



# Innovations in Graduate Medical Education Aligning Residency Training with Changing Societal Needs

A Report on Six Regional Conferences from the Josiah Macy Jr. Foundation and  
Vanderbilt University Medical Center  
University of Texas MD Anderson Cancer Center  
University of California, San Francisco School of Medicine  
University of Washington – WWAMI Regional Medical Education Program  
Partners HealthCare  
University of Michigan Medical School

November 2016

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Cover: A Vanderbilt University conferee reporting on a breakout group session.

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**University of Michigan Medical School**

Edited by Teri Larson



November 2016



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# INTRODUCTION

## GEORGE E. THIBAUT, MD

For the past nine years, the theme of the work of the Josiah Macy Jr. Foundation has been the alignment of health professions education with a changing healthcare delivery system and with changing societal needs. That work has been and continues to be rewarding, and much has improved in the pre-licensure education of health professionals—particularly in the area of interprofessional education (IPE).

The high degree of decentralization and variability across graduate education programs in the health professions presents a complicated puzzle for those seeking to reform and innovate current practices. Within the health professions, physician training is the largest formalized educational enterprise, comprising more than 10,000 residency and fellowship programs across the United States. This is the pathway that physicians must take to be certified for independent practice in the various specialties in medicine. In the US, the GME system trains more than 120,000 residents per year.

This system for the graduate education of physicians is held in high regard around the world and has produced well-trained physicians for the United States. But like all parts of our health professions education system, it must adapt to changes in the delivery system, changes in disease burden, and changes in the demography of patients served. Because the system is so large and complicated, regulated by a national body [the Accreditation Council for Graduate Medical Education (ACGME)], and heavily funded by federal dollars (largely, but not exclusively, through the Medicare program), it has been thought that any widespread and lasting reforms of this system would require a national approach.

This was, in part, the thrust of two Macy Conference reports<sup>1,2</sup> published in 2011, as well as the 2014 Institute of Medicine (IOM) report<sup>3</sup>, which was prompted by the Macy reports. When these careful and thoughtful publications—written by distinguished academics and policy leaders—failed to galvanize support for recommended reforms, there was an impression in some sectors that change is either not possible or not desirable.

An alternative view is that an overarching national strategy may not be the way that reform can or should take place. I know from my own travels across the country that a lot of innovation is happening in GME under local leadership and in response to local needs. I hypothesized that local and regional innovations could add up to national innovations if we could describe, encourage, and disseminate these innovations. That led the Macy Foundation to look for academic partners to sponsor regional meetings to showcase GME innovations. We received enthusiastic acceptances from the first six we asked (and we know we could have had more). The six were chosen to achieve geographic spread. Each site was given independence in selecting its planning committee, format, and themes—the only caveat being that the conference needed to highlight innovations in the graduate education of physicians. In order for the Macy Foundation to provide support and be present at all the conferences and in order to create a “learning community” that would learn from the process itself, we decided that the conferences would occur over a four-month period in 2016, from early February to late May. Each committee would plan its own conference, but the chairs would be kept informed of the planning process of the other conferences through regularly scheduled conference calls of the chairs and Macy staff.

As you will see from the conference reports, which comprise chapters 2–7 of this publication, the planning committees exercised their independence and planned six distinct conferences. But from the beginning, there were some commonalities. The first was enthusiasm for the process in all the sites. The second was the desire to be as inclusive as possible and to reach out broadly for participants from community training sites and state and local organizations. And third, all of the planners were

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1 Michael ME Johns, Chair. Ensuring an Effective Physician Workforce for America: Recommendations for an Accountable Graduate Medical Education System. Proceedings of a Conference Sponsored by the Josiah Macy Jr. Foundation, held in Atlanta, GA, Oct. 24–25, 2010; New York: Josiah Macy Jr. Foundation, 2011.

2 Debra Weinstein, Chair. Ensuring an Effective Physician Workforce for the United States: Recommendations for Graduate Medical Education to Meet the Needs of the Public. Proceedings of a Conference Sponsored by the Josiah Macy Jr. Foundation, held in Atlanta, GA, May 2011; New York: Josiah Macy Jr. Foundation, 2011.

3 Institute of Medicine. Graduate Medical Education that Meets the Nation’s Health Needs. Washington, DC: The National Academies Press, 2014.



thinking about the connection between GME and the community served and between GME and the health of the public. These connections were reflected in the titles chosen for several of the conferences and in the topics chosen for discussion.

The six conferences had nearly 800 participants who came from 39 states and the District of Columbia. We knew we could not possibly capture all the innovation that is occurring, but we wanted to be as broadly representative as possible.

The conference series also was enriched by having two national organizations represented at each of the conferences. The ACGME, which is responsible for accrediting graduate medical education programs in the US, asked to have two representatives at each conference so that they could learn about innovations and be in a better position to support them. They made it clear that they were not there in an official, regulatory role, but only as learners. I believe the changes in the ACGME under Tom Nasca's leadership—as exemplified by the Next Accreditation System and the Clinical Learning Environment Review (CLER) program—have helped promote an atmosphere conducive to innovation. The Department of Veterans Affairs (VA) also asked to be at every meeting. The VA is involved in training more than one-third of all residents in the US and has been a laboratory for innovations at the interface of education and healthcare delivery. One example of this commitment has been the creation of the Centers of Excellence in Primary Care, which have fostered a model for IPE and collaborative practice.

This report gives an overview of the six conferences and an individual report on each. I want to briefly anticipate some of what follows by giving my impressions of the commonalities of the meetings and comment on the six themes that emerged that I think tell us a lot about the direction in which GME is going.

Common to all the meetings was the enthusiasm and gratitude of all the participants. Many commented that they had never had the opportunity before to meet with colleagues in the GME world in such an open setting to discuss ideas about education. They found it both validating and stimulating. Second, they all saw technology as a potential ally in achieving their educational goals. They wanted to learn more and stimulate more support for technology across the range of potential applications, from simulation, to online learning, to computerized feedback, to videos, to apps and games. Third, they all wanted to keep this momentum going, both for their own personal growth as well as for the dissemination of the work they are doing. At least one follow-up regional meeting is already being planned and other follow-up plans are under discussion.

As to themes, I saw six important themes that came up to varying degrees at all of the conferences. The themes are interrelated and, together, I believe, they will help define new directions for GME:

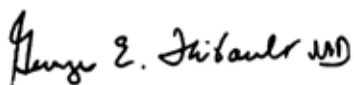
1. GME must be more outward-looking. As a former program director, I know very well how easy it is to become preoccupied with the details of scheduling, compliance, and local problem solving. But the excitement and the future of GME lie in seeing it as a tool to improve the health of the public, to address health disparities, and to deal with the broader social determinants of health. This was the theme of many of the innovations presented. Of course, expanding GME's focus cannot replace the attention it pays to learners' acquisition of basic doctoring skills. But it can broaden the settings and context in which these skills are acquired.
2. Residents can be empowered to improve the quality and value of care. Leaders of healthcare organizations need to stop thinking of residents (or residencies) as a problem, but rather think of them as part of the solution. Residents comprise a talented workforce that, when appropriately trained, deployed, and incented, can help achieve institutional goals to improve quality, safety, and efficiency. Many examples of this strategy were presented.
3. Residency programs (and sponsoring institutions) will need new partners to adequately train residents for all needed career pathways and to make more contributions to the health of the communities they serve. We heard many examples of this theme, including details about the faculty development that will be necessary to make this successful.
4. Training will become more individualized. This means developing special tracks to prepare trainees for careers in, for example, rural medicine or urban medicine. But it also involves individual feedback based on real-time experience to enable trainees in all programs to address deficiencies in an individualized way. It also means a greater attention to resident wellness to avoid burnout and to help prepare for a career as a resilient life-long learner. We heard examples of all three forms of individualization.
5. Residency programs will focus more on the importance of teamwork training and interprofessional collaboration. All physicians will work in

teams throughout their careers, and more time in residency must be spent with learners and practitioners from other disciplines and professions with an explicit goal of developing team competencies. This is the most nascent of the themes, but many examples are emerging.

6. The funding of GME is becoming more diversified. This diversification is both a result of the above trends and an impetus to these trends. As programs become more outward-looking and community focused, and as they develop new partnerships, they can garner support for meeting system, state, and regional needs. Continuing to meet these needs, then, becomes a condition for continued funding. States have been the most frequent alternative funder of programs, through both Medicaid and line item appropriations for GME. Other federal agencies—such as the Health Resources and Services Administration (HRSA) and the VA—have also increased GME funding to accomplish the specific missions of those agencies. Medicare will remain the principle funder, and these alternative funding strategies may be a model for continued or additional Medicare funding.

My overall feeling after these intensive months of planning and conference execution is one of exhilaration and optimism. I am enormously impressed by the energy, creativity, and sense of social mission among our GME leaders.

From the cumulative vision of these conferences we can begin to draw a picture of the GME system of the future—one that is more outward-looking and community-oriented; one that empowers residents to improve the healthcare system and the health of the public; one that individualizes training and is more humane; and one that is interprofessional and collaborative. Many examples of innovations about which we learned are generalizable and adaptable to other settings. The sum total of these local and regional alignments between education and societal needs can begin to look like a national alignment if they are supported, encouraged, and disseminated.



**George E. Thibault, MD**

President, Josiah Macy Jr. Foundation



# CHAPTER 1

## OVERVIEW OF MACY REGIONAL CONFERENCES ON INNOVATIONS IN GME

A transformation is taking shape in graduate medical education in regions across the country. That was the belief of the Josiah Macy Jr. Foundation, which has been working in recent years to better align GME, the residency training period for physicians that leads to independent practice in the various specialties of medicine, with the realities of clinical practice and the healthcare needs of society. To identify, highlight, and promote the elements of this transformation, the Foundation co-hosted, with major academic health centers, six regional conferences focused on sharing innovations in GME.

