served on the President's White House Fellows Commission during the Obama Administration and for 12 years he chaired the Special Medical Advisory Group for the Department of Veteran's Affairs. He is past President of the Harvard Medical Alumni Association and Past Chair of Alumni Relations at HMS. He is a member of the National Academy of Medicine.

Dr. Thibault graduated summa cum laude from Georgetown University in 1965 and magna cum laude from Harvard Medical School in 1969. He completed his internship and residency in Medicine and fellowship in Cardiology at MGH. He also trained in Cardiology at the National Heart and Lung Institute in Bethesda and at Guys Hospital in London, and served as Chief Resident in Medicine at MGH.

Dr. Thibault has been the recipient of numerous awards and honors from Georgetown (Ryan Prize in Philosophy, Alumni Prize,

and Cohongaroton Speaker) and Harvard (Alpha Omega Alpha, Henry Asbury Christian Award and Society of Fellows). He has been a visiting Scholar both at the Institute of Medicine and Harvard's Kennedy School of Government and a Visiting Professor of Medicine at numerous medical schools in the US and abroad. In 2017 he was the recipient of the Abraham Flexner Award for Distinguished Service to Medical Education from the Association of American Medical Colleges and he was made an honorary Fellow of the American Academy of Nursing. He has received honorary doctoral degrees from Georgetown University, Wake Forest University and The Commonwealth Medical College.

Meghan Treitz, MD, is a general pediatrician and assistant professor of pediatrics at the University of Colorado School of Medicine and Children's Hospital Colorado, where she serves as the director of the pediatric resident advocacy program and associate director of the pediatric clerkship. Her academic interests include reflective practices, curriculum design, early childhood literacy, advocacy, and technology in teaching and learning. She is a mother, a storyteller, a thinker, a dreamer, an idea-maker, an advocate, a medical educator, a reader, a creator, and a lifelong learner.

Maria Wamsley, MD, is a professor of medicine at the University of California, San Francisco (UCSF). She is a member of the UCSF Academy of Medical Educators and has expertise in faculty development. She co-leads the School of Medicine's collaborations with the UCSF program for innovation in interprofessional education (IPE) and practice and co-chairs the IPE curriculum development committee. She has extensive experience in developing, implementing, and evaluating curricula and expertise in the use of standardized patients. She is co-director for the PISCES longitudinal integrated clerkship and director of the health professions education pathway, which provides additional training for undergraduate and graduate learners interested in education.