“We’ve been seeing a lot of new energy in the field around reforming and improving today’s GME system, and we want to capitalize on that,” said Macy Foundation President George Thibault, MD. “While changes are necessary at the federal level, the reality is that such changes will take time, and we need to move much faster. There are many GME innovations already happening across the country that we can learn from and share with one another.”

Thus, the Macy Foundation invited six academic health centers to co-host regional conferences featuring GME innovations. The locations and dates of the conferences were:

- Vanderbilt University Medical Center, Nashville, TN *February 1, 2016*
- University of Texas MD Anderson Cancer Center, Houston, TX  
*February 17, 2016*
- University of California, San Francisco School of Medicine *March 30, 2016*
- University of Washington – WWAMI Regional Medical Education Program, Spokane, WA *March 31–April 1, 2016*
- Partners HealthCare, Boston, MA *May 6, 2016*
- University of Michigan Medical School, Ann Arbor, MI *May 23–24, 2016*

These regional conferences continued the Macy Foundation's past investments in making GME more accountable to the needs of the public. In 2010, the Foundation hosted a conference focused on the governance and financing of GME. A year later, it hosted a follow-up conference on the content and format of GME. In 2011, the Foundation published two reports—*Ensuring an Effective Physician Workforce for America: Recommendations for an Accountable Graduate Medical Education System* and *Ensuring an Effective Physician Workforce for the United States: Recommendations for Graduate Medical Education to Meet the Needs of the Public*—highlighting the recommendations and conclusions from the conferences.

In 2012, the Foundation continued its GME efforts when, along with the Health Resources and Services Administration, the Veterans Health Administration, and 11 other private foundations, it supported an independent review of the GME system by a 21-member committee of the Institute of Medicine. In its 2014 report, *Graduate Medical Education that Meets the Nation's Health Needs*, the IOM committee concluded that there is "an unquestionable imperative to assess and optimize the effectiveness of the public's investment in GME," and recommended significant reforms in GME governance, financing, and structure.

According to the IOM report: "Since the creation of the Medicare and Medicaid programs, the public has provided tens of billions of dollars to fund GME in teaching hospitals and other educational institutions. Yet, under the current terms of GME financing, there is a striking absence of transparency and accountability for producing the types of physicians that today's healthcare system requires."

But major changes in federal programs don't happen overnight, despite the fact that health care is changing rapidly and dramatically—the American population is aging, growing more diverse, and experiencing higher rates of chronic conditions at the same time that the Affordable Care Act (ACA) is expanding access to care for more people. Many leaders and educators in medicine as well as healthcare administrators and state policymakers are recognizing that GME must keep up or be left behind. Changes in GME are happening on the ground in ways that are designed to help meet the needs of local populations.

It is these regional innovations that the Macy Foundation wanted to capture and share through the six regional conferences. Each conference had its own local planning committee, structure, mix of topics covered, and regional flavor. Some conferences, for example, went deep into rural health issues and the recruitment and retention of primary care residents. Some focused more on quality improvement,

community-based training opportunities, or interprofessional education and teamwork. At some, health disparities or mental health care were front and center, and some explored ways to increase workforce diversity or use technology to improve pedagogy.

The Foundation's only directive: that, regardless of priorities and focus areas, the conferences feature innovations in GME happening in the regions so they could be shared broadly and, we hope, inspire similar efforts across the country. To this end, the Foundation enthusiastically agreed to a request from the Accreditation Council for Graduate Medical Education (ACGME), which is responsible for accrediting physician residency programs, that its representatives also participate in the conferences. As a result, ACGME representatives attended every conference. Macy Foundation President George Thibault explained their presence at one of the meetings: "ACGME representatives are coming to these meetings specifically because they are interested in creating greater flexibility in their accreditation policies. They're here to learn; they are listening." Representatives from the Veterans Health Administration expressed similar enthusiasm and also participated in the regional conferences.

This report captures both the overarching themes that ran through all the conferences as well as the regional characteristics and differences that made each unique. The hope is that the conversations that started in each of the six regions will continue, and that the innovations highlighted here will inspire creativity in GME programming across the country.

## THEMES ACROSS SIX REGIONAL CONFERENCES

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While the six regional conferences were quite different, there also were many similarities. In particular, several common themes ran through all or most of them to varying degrees. These themes are useful to highlight and discuss because they illustrate the Macy Foundation's purpose in sponsoring the conferences: to celebrate the fact that, despite the lack of an organized national effort to reform GME to keep pace with the rapidly changing American healthcare system, it is evolving regardless—in ways big and small in regions all across the country.

## The six themes that ran through the conferences were:

1. GME is becoming more outward-looking with more emphasis on social mission and community engagement.
2. GME is empowering residents to help create high-value health care.
3. GME is expanding, creating new partnerships, and developing training opportunities in different settings.
4. GME is focusing on more individualized training.
5. GME is including more interprofessional and interdisciplinary, team-based clinical and educational experiences.
6. GME is attracting new sources of funding beyond Medicare.

Below, we discuss in more detail some of the ways that change is occurring within and around GME, as indicated by what we heard at the conferences. We also provide a sampling of featured innovations, illustrating the themes. We believe the themes represent trends in GME that hold positive implications for the future of health care in America.

The challenge before us as a society—and also as healthcare leaders, educators, learners, and patients and their families—is to act now on the opportunity to appropriately align the graduate education of physicians with both the realities of clinical practice and the healthcare needs of individuals and communities, so that tomorrow’s health system is one of high-value care and improved health for all.

### **1. GME IS BECOMING MORE OUTWARD-LOOKING WITH MORE EMPHASIS ON SOCIAL MISSION AND COMMUNITY ENGAGEMENT.**

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During his keynote at the University of Michigan conference, Paul Batalden, MD, of the Institute for Healthcare Improvement and the Geisel School of Medicine at Dartmouth University, evoked a version of the adage “Systems are perfectly designed to achieve exactly the results they achieve.” It’s a saying that was heard at several of the regional conferences and is heard often in healthcare reform discussions across the nation as we seek to redesign our healthcare system to obtain more desirable results—better health for all at a lower cost. Dr. Batalden emphasized the concept of “co-producing” health with the communities we serve and the need to harness GME programs and residents as part of that co-production.



Graduate medical education is part of the American healthcare system. Historically, like all other parts of the system, it has operated largely independently. But GME is part of the pipeline that creates new physicians. It's the bridge period between medical school and professional practice. A speaker at one of the regional conferences characterized residency as the time when practice habits, attitudes, professional identity, and more are imprinted on new physicians. And, given that GME is funded by \$15 billion of public money, it is crucial that GME align its physician training efforts with the needs of patients, families, and communities and with the realities of clinical practice. This means more engagement with the communities we serve and a wider distribution of residents.

Thus, we are beginning to see, in regions across the country, GME programs that once were inward looking silos, beginning to look outward and toward the future. As Joseph Kolars, MD, senior associate dean for education and global initiatives at the University of Michigan Medical School, observed: it used to be that "80% of the conversations at these (GME) meetings were focused on practical details like curriculum, funding, duty hours, milestones, recruitment, slots, etc. Now, we're here asking ourselves bigger questions: 'What is the relationship between GME and the quality of care? What is GME's role in improving the fact that the United States ranks only 37th in the developed world in health outcomes?'" He went on to say, "We're participating in a team sport and we need to be thinking that way."

One of the thorniest issues that all six of the regional conferences tackled is the current mismatch between the supply of and demand for physicians in certain regions and in certain specialties. While news headlines in recent years have reported on a widely predicted "shortage" of doctors, speakers across the conferences characterized the mismatch as a maldistribution of physicians as opposed to an absolute shortage. More affluent communities and regions appear to be adequately served, while rural areas and lower income areas are strikingly underserved, by both primary care specialties (family medicine, internal medicine, and pediatrics) and other specialties, particularly psychiatry, general surgery, and obstetrics/gynecology. The challenge to GME is to find ways to create more community-based residency programs in rural and underserved areas, particularly in primary care.

For example, according to Andrew Bindman, MD, a University of California, San Francisco (UCSF) professor of medicine and presenter at the UCSF regional conference, in California, more than two-thirds of annual GME funding goes to acute care hospitals in and around Los Angeles and San Francisco. This correlates

with where most doctors in the state practice. Conversely, the rural and largely poor San Joaquin Valley has far fewer physicians per capita, the highest hospitalization rates for preventable illnesses, and the largest increases in Medi-Cal (Medicaid) enrollment.

GME alone cannot solve the maldistribution issue, but as seen at the regional conferences, it can innovate in ways that begin to address the needs of local communities, including creating opportunities for residents to practice and gain skills in community health, population health, and social determinants of health.

## Examples of Featured Innovations

- Florida International University is training both medical students and residents to address health needs in the local community. Family medicine residents, for example, are assigned to follow two South Miami households longitudinally, providing clinical services and support around issues related to the social determinants of health. Residents also may participate in a mobile health center.
- The Faculty Scholars in Health Disparities and Culturally Responsive Care Program at the University of Alabama School of Medicine (UASOM) seeks to generate a cadre of teaching faculty who will act as institutional champions to support the further development, implementation, and evaluation of curricula that improve integration of training in health disparities and cultural competence across the entire spectrum of medical education within UASOM and all affiliated academic medical centers.
- At Texas Tech, an accelerated family medicine track focused on the training and retention of rural primary care practitioners enables medical students to transition into their first year of residency during what would traditionally be their fourth year of medical school. The program has increased the number of family medicine practitioners in the region.
- Southern California Kaiser Permanente's community medicine fellowship is developing physician leaders who are passionate about community medicine. The program allows recent graduates in medicine, pediatrics, or family medicine to gain meaningful experience in caring for underserved patients in federally qualified health centers (FQHCs), free clinics, school-based clinics, and clinics serving people who are homeless. It also allows

the fellows to work with community health leaders to learn about upstream factors that affect health and to engage in community advocacy.

- Family and community medicine residents at UCSF/Zuckerberg San Francisco General participate in the Advocacy, Community Engagement, Quality Improvement, and Leadership Academy, which provides a structured three-year curriculum on the care of underserved and vulnerable populations. The first year focuses on understanding patients' needs; the second, on developing skills to meet those needs; and the third, on practicing those skills.
- The WWAMI Family Medicine Residency Network is a group of 29 affiliated residency programs located in Washington, Wyoming, Alaska, Montana, and Idaho. The Network, which is based at the University of Washington School of Medicine, promotes excellence in family medicine residency education, provides academic leadership, and responds to the demand for family physicians across the five-state region.
- Partners HealthCare's Kraft Center for Community Health Leadership has two programs designed to bolster the primary care workforce. The Center's fellowship program, available to residency graduates in internal medicine, family medicine, pediatrics, obstetrics/gynecology, and psychiatry, includes community health center-based clinical practice; matriculation at Harvard School of Public Health leading to an MPH degree; and participation in a formal curriculum emphasizing health disparities, social determinants of health, quality improvement, management, and leadership. A parallel practitioner program is focused on recruiting early-career physicians and advanced practice nurses.
- Detroit Wayne County Health Authority's Teaching Health Center program (funded by a HRSA teaching health center grant) sponsors the nation's largest community-based health professions training program, including more than 70 residents. Upon completion of their community-based training, residents receive a diploma from Michigan State University College of Osteopathic Medicine and a population health certificate from the University of Michigan School of Public Health.

## 2. GME IS EMPOWERING RESIDENTS TO HELP CREATE HIGH-VALUE HEALTH CARE.

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Just as GME itself is an important component of health system reform, so too are residents. Increasingly, residents are viewed as assets within clinical practices and healthcare systems. As the Macy Foundation's George Thibault said, "Residents are not part of the problems in health care; they are part of the solution."

And just as GME leaders are looking outward and forward, so too are residents, who want to be prepared for the health system of today and tomorrow, not yesterday. Across all six regional conferences—all of which engaged residents as participants, panelists, and/or presenters—it was clear that attendees viewed residents as assets capable of making positive contributions to patient care, quality improvement, problem solving, leadership, teaching, teamwork, culture change, and more within clinical practices.

Recent research—conducted by the UCSF Center for Excellence in Primary Care and sponsored by the Macy Foundation and the Association of American Medical Colleges (AAMC)—looked at 23 primary care outpatient residency clinics across the country and identified six characteristics common to the most successful. Dubbed the "Clinic First" approach by researchers, among the six keys to successful primary care clinics was the guidance to "engage residents as co-leaders of practice transformation."

Efforts to empower residents have been bolstered by the ACGME's Clinical Learning Environment Review (CLER) program, instituted in 2011, which encourages hospitals, medical centers, and other accredited clinical sites to engage residents in six specific areas—patient safety; health care quality; care transitions; supervision; duty hours and fatigue management and mitigation; and professionalism. Required CLER site visits provide the institutions with feedback "designed to encourage clinical sites to improve engagement of residents and fellow physicians in learning to provide safe, high-quality patient care."

CLER is helping validate and improve efforts to engage residents more deeply, encouraging them to invest in and take ownership of the care being provided. Many institutions are learning that physician trainees bring fresh creativity, energy, and talent to their roles that can be harnessed to help reduce disparities and improve care.

## Examples of Featured Innovations

- A resident-led effort among eight different departments at Vanderbilt University Medical Center focused on identifying ways to reduce wasteful or unnecessary medical tests, treatments, and procedures. The educational program resulted in significant reductions in blood draws and increases in inpatients' lab-free days. Leadership has committed to investing in technology to automate data gathering.
- In Atlanta, Grady Hospital is the major teaching institution for both Emory University School of Medicine and Morehouse School of Medicine. The hospital's chief resident council addresses resident issues and shares information. One of the council's focuses has been patient safety and transitions in care. Residents performed an inventory on the types of care transitions across institutions, programs, and specialties. Once the project was complete, best practices and new policies on care transitions were developed and implemented.
- GME leaders at the University of Virginia Health System hypothesized that a resident-driven project to improve a quality metric would have a better chance of succeeding than a top-down mandate. The residents leading the effort chose patient satisfaction—specifically a one percentage point increase in patient satisfaction around communications with physicians—as their main target, and the health system offered residents an incentive bonus for meeting the target. Results are currently being analyzed.
- UCSF Medical Center conducts an institution-wide quality improvement program for all residents and fellows. Each year, three goals are set: one measure of patient satisfaction, one quality and safety goal, and one operational goal. Program-specific quality initiatives are also developed. Over the 10-year program period, approximately two-thirds of the all-program goals and three-quarters of the program-specific goals have been met. Financial incentives have been provided for successful goal completion, with each resident and fellow receiving an average of \$800 per year, costing the medical center approximately \$800,000 per year. Formal analysis of several of the projects has demonstrated an effective return on investment for the medical center and enhanced practice-based learning and system-based practice for the residents and fellows.

- A resident-led, interprofessional collaboration at UCSF improved medicine reconciliation at inpatient admission. Residents worked with a team of pharmacists, nurses, attending physicians, and administrative staff to observe providers, identify barriers, generate ideas to improve medication reconciliation, and test interventions. The residents created a dissemination plan for the new standard work that included pocketcards for house staff and a best practices video to be shown at monthly orientations. The effort resulted in a significant increase in the number of patients who received a complete medication reconciliation.
- At Henry Ford Health System in Detroit, the Academic Patient Centered Team Care (A-PCTC) Clinic pursues a dual mission: to advance the health and well-being of its patients and to educate tomorrow's healthcare leaders via clinical training programs, research, and quality improvement. As part of the clinic's redesigned care delivery model and its outpatient training curriculum, internal medicine residents and faculty lead interdisciplinary care teams that seek to address each patient's medical, behavioral, and social needs. The A-PCTC clinic's daily work is focused on improving the patient experience, teamwork, quality of care, and education.
- Advocate Lutheran General Hospital in Chicago serves as the regional hub for a new, three-year Macy Foundation funded program, Professionals Accelerating Clinical and Educational Redesign (PACER), involving nine institutions and 27 primary care residencies. Faculty serve as coaches for quality improvement initiatives that are resident-led, longitudinal, team-based, interprofessional, and focused on specific care objectives (e.g., performance on diabetes management indicators).

### **3. GME IS EXPANDING, CREATING NEW PARTNERSHIPS, AND DEVELOPING TRAINING OPPORTUNITIES IN DIFFERENT SETTINGS.**

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Closely related to the more outward-looking nature of GME and the empowerment of residents is the development of new clinical training sites, particularly in community-based, primary care settings that offer a much different learning environment than the traditional teaching hospital. At every regional meeting, participants discussed residency programs and rotations being established in

non-traditional settings, including FQHCs and other ambulatory care clinics, community hospitals, rural health clinics, Indian Health Service and Tribal clinics, homeless shelters, mobile health units, and more.

The expansion of training sites includes both established programs adding rotations at new sites and the creation of entirely new programs. In many cases, GME leaders are successfully making the case to new partner organizations that participating in GME is both a public service and an aid to achieving their healthcare and community goals. This case is much easier to make, of course, in places where the state legislature or a community consortium has pledged financial support for new or expanded residency programs.

At the regional conference held in Spokane, WA, Judith Pauwels, MD, associate director, program development and accreditation for WWAMI, presented on the “Development of New GME Programs.” During her presentation, she acknowledged the challenges inherent in creating a new program, including financing (up to \$1 million in start-up costs) and the amount of time it takes to get a program off the ground (3–5 years). But she also said that “now is an opportune time to make the case to communities, before the hole (lack of access to primary care) gets too deep.”

Another avenue that has led to the development of new community-based training sites has been HRSA’s Teaching Health Center (THC) Graduate Medical Education program, which began in 2010, under the auspices of the ACA, as a five-year, \$230 million grant initiative to increase the number of primary care residents and dentists trained in such settings. During the 2015–2016 academic year, 59 Teaching Health Center Graduate Medical Education programs in 24 states supported nearly 690 residents. The program was reauthorized in 2015 for two years and \$120 million. The strong support expressed for this program and the very positive results to date are reasons this program should be continued.

## Examples of Featured Innovations

- In 2015, partnering with Florida International University’s Herbert Wertheim School of Medicine, the Citrus Health Network, in Hialeah, FL, became the first FQHC to sponsor an ACGME-accredited psychiatry residency program.
- At Baptist Health System in Birmingham, Alabama, second-year internal medicine residents conduct house calls with an attending physician for two half-days per week over the course of a one-month quality improvement

rotation. The program has resulted in positive outcomes for patients, in terms of reduced readmission rates among those who received house calls. But, according to program leaders, the most important impact has been on resident physicians and their increased understanding of socioeconomic status and living conditions on the health of their patients.

- There currently are six THC training family medicine residents in California. One of the THC also trains residents in pediatrics and psychiatry. Three of the programs existed prior to the availability of HRSA's THC grant funding, and three are new programs created with the funding. Four of the programs are affiliated with FQHCs and two are part of a community-based GME consortium. All of the state's THC are located in medically underserved areas, with four in the rural Central Valley and Inland Empire regions, one in a small city in the northern part of the state that serves a medical hub for rural residents, and one in an underserved area of San Diego. Most of the residents who complete the THC programs—a total of 107 residents are admitted each year—remain in safety net practices, either in the facility where they trained, in the same community, or in another community.
- The Alaska Pediatrics Residency Track enables pediatric residents at Seattle Children's Hospital to have the opportunity to spend four months a year (for three years) working in community-based settings in Alaska. Training sites include the Yukon-Kuskokwim Health Corporation, which serves a high-risk Native population in a remote region.
- In partnership with a rural, 25-bed critical access hospital, the Maine Medical Center, a large, tertiary teaching hospital in Portland, has established a rural track as part of its internal medicine residency program. The Rural Internal Medicine Maine (RIMM) program partners with Stephens Memorial Hospital in Norway, Maine, a community of 5,000 people located 45 miles to the north of Portland in the foothills of the White Mountains. The program allows residents to alternate their training experiences between two very different practice sites, enabling them to gain a deeper understanding of population health and the social determinants of health as well as expertise in rural practice where resources are more limited.
- The Family Medicine Residency of Western Montana is the only family medicine program in this rural region. The program, based in Missoula



with some residents based out of Kalispell, involves the University of Montana, two community health centers, three primary hospitals, nine rural communities, a core faculty, and more than 300 regional physicians.

- In a rural area of upstate New York, where physician recruitment challenges were negatively impacting access to services, ArnotHealth, a community-based healthcare system in Elmira, NY, is collaborating with Lake Erie College of Osteopathic Medicine to develop a GME program as means to “grow their own” physicians in the area.

## 4. GME IS FOCUSING ON MORE INDIVIDUALIZED TRAINING.

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Higher education in general is moving toward individualization and personalization, allowing learners input into what they learn and how they learn it. This may include allowing learners to participate in the design of their own educational program, including determining focus areas, pace of learning, desired teaching methods, learning environment, feedback and assessment processes, etc. This is the opposite of didactic teaching in more traditional programs in which all learners receive the same information and are assessed in the same ways. In GME, individualization and personalization give physician trainees more control over their professional development and career paths as well as their personal well-being—and create room to both reduce burnout and improve patient care.

During the regional conferences, these approaches came up in several ways. There were many programs presented that have created specific tracks to train residents for certain career pathways. There also was significant discussion about the use of data and measurement and the best ways to track and assess skill development among residents. More programs are using real-time data to assess a resident’s readiness for subsequent rotations or to design added experiences.

We also heard at every conference concerns about resident burnout and the need to coach residents in self-care and stress management. This increasing focus on physician wellness is leading to a number of important innovations aimed at making the training experience more humane.

## Examples of Featured Innovations

- The UCSF Osher Center for Integrative Medicine is piloting a new wellness curriculum with residents in three departments: family and community medicine, internal medicine, and pediatrics. The curriculum, Supporting Provider Resilience by Upping Compassion and Empathy (SPRUCE), is a scalable, technology-assisted training in emotion regulation and mindfulness meditation to cope with work stress, sustain adaptive empathy, and reduce the likelihood of burnout, which is thought to affect 50–80% of residents. Preliminary data suggest residents benefit from a variety of approaches to delivering wellness trainings.
- At Seattle Children’s Hospital, the Resident Education and Advocacy in Child Health (REACH) pathway for pediatric residents trains residents to look beyond the walls of the clinic and hospital to understand child health in a community context. Residents in these pathways explore fundamental questions related to child health through a mini-public health curriculum, community-based projects, and a two-month immersion stream that engages them either in community health locally or in global health in Kenya.
- Presented at the Partners GME conference, the System for Improving and Measuring Procedural Learning (SIMPL) is a mobile device application (app) that measures autonomy and performance after every procedure in which a surgical resident participates. The app, developed by the non-profit Procedural Learning and Safety Collaborative, which is supported by Massachusetts General Hospital (MGH), Northwestern University, and Indiana University, combines evidence-based assessment methodologies with a user-friendly interface, allowing residents and faculty to complete personalized assessments with as few as four “taps” on their smartphones. Faculty may also dictate feedback and data are available to all users in real time.
- The Pediatric Individualized Competency-based Curriculum (PICC) at Dartmouth-Hitchcock Medical Center aims to transform residency education by empowering residents to manage their own education under the guidance of a mentoring team. The program has four components, including an assessment system to track residents’ clinical competence as it develops; a longitudinal career development curriculum; faculty development; and

resident development through mentorship, conferences/retreats, and use of an electronic, individualized curriculum planning tool.

- The MGH's Professional Development & Coaching for Residents program was designed as a safe space for residents to reflect on their performance and discuss professional development. Working with non-evaluative coaches who have been trained in positive psychology principles and strength-based coaching allows residents to connect in a meaningful way with a faculty mentor who can help them build confidence and increase well-being. The program has 72 coaches for all 178 residents and is expanding.
- The Education in Pediatrics Across the Continuum (EPAC) program is an innovation in competency-based—as opposed to time-based—learning. This is a pilot project sponsored by AAMC and the Macy Foundation at four schools: University of Minnesota; University of California, San Francisco; University of Colorado; and University of Utah. Selected students going into pediatrics advance through medical school as they meet milestones and enter residencies in pediatrics at that institution based on achievement of competency.
- At the University of Michigan conference, several innovations were presented during a session on “Obtaining Personalized Outcomes Data for Residents.” The University of Cincinnati, for example, organizes residents into integrated practice teams that meet weekly to reflect on their performance and what they would like to improve. In another example, residents at St. Joseph Mercy Hospital in Ann Arbor, MI, gather their own patient outcomes data related to patient discharges. Twelve interns audit anonymous charts quarterly (240 discharge summaries total) and render scores based on established Joint Commission criteria. Both examples have generated positive outcomes and been documented in journal articles.

## 5. GME IS INCLUDING MORE INTERPROFESSIONAL AND INTERDISCIPLINARY, TEAM-BASED CLINICAL AND EDUCATIONAL EXPERIENCES.

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There is a growing recognition that high-value health care requires more team-based care. In fact, efforts to develop IPE programs—when learners from two or more professions learn about, from, and with each other to enable effective collaboration and improve health outcomes—have been on a steady rise in health professions schools. It is important that these interprofessional opportunities continue in residency and that residencies model interprofessional collaborative practice.

In addition to the importance of interprofessional opportunities, there is a need to increase the number of interdisciplinary educational opportunities across the specialties of medicine. All physicians are dependent upon their colleagues in other disciplines to provide optimal care to their patients, and more time needs to be devoted to learning how to make use of the special expertise of each discipline and communicate more effectively. But, until recently, interprofessional and interdisciplinary training opportunities have been rare in GME.

Interest in interprofessional, team-based training as an increasingly necessary component of GME was expressed at all meetings. GME leaders and faculty are seeing the benefits of adding interprofessional and interdisciplinary components to their training programs. At a time where there is more and more evidence that care delivered by well-functioning teams leads to better patient outcomes, cost savings, and higher patient satisfaction, there is good reason for IPE and collaborative practice to become a larger part of all GME programs.

### Examples of Featured Innovations

- Two programs in rural Texas are focused on training psychiatrists as part of a primary care team. At the University of Texas Northeast, psychiatry residents are practicing along with family medicine residents and other primary care team members in community-based clinics. And at the University of Texas Rio Grande Valley, psychiatry residents are embedded in primary care clinics and all rotations will be in teams with other health professionals, including primary care practitioners, social workers, pharmacists, and more.

- The UCSF-affiliated San Francisco VA Center of Excellence in Primary Care Education has introduced monthly, trainee-led case conferences to improve interprofessional, team-based care for high-complexity patients. These conferences—known as patient-aligned care teams’ interprofessional care updates (PACT-ICUs)—involve internal medicine residents, nurse practitioner students/residents, and other health professional trainees. The goals are to improve care by developing a multidisciplinary treatment plan and to increase trainees’ understanding of each team member’s role in caring for complex patients. Evaluations show that the conferences are achieving these goals.
- Primary care residents at the UCSF-affiliated San Francisco VA Healthcare System participate in a new, interprofessional, case-based patient safety curriculum that teaches a system analysis approach for assessing adverse events and near misses in their ambulatory clinic.
- The San Francisco VA Health System/Center for Excellence in Primary Care Education also presented innovations that included an interprofessional training program in shared medical appointments and an interprofessional training program in motivational interviewing. The shared medical appointment curriculum involves family medicine residents and nurse practitioner trainees using shared appointments to address chronic health conditions. Recognizing motivational interviewing as an important patient-centered component of shared medical appointments, the other innovative program is helping teams of internal medicine residents and nurse practitioner students learn the technique through a curriculum that involves real-time direct observation that allows learners to receive immediate feedback on their use of the motivational interviewing of patients.
- All 240 residents at the University of California, Irvine participated in an innovative, interprofessional full-day orientation training session on patient safety and quality improvement processes and initiatives.
- The Boise Center for Excellence in Primary Care is a model for IPE within the VA Health System and an important training opportunity for WWAMI’s family medicine residents. The program engages teams of trainees, including nurse practitioners, nurses, pharmacists, physicians, and psychiatrists. Together, they receive formal instruction and participate in workplace

learning opportunities, such as shared medical appointments and panel management. The program has resulted in positive outcomes for trainees, patients, and the health system.

- More than 2,500 participants, including practicing physicians, residents, nurses, respiratory therapists, mid-level providers, and other health professional learners, have completed the Simulation-Based IPE Team Training program at Brigham & Women's Hospital in Boston. The program was developed after a mock code event in 2004 identified poor teamwork and communication as the cause of a failure in patient care. The simulation program teaches a crisis resource management curriculum that includes support, role clarity, closed-loop communication, resource management, and global assessment.
- At Boston's MGH, the Inter-Specialty Patient Safety and Quality Improvement (PS/QI) Core Curriculum is a cross-specialty "core" patient safety/quality improvement (PS/QI) curriculum, which is linked to competency assessment and integrated with an institution's overall approach to teaching and engaging staff in PS/QI. Developed at MGH by a task force of PS/QI experts, GME leaders, educators, and trainees, the curriculum framework addresses competency objectives, delivery mechanisms, and assessment, and is applicable across all GME programs.

## **6. GME IS ATTRACTING NEW SOURCES OF FUNDING BEYOND MEDICARE.**

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Most of the nation's 120,000+ residency slots are funded primarily through Medicare, costing this federal program more than \$10 billion per year. The number of Medicare-supported residency slots, however, was capped in 1997. In spite of the cap, the number of residency positions has grown 1.7% per year over the past two decades. Because of the opening of new medical schools and the expansion of existing medical schools, the number of new medical school graduates increased 2.4% per year. During the UCSF meeting, Edward Salsberg, MPA, director of health workforce studies at George Washington University, referred to this as a "very slow squeeze."

Medicare, however, is not the only source of funding for GME, and there may well be increased diversification of funding sources in the future. Other federal government sources include Medicaid (combined state and federal), VA, and HRSA. In recent years, state governments, concerned about the health of their populations, especially those who are medically underserved, have started funding residency programs as a way to retain medical school graduates and address specific healthcare needs. According to the AAMC, research shows that 68% of physicians who complete all of their training in a particular state remain in that state to practice. Hospitals, health systems, and communities are also funding GME positions where they address the specific needs of the community. As the Macy Foundation's Dr. Thibault expressed during one meeting, "We're seeing an expanding mosaic of funding sources and options for GME."

## Examples of Featured Innovations

- State funding of GME was featured and/or discussed at most of the regional conferences. Examples of state funding innovations include the following:
  - Georgia – To address physician shortages, especially in primary care and in rural areas, the state funds efforts to increase the number of Georgia medical school graduates as well as expand existing GME programs and start new GME programs at new teaching hospitals.
  - Mississippi – The state created the Office of Physician Workforce in 2012 and authorized up to \$1 million per year for three years for any institution or entity willing to create an ACGME-accredited family medicine residency program.
  - Texas – Building on previous GME grant programs, the state allocated \$53 million in FY 2016–17 to continue growing GME programming and increasing the number of physicians in Texas. The funding supports grants to sponsoring institutions for the creation of new GME programs or expansion of existing programs, with a particular focus on programs that offer first-year residencies to graduates of Texas medical schools.
  - California – The California Workforce Policy Commission administers the state's Song-Brown grant program, which was funded with \$100 million over three years to increase the number of primary

care residency programs—including family medicine, internal medicine, obstetrics/gynecology, and pediatrics—in medically underserved areas.

- Nevada – During its last bi-annual session, the Nevada state legislature approved \$10 million over two years to develop and expand GME programs as a means to help address physician shortages in rural parts of the state.
- Oklahoma – Concerned about access to care in rural areas, the state’s Tobacco Settlement Endowment Trust awarded a six-year, \$3.8 million grant to help fund residency training programs. The grant to Oklahoma State University is being used to establish medical residency programs in mostly rural areas, including Ada, Ardmore, Lawton, McAlester, Norman, and Oklahoma City.
- Washington – The state has funded family medicine residency programs since the 1970s. Prior to the 2015 legislative session, the Family Medicine Residency Network was receiving approximately \$4 million per year for residency programs across the state. In 2015, the Network successfully obtained an additional \$8 million for the biennium (\$4 million per year) to support existing residency programs and develop new ones. Also in 2015, the state provided \$4 million for the biennium to train psychiatry residents in the integration of mental health into primary care practice. These funds are being shared between the University of Washington Psychiatry Residency Program and the Spokane Psychiatry Residency Program.
- GME consortia, created to help develop and support residency programs to meet regional needs, were also featured at the conferences, including:
  - Valley Consortium for Medical Education in Modesto, CA – Involving a variety of healthcare organizations in Stanislaus County, this community-based consortium sponsors and funds residency training.
  - Oregon GME Consortium – Realizing that achieving Medicaid expansions in rural areas of the state would be a challenge, hospitals, health systems, physician groups, and both Oregon



medical schools formed this consortium to help develop new rural residency programs, which will be funded by member pledges as well as a \$1.5 million allocation by the state legislature.

- Spokane Teaching Health Center (STHC) consortium – Comprising Empire Health Foundation, Providence Health Care, and Washington State University Spokane, this consortium was formed in 2013 to apply for HRSA's teaching health center funds as a means to support new residency slots in family medicine and internal medicine.

## CONCLUSION

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Aside from the six common themes outlined above, there were three overarching issues discussed during every conference: 1) the importance of integrating educational technology; 2) the value of convening, exemplified by the regional conferences; and 3) the importance of disseminating the innovations. Technology threaded its way as an issue through most of the conferences because of its recognized value as a tool to advance and improve GME. Online portals and telehealth programs, for example, can help support physician educators and residents practicing in remote locations. Simulation labs have been found particularly useful in practicing and evaluating team-based skills. And the value to GME of smartphone apps, such as the one described above that allows for more timely feedback loops between faculty and trainees, is limited only by imagination and development resources. Indeed, technology in all its many forms and functions is enabling and advancing many efforts to align health professions education and training with the evolving health system and needs of the public.

Another topic of conversation at every meeting was the need for more opportunities for the GME community—from leaders to educators to learners to accreditors and policymakers—to convene regularly on a local, regional, and/or national basis to share innovations and consider the bigger issues addressed at the six conferences. An audience member at one of the meetings made a well-received suggestion that a national stakeholder organization should create an online GME innovation portal to facilitate the dissemination of successful programs.

Finally, on the topic of dissemination, David Blumenthal, MD, MPP, president of The Commonwealth Fund, led a panel on disseminating innovation at the regional conference in Boston. His advice to GME innovators was to “recognize that you’re in the diffusion business: think about your innovation in terms of its diffusability; think about who the early adopters/early majority are and target your innovation to them; and remember that diffusion takes time.” Another piece of advice shared during the panel: “Don’t forget policymakers in your dissemination efforts.”

As president of the Josiah Macy Jr. Foundation, George Thibault was invited to wrap up several of the regional conferences with a summary of the important points he heard and the lessons he learned. As the conferences progressed and the evidence of the positive impact of reforms grew, he expressed ever more emphatically, “Without any national mandate to reform GME, you are showing we can do it. The unsettled time we’re experiencing right now in health care works to our advantage because innovation is called for, disruption is expected, and defense of the status quo is less acceptable. We must seize the moment and align GME with the future of health care in America. And we must recognize that our talented resident workforce can make important contributions to meeting the healthcare needs of the public.”





Donald W. Brady, MD

# CHAPTER 2

## VANDERBILT UNIVERSITY MEDICAL CENTER: GME AS AN INSTRUMENT OF CHANGE TO IMPROVE THE HEALTH OF SYSTEMS, POPULATIONS, AND SOCIETY

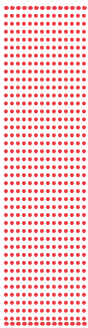
On February 1, 2016, Vanderbilt University Medical Center (VUMC) hosted a one-day conference entitled *GME as an Instrument of Change to Improve the Health of Systems, Populations, and Society*. The conference focused on three essential levels of healthcare delivery: systems, large segments of society, and specific populations (and the disparities in their care), with attention given to the ways in which graduate medical education can help address unmet needs.

### CONFERENCE PLANNING

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At VUMC, we worked quickly to form a planning committee whose members represented a broad section of the southeastern United States and for whom the theme resonated. The following people joined the planning committee.

- **Donald Brady, MD**, *conference chair*, senior vice president for educational affairs and designated institutional official (DIO), senior associate dean for GME and continuing professional development, VUMC
- **Yolangel Hernandez-Suarez, MD, MBA**, vice president & chief medical officer-integrated care delivery organization, Humana
- **Lloyd Michener, MD**, professor and chair, department of community and family medicine, Duke University School of Medicine
- **Bonnie Miller, MD**, executive vice president for educational affairs and senior associate dean for health sciences education, VUMC
- **Shelley Nuss, MD**, campus dean and DIO, Augusta University/University of Georgia Medical Partnership
- **Jim Zaidan, MD, MBA, ACGME** CLER site visitor



With in-kind support from the VUMC Office of Strategy and Innovation, the planning committee held a series of conference calls to develop an agenda that would do two things: 1) highlight innovations in graduate medical education in the southeast, particularly related to the three focus areas of systems, large segments of society, and specific populations (disparities); and 2) challenge participants to collaboratively iterate ways to scale and generalize these innovations to improve patient care at both the individual and population levels.

Transforming GME to meet society's needs requires a team approach, so the planning committee focused on inviting a broad range of individuals to participate in this conference, including institutional officials focused on GME (e.g., DIOs, associate deans for GME, key program directors); leaders of health systems; government representatives; education leaders; and public representatives. Given the conference theme, the committee invited not only people whose daily work relates directly to GME, but also people whose lives/roles depend on the quality of the doctors that the GME system trains and who may have valuable insights into the training of the next generation of physicians.

For the conference format, the planning group settled on using a DesignShop<sup>SM</sup> methodology, which, among other features, involves highly interactive, small-group problem-solving sessions. The primary goal was to share and showcase innovative efforts within the southeast region, and during breakout sessions, participants discussed the following questions: 1) Could these innovations be adapted to local needs and scaled? 2) If so, what steps and resources would be needed? and 3) What are the barriers?

## CONFERENCE OVERVIEW

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The conference began on Sunday evening, January 31, and extended through late afternoon on Monday, February 1. Sunday evening's focus was two-fold. First, it highlighted two innovations from each of the three thematic foci (systems, populations, society), specifically innovations addressing: 1) the use of reflective data to drive changes, 2) state-level funding initiatives for GME, and 3) healthcare disparities.

Second, the evening enabled conference participants to meet each other and begin building relationships. This was important because the broad diversity of attendees, from within and outside the GME world, meant that many of them did not know each

other. Participants came from Tennessee (21 participants), Florida (11), Georgia (10), Virginia (8), Mississippi (8), North Carolina (7), Alabama (6), Maryland (5), Kentucky (3), West Virginia (2), District of Columbia (2), South Carolina (1). In addition, there were representatives from the ACGME, the Centers for Disease Control and Prevention, the Josiah Macy Jr. Foundation, the U.S. Department of Health and Human Services, HRSA's Bureau of Health Workforce, and the Veterans Health Administration's Office of Academic Affiliations.

While ACGME-designated institutional officials/deans for GME made up the largest single demographic group (21), also present were program directors, residents, nursing leaders, department chairs, chief medical officers, and chief strategy officers from a variety of medical centers and academic institutions. In addition, two members of the board of directors of the National Association of City and County Health Officials; patient advocate leaders, including the CEO of the National Patient Advocacy Foundation; leaders of state hospital associations; minority health advocates; and many others were in attendance.

Macy Foundation President Dr. George Thibault began the conference on Sunday evening by elaborating for the group why the Foundation established the *Regional Conferences on Innovations in GME series*, including the importance of showcasing and disseminating innovations going on around the country. These innovations can help improve systems of care and help improve medical centers in ways that are not being recognized because health system leaders at multiple levels are not aware they exist.

Next, Dr. Donald Brady oriented the participants to the specific themes and format of the conference. In highlighting the diversity of participants, he pointed out that even the planning committee comprised physicians from six different medical disciplines (psychiatry, internal medicine, surgery, OBGYN, family medicine, and anesthesiology), four different states (Tennessee, Georgia, North Carolina, Florida), and both academic and health system leaders. Secondly, he grounded the group in the importance of using GME as an instrument of change to improve the healthcare system and the health of the population by spotlighting the incredible need to improve the healthcare statistics of the southeastern United States.

Finally, he opined that the group should use this conference as an opportunity to envision an improved future state of healthier individuals and populations, and an improved health care system. He challenged the group to consider both innovations currently ongoing in the south as well as the innovative ideas for improving physician

training posed by participants, such as patient advocates and public health leaders, who are not directly involved in GME, but are strongly invested in connecting it to the health of the public.

After these opening remarks, participants rotated through innovation presentations covering: 1) the use of reflective data to drive changes, 2) state-level funding initiatives for GME, and 3) healthcare disparities. These three areas of focus were chosen for specific reasons. At the societal level, for example, innovative models of GME funding might address overall workforce needs while recruiting and retaining physicians in underserved areas. Such efforts currently are underway in both Georgia and Florida.

Also, our local health systems must develop new ways of providing physicians with data about their practice patterns that encourage them to practice safely, induce sustained behavior change, and improve patient outcomes. VUMC residents have partnered with the "Choosing Wisely" campaign to reduce daily lab ordering, and are helping develop an informatics system that regularly provides practice-pattern data to house staff (and is scalable to all physicians and providers) with the goal of achieving high-value care. Finally, efforts are underway at several institutions across the southeast, ranging from large safety net systems to smaller community settings, aimed at addressing the needs of underserved groups and reducing healthcare disparities. The evening concluded with dinner.

On Monday, participants dove into the generative portion of the conference. After some stage-setting remarks from Peter Durand, the conference facilitator, each participant went to a whiteboard and outlined either a current innovation in GME in which they are involved or an innovative idea they had that could improve GME. In groups of six-to-eight people, the participants shared their ideas, coalescing themes and innovations that were presented to the larger group.

Then, Dr. David Owen, author of *Creative People Must Be Stopped: 6 Ways We Kill Innovation (Without Even Trying)*, and professor of practice of management and innovation at Vanderbilt University's Owen Graduate School of Management, presented a mini-workshop on the difficulty of innovation, often caused by our own inability to break through constraints. Participants then broke out into self-selected teams to define a problem in their topic area (populations, the educational environment, society, technology, or systems data) and identify potential solutions. They were then asked to identify possible constraints and to report out recommendations on how to address, diffuse, or overcome those constraints.



To end the conference, Peter Durand facilitated a wrap-up discussion, synthesizing the many themes and lessons from the conference. Donald Brady and George Thibault closed the session by thanking participants for their time and asking them to commit to pursuing one innovation in the GME space over the next year, write down that commitment, and post it on the board as they left. The planning committee committed, with help from the facilitation team, to gathering the commitment cards and redistributing them back to attendees six months after the conference so that they may reflect on their progress.

## SELECTED INNOVATION HIGHLIGHTS

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The following innovations were presented at the conference as examples of innovations in the region.

### Innovations in State Funding Initiatives for GME

#### **Georgia: Establishing New Teaching Hospitals and Residency Programs with State Support**

Dr. Shelly Nuss, campus associate dean for GME for the Georgia Regents University/ University of Georgia Medical Partnership, Medical College of Georgia, and Mr. Ben Robinson, executive director of the Center for Health Workforce Planning and Analysis, University System of Georgia, presented a brief perspective on Georgia's physician shortage and the state's innovative funding proposal to cover start-up costs for new teaching hospitals launching primary care GME programs. They addressed the issues to be considered when starting new GME programs (e.g., sustainable funding, regional distribution needs, specialty needs, and potential partnerships), estimated start-up costs and how to calculate them, and how the Georgia Board of Regents used such information to develop an expansion plan.

They also addressed lessons learned, including the importance of building relationships, educating legislatures, gaining buy-in from key stakeholders, and the need for understanding both state and local politics. Finally, they challenged the group to ponder the question of whether the building of new GME programs at new teaching hospitals is a state's responsibility and, if so, could Georgia's approach be replicated in other states? Or, if it's a federal issue, how can the federal government or Medicare fund new GME program development?

## Florida: Creating GME in the Setting of a New Medical School

In 2000, Florida invested in the creation of three new medical schools in response to the physician shortage predicted for the state. The role of advocating for increased GME slots has fallen in large part to these new medical schools. According to Dr. Yolangel Hernandez-Suarez, Florida International University's (FIU) new Herbert Wertheim College of Medicine has used the following approaches with varied success.

1. *Influencing hospitals without GME experience to start new residency programs. This was FIU's least successful effort.* The financial pressures faced by Florida hospitals—both private and public—have made chief financial officers wary of making long-term investments in GME. FIU was able to work with one non-profit system to start a family medicine program because the non-profit has a corporate strategy to own and operate primary care centers and saw the program as a recruitment pipeline.
2. *Leveraging reform to create new funding streams for GME.* In 2014, Florida undertook historic Medicaid reform, moving the program to a managed care platform. To secure the continued support of Medicaid for GME, FIU worked to educate the legislature of the threat of flowing those dollars through managed care organizations (MCOs). In 2014, the state moved \$70 million outside of managed care to flow to GME through the traditional CMS formula. Moreover, with the passage of the ACA, FIU was able to lobby for the creation of a new law in Florida that allows MCOs to contribute to GME through the medical loss ratio (MLR). To date, this has not been done as MLRs have been labile in the first two years of the ACA.
3. *Working with non-traditional GME partners to create new programs.* This was FIU's most remarkable win. It worked with an FQHC with a long history of training psychologists and social workers to establish a residency in psychiatry. This was funded through support from the FQHC, some startup funding from the state, and recurring HRSA dollars specific to training doctors in the ambulatory setting.
4. *Encouraging existing teaching hospital to increase residency programs/ slots.* This was moderately successful, with the addition of an anesthesia residency and a urology residency in an affiliate teaching hospital. The same hospital also added slots to its internal medicine program.

5. *Working with osteopathic programs for dual accreditation.* FIU began this work prior to the ACGME and American Osteopathic Association (AOA) joint position. It had a champion in the senior physician leadership in a system with over 100 osteopathic slots. The leadership worked to secure dual accreditation for internal medicine and pediatric programs. Although this did not result in a net increase of GME slots, it did open opportunities for FIU's allopathic grads.

## **Innovations in Addressing Healthcare Disparities**

### **FIU: Training the Future Workforce to Address Social Determinants of Health**

After discussing how the distribution of health and well-being among our population alternatively influences and is influenced by the healthcare system, one's social position, socioeconomic and political contexts, and personal factors, FIU's Dr. David Brown, vice chair of medicine, family medicine, and community health, explained the development of a service learning framework consisting of five constructs: 1) engage a tapestry of community partners, 2) harness resources with a coalition, 3) expose learners to social determinants of health at the household level, 4) practice health promotion and reflection, and 5) improve household health and learner competencies.

He also discussed the importance of academic centers defining community engagement and making it part of their mission. He explained how FIU's NeighborhoodHELP Academic Team comprised representatives from medicine, law, education, public health, social work, nursing, and outreach to accomplish their goals of addressing the needs of households through specific interventions and building social networks among various agencies (e.g., schools, faith-based organizations, government offices, healthcare providers, social service agencies, businesses, and daycare centers) at the household and community-based organization level. The group's initial impacts have been to increase the utilization of preventive health services and social services, decrease the utilization of the emergency room as a usual source of care, and increase the academic center's engagement with policy development and the social determinants of health.

## Innovations in the Use of Reflective Data to Drive Change in Healthcare Systems

### VUMC: House Staff Choosing Wisely Initiative

Presenter Dr. Meghan Kapp described how a group of house staff representing eight different departments across the medical center embarked on a process to teach themselves about organizational change principles and use that learning to advance dialogue at VUMC on avoiding wasteful or unnecessary medical tests, treatments, and procedures. Initially focusing on reducing the number of daily complete blood counts (CBCs) and basic metabolic panels (BMPs) drawn on patients on general medicine teaching services, the group created an educational campaign called “What’s Your Default?” It encourages providers to think about what tests are necessary and not just what is convenient.

The campaign, combined with weekly reflective data to providers, resulted in significant reductions in blood draws (absolute reduction approaching 30–35%), significant increases in patients’ lab-free holidays on inpatient services, and garnering of support from VUMC leadership for investment in information technology to automate reflective data gathering and delivery (e.g., because this effort was freeing nurses to spend more time in other efforts for better patient care). It also was expanded to other services and other needs (such as reducing the unnecessary use of telemetry and the use of daily chest radiography in the intensive care unit). The resident-led steering committee driving this effort has worked to disseminate their lessons learned by presenting at national conferences as well as at individual institutions in Tennessee and Connecticut.

Overall, more than 30 abstracts detailing GME innovations underway at institutions in the southeast (as well as a handful that are in the planning stages) were submitted and made available to conferees. These abstracts addressed one or more of the three topic areas of the conference: innovations in GME funding, innovations in addressing disparities, and innovations in the use of reflective data.

### Conference Assessment and Next Steps

Participants deemed the conference a success both because of its focus on GME innovations happening in the southeast and because it brought together groups that previously have not been directly involved in conversations about GME. The

conference assembled an incredibly diverse collection of people, all with a stake in how we train physicians to talk about GME and how we can innovate to drive system improvement. The conference leadership noted that GME innovations could be a lever to improve the health of people in the southern region, an outcome that will take years to achieve. The conference also encouraged participants to form new collaborations and partnerships, and continue sharing and leveraging innovations in GME to help drive system transformation.

The substantial creative energy among a very diverse group of people painted an optimistic picture of what the future of GME may be. Conference attendees and planners alike wanted the conference materials to be made available to everyone, including those who were unable to attend. The facilitation team for the conference created a web portal, which includes access to all abstracts submitted, all presentations made, videos of summary comments, as well as pictures from the conference and more.

Next steps include sending attendees their commitment cards so that they may reflect on their progress toward achieving their goal and/or on the constraints that have hindered their progress. The group realizes that the higher-level goal of using GME as an instrument of change to improve the health of systems, populations, and society in the southern United States is not a short-term endeavor and, by necessity, will require sustained effort and focus. The planning team has remained in contact and has begun active planning for a follow up conference on February 27, 2017.

## **Additional Information**

Conference materials are available at [https://strategyandinnovation.mc.vanderbilt.edu/160131\\_macygme/](https://strategyandinnovation.mc.vanderbilt.edu/160131_macygme/). Please contact Donald Brady with any questions.







Diane C. Bodurka, MD, MPH

THE UNIVERSITY OF TEXAS  
MD Anderson  
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# CHAPTER 3

## UNIVERSITY OF TEXAS MD ANDERSON CANCER CENTER:

### DEVELOPING AN INNOVATIVE BLUEPRINT TO ADDRESS TRAINING AND RETENTION OF RURAL PRACTITIONERS, MENTAL HEALTH ISSUES, AND INTERPROFESSIONAL EDUCATION

The University of Texas MD Anderson Cancer Center, in Houston, Texas, hosted the southwestern region conference on innovations in GME, co-sponsored by the Josiah Macy Jr. Foundation. The conference brought together medical leaders, health professions educators, trainees and other healthcare professionals to showcase innovations and share promising models in GME in the southwestern region.

## CONFERENCE PLANNING

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Raymond S. Greenberg, MD, PhD, executive vice chancellor for health affairs with The University of Texas System (UT), accepted the invitation to co-sponsor this conference, with MD Anderson serving as the host site. A planning committee was formed to discuss the content of the conference. The planning committee consisted of the following participants:

- **Diane C. Bodurka, MD, MPH**, *conference chair*, vice president, clinical education, UT MD Anderson Cancer Center
- **Oliver Bogler, PhD**, senior vice president, academic affairs, UT MD Anderson Cancer Center
- **Belinda Debose, BBA**, administrative director, department of clinical education, UT MD Anderson Cancer Center
- **Bitia Esmaeli, MD, GMEC chair**, UT MD Anderson Cancer Center
- **Raymond S. Greenberg, MD, PhD**, executive vice chancellor for health affairs, UT
- **Tamara Greiner, MA, CHCP**, conference management, UT MD Anderson Cancer Center

- **Helene P. Phu, MEd, RN, OCN, CCRP**, clinical program manager, department of clinical education, UT MD Anderson Cancer Center
- **Maura Polansky, MS, MHPE, PA-C**, program director, department of clinical education, UT MD Anderson Cancer Center
- **Coni Tierney, CMP**, conference management, UT MD Anderson Cancer Center

The planning committee met on several occasions to discuss plans and solicit interest and participation from other academic health centers from Texas, Arkansas, Oklahoma, and Colorado. Topics for the conference were selected based on recommendations and interest from Texas institutions and neighboring states and focused on physician shortages in rural areas; mental health workforce shortage; and IPE as part of training.

Speakers were invited based upon their published expertise in the topics and recommendations from institutional leaders and/or the Texas Medical Association (TMA). Stakeholders included individuals who directly affect or are affected by changes in curriculum; program directors who deliver the curriculum; and individuals with administrative influence to support curriculum innovations. The invitation list included the following: presidents, chancellors and deans of regional medical schools; representatives from ACGME and the VA; the TMA; program directors; psychologists; advance practice providers, and trainees. All designated institutional officials in Texas were included and also encouraged to forward the invitations to their respective program directors, educators, and trainees.

## CONFERENCE OVERVIEW

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The conference was held February 17, 2016, and began with a reception on the evening of February 16. The summit agenda included three sessions on the 17th: training and retention of rural practitioners; mental healthcare issues; and IPE. Each session was facilitated by a moderator and featured a panel of five experts, who gave presentations. The more than 80 attendees from 27 institutions were given the opportunity to ask questions after each of the presentations.

The summit began with a welcome and introduction from Drs. Bodurka and Greenberg. Dr. Greenberg thanked the Macy Foundation and our partners for their co-sponsorship of this regional symposium. Dr. Greenberg spoke about the GME Expansion Program that will support nearly 500 residency positions in 2017, with

about 40% of these positions being new. There is an expansion model in place with a focus in primary care and developing psychiatric residencies. Additionally, funding has been set aside in support of existing family care residencies and primary care preceptors for the residents. Dr. Greenberg affirmed that residency programs in Texas have state support, unlike many other states, and we are very appreciative of that support. He stated that while we always appreciate more support from the state, it will be a challenge in the future with the current trajectory of the oil and gas industries.

Next, George Thibault, MD, president of the Josiah Macy Jr. Foundation, discussed the Foundation's support for a series of regional conferences intended to encourage change in GME to meet the needs of trainees and the public. He spoke about the goal to identify opportunities for replicating and scaling up innovations to address problems with GME regionally and nationally.

## SESSION 1: TRAINING AND RETENTION OF RURAL PRACTITIONERS

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The first session focused on "Training and Retention of Rural Practitioners" and was moderated by Lisa R. Nash, DO, MS-HPEd, FAAFP, associate dean, educational programs, University of North Texas Health Science Center. The following presentations were given:

- *Rural Graduate Medical Education in Arkansas: Structure and Outcomes* by Daniel Rahn, MD, chancellor, University of Arkansas
- *Training and Retention of Rural Practitioners* by Cynthia Jumper, MD, MPH, vice president, health policy, Texas Tech University Health Sciences Center
- *Preparing Residents and Students for Rural Practice* by Paul E. Ogden, MD, interim executive vice president and acting CEO, Texas A&M Health Science Center
- *Oklahoma State University's Rural Physician Pipeline: State Collaboration in Recruitment and Retention* by William J. Pettit, DO, MA, provost, Oklahoma State University Center for Health Sciences

- *Welcoming Independent Physicians into the World of ACOs* by Robert Morrow, MD, MBA, president, Blue Cross and Blue Shield of Southeast Texas

This session highlighted the dearth of physicians per capita in rural areas, with some projections anticipating a shortage of as many as 124,000 physicians in the United States by 2025. Each member of the panel presented a variety of strategies and methods intended to address this mismatch in Arkansas, Oklahoma, and Texas.

Several different pipeline programs and creative curriculum redesigns have demonstrated success, but concerns were raised about the declining pool of medical school applicants. Attracting applicants, especially those from rural areas, with appropriate qualifications and skills that match and reviewing applications holistically are important factors related to medical school expansion. Another important factor to consider is the training site itself. We need to examine how to best involve local communities in bringing GME into the community and identify enough rural communities that might be interested in and benefit from serving as IPE hubs. An additional challenge is retention and social support for new graduates who are just starting their families.

Equally challenging is recruiting physicians from other locations to serve in rural areas and ensuring their success. We must identify and develop mechanisms to help support these physicians in their transition from training to practice so they stay in the community long enough to grow roots and remain in these communities permanently. There were also discussions about market forces that threaten the sustainability of independent physician practice: increasing costs, flat or declining fee schedules, limited capital, and new physicians looking for a better lifestyle.

An unintended consequence as we drive toward accountable care organizations (ACOs) is that physicians are being pushed out of rural areas into agreements with larger hospitals. Blue Cross Blue Shield of Texas partnered with the TMA to offer a sustainable solution: TMA PracticeEdge. This program provides independent physicians with the tools and knowledge to be effective in value-based care and the ability to choose which hospitals with which they wish to be affiliated.

## SESSION 2: MENTAL HEALTH CARE ISSUES

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Ali Abbas Asghar-Ali, MD, associate professor of psychiatry at Baylor College of Medicine, moderated the second session, which focused on “Mental Health Care Issues.” The following presentations were given:

- *Mental Health in the Rio Grande Valley: A Problem Needing a Solution* by Arden D. Dingle, MD, chief of child and adolescent psychiatry and program director of the child and adolescent psychiatry fellowship program, UT Rio Grande Valley
- *Is Mental Health a Public Health Issue?* by Jay Maddock, PhD, FAAHB, dean and professor, Texas A&M University School of Public Health
- *Mental Health and a Rural Academic Medical Center* by Kirk A. Calhoun, MD, president, UT Health Northeast
- *Addressing a Shortage of Child Psychiatrists* by Mary Dale Peterson, MD, MSHCA, president and CEO, Driscoll Children’s Health Plan, Corpus Christi, TX

Multiple sources identify members of the mental health workforce as primary care physicians, psychiatrists, clinical psychologists, social workers, and advanced practice nurses. Although there are a variety of healthcare workers in this workforce, there still is a general shortage of the number of people providing mental health services in the US.

There are areas in Texas that rank among the poorest and most underserved areas for both health and mental health. In these areas the healthcare and social services systems are overwhelmed, providing inadequate services and poor access. Residents of these areas who have the resources travel to larger Texas cities for health care. The many who do not have resources, however, rely on emergency care to meet their healthcare needs. We need short- and long-term solutions as well as education, consultations, and support for healthcare providers and advocates in these areas. Currently, one can receive outpatient and inpatient care, but minimal services exist for those who require something in between. A better spectrum of mental health services is needed that ensures accurate diagnosis on the front end, followed by incorporation into the primary or specialty medical home for ongoing management and care.

Several academic centers have partnered to integrate psychiatry training into the training for nurses, pharmacists, and other health professions. Residents will have longitudinal experiences in primary care and work in primary care clinics for the mental health patient population.

While the market has increased dramatically for psychiatry, it will take a number of years to establish the residency pipeline to meet the demand. Payment mechanisms are changing to support better access to services as society better understands the impact of not providing psychiatric and behavioral health care to at-risk populations. Nevertheless, primary care physicians are feeling overburdened and unequipped to manage the mental health needs of children. Wait times for a psychiatrist visit may be up to six months, which could lead to lethal consequences when members of this at-risk population lack access to care. Privacy concerns and the stigma attached to mental illness may make it difficult for a person to share personal information and access care. Addressing these barriers is an important goal. Mental health care should be provided on a level equivalent to other areas of medical care

We must also be aware of prevention and treatment of mental health issues for our GME trainees. Residents and practitioners should be informed about ways to achieve healthful work-life balance, including teaching people effective strategies to fit in exercise and other healthful lifestyle practices.

## SESSION 3: INTERPROFESSIONAL EDUCATION

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Conference Planning Chair Dr. Bodurka moderated the third session of the day, which focused on “Interprofessional Education.” The following presentations were given:

- *Creating a Culture of Interprofessional Practice: UNTHC’s Institutional IPE Initiatives* by David W. Farmer, PhD, LPC, LMFT, director of interprofessional education and practice and assistant professor of medical education, University of North Texas Health Science Center
- *Integrating Interprofessional Care Delivery and Education: A ‘Win’ for Patients, Trainees, and Faculty* by Steven A. Lieberman, MD, senior dean for administration and John P. McGovern Distinguished Chair in Oslerian Medicine, UT Medical Branch

- *Interprofessional Integration: Preparing Dell Medical Students for Collaborative Practice* by John C. Luk, MD, assistant dean for interprofessional integration, UT Austin Dell Medical School
- *Interprofessional Patient Safety Education in the Pre-Clinical Curriculum* by Anne C. Gill, DrPH, MS, associate director, Baylor College of Medicine
- *Road Map to Integrating Interprofessional Education* by Regina Bentley, RN, EdD, CNE, assistant dean for academic affairs, Texas A&M University

In IPE, people from different health professions both teach and learn from each other. IPE must focus on the development of competencies in collaborative practice; be integrated into the curriculum; begin with the initial year and be reinforced across all years; be leveled with student and program readiness; include faculty development; and be assessed for effectiveness.

Several innovations include multi-institutional IPE collaborations for a common curriculum with medicine, nursing, pharmacy, and other health professions. Tools and training currently being used include the Interprofessional Education Collaborative's core IPE competency domains; Institute for Healthcare Improvement's online modules; AAMC's entrustable professional activities; Agency for Healthcare Research and Quality's TEAMSTEPPS training; and ACGME's milestones. It is important that IPE activities are integrated within core competencies and simulation during the four-year curriculum and that faculty development is included. Ideally, IPE training should start during the first year with teamwork skills training. In the second year, practicums may facilitate the alignment of IPE training with the student's career interests. As the students transition into GME, IPE is applied into a clinical context.

A key to having a good IPE program is to seek institutional support from the dean or other leadership and to develop faculty champions to work with students. The curriculum design should include grouping students together who have comparable skill levels and mapping the competencies for each profession. Another key is to identify the appropriate facilities and research opportunities to attract grant support. Having these elements in place before designing the IPE course is important to the success of the program.

It is important to develop intentional objectives that the students will meet during the IPE activities. The program must incentivize collaboration through IPE in the form of support or faculty awards. Additionally, IPE must be fully integrated as part of the

educational, training, and practice culture of the institution and not seen as an add-on requirement.

Many of the examples of IPE cited were at the undergraduate level. All presenters emphasized the importance of continuing IPE into GME since students will soon arrive as residents with prior IPE experience.

## SELECTED INNOVATION HIGHLIGHTS

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Information gained from the conference will be the basis for a “blueprint” to address barriers and to facilitate change in the three focus areas: training and retention of rural practitioners, mental health issues, and IPE. The following are some of the innovations that were presented:

- Texas Tech University Health Sciences Center developed the Family Medicine Accelerated Track (FMAT). The FMAT allows a student to complete four years of medical school in three years.
- Arkansas incorporates interprofessional teamwork and practice transformation involving pharmacists, health educators, physician assistants, nurses, and lay healthcare workers. Also, the Area Health Education Centers program provides pipeline programs, rural rotations, continuing education, and housing for students in healthcare professions.
- Texas A&M participates in the Joint Admission Medical Program (JAMP), supported by the Texas legislature, to encourage and support disadvantaged students pursuing a medical education.
- Oklahoma State University's (OSU) Operation Orange program is a medical summer camp for high school students. Medical students and administration meet with five to six regional sites a year to meet and keep in contact with high school students. Another innovation at OSU is the Blue and White Coat Program to help members of Future Farmers of America transition into medical school.
- Blue Cross Blue Shield of Texas, in partnership with the TMA, has a program called the TMA PracticeEdge that provides independent physicians with the tools and knowledge to be effective in a value-based care environment.



- UT Rio Grande Valley is an integration of two pre-existing institutions: UT Brownsville and UT Pan American. Its primary goal is to improve the lives of those who live in the Rio Grande Valley.
- UT Health Northeast has initiated community engagement efforts with local providers and the philanthropic community to improve behavioral health service delivery. The local mental health authority works with primary care providers to provide integrated care.
- UT Tyler has designed a creative curriculum in which the psychiatry residency, psychology internship, and family medicine residency overlap. Residents in these programs train and learn together in didactics and clinics and handoff to each other.
- Driscoll Children’s Hospital, UT Medical Branch at Galveston (UTMB), and the Behavioral Health Services of Nueces County have created a three-way telemedicine program to provide licensed, credentialed, bilingual child psychiatrists for initial consultations and 30-minute follow-up sessions with pediatric mental health patients. Caseworkers in the area follow up with the child or family at the school, home, or anywhere else necessary, in between the scheduled visits, especially if the child is in crisis.
- UTMB has created the TEAM Clinic, which combines patient-centered medical home care and an education home for health professions learners. This model starts IPE training in the classroom and carries it through clinical education and practice to provide continuity in care for patients and continuity in education for students and residents.
- UT Dell Medical partners with the schools of pharmacy, nursing, and social work to provide IPE training to its students.
- Baylor College of Medicine has formed a partnership with Texas Woman’s University and the University of Houston College of Pharmacy to offer a preclinical IPE experience.

## CONFERENCE ASSESSMENT AND NEXT STEPS

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Dr. Bodurka closed the conference by saying, “We hope this is the beginning of a long-term and fruitful dialogue which will help motivate and lead needed GME innovations and developments. We are delighted that participants representing multiple facets of higher education in Texas and surrounding states are willing to share their innovations and commit to future collaboration towards GME reform in the southwestern region.”

As we reflect upon the richness of the conference presentations and discussions, the topics of retention and recruitment of primary care physicians in rural areas, mental health issues, and IPE were all addressed. There was a high level of energy and interest in sharing innovations in curriculum redesign, forming partnerships, and being part of solutions. Although the struggles and issues of public health may vary from region to region, solutions fall into the same themes, including funding needs; educational implications; team-based approaches; community connections; and partnerships with local, state, and federal entities. Strategies were offered—such as technology solutions, increasing community involvement, and new employment models—to help retention of health professionals in underserved areas.

Mental health is a public health issue affecting a large percentage of Americans that should be addressed with an approach that mixes universal and targeted prevention programs. Better physician training is needed in mental health outcomes research and preventive care. In both rural and urban areas, there is a need for consistent funding of psychiatry and mental health education and to expand training in all mental health professions, not just psychiatry.

It is clear that IPE is important in training and a clear definition of team competencies is needed and should serve as a basis for best practices. For IPE to be successful, some issues should be addressed: the power gradient among the different professional roles; faculty development and career paths for different professions; and the need to align core competencies.

There was a collective sense of ownership and urgency among institutions in the southwestern region to move forward with improvements that will meet all the challenges of a new healthcare system and the changing needs of their communities. It is clear that GME is an integral part of these changes and we must demonstrate the valuable role of GME and our trainees as we move forward. We

must also recognize the healthcare disparities that exist in different communities and create an opportunity to improve GME training to help close these gaps.

Thank you letters were sent to speakers and follow-up emails were sent with the event video to conference participants. Some institutions have already started discussions at their own campuses and others would like to continue with another conference next year.

The planning committee is indebted to George Thibault and the Josiah Macy Jr. Foundation for their funding and support of this event. The planning committee also sincerely appreciates the conference co-sponsors for their financial contributions and support: UT MD Anderson Cancer Center, Texas A&M Health Science Center, UT Rio Grande Valley School of Medicine, UT Southwestern Medical Center, UT at Austin Dell Medical School, Texas Tech University Health Sciences Center, University of North Texas Health Science Center, UT Medical Branch at Galveston, and UT San Antonio School of Medicine.

## **Additional Information**

Additional information from the conference, including pictures, presentations, and videos are available at <https://www.mdanderson.org/research/departments-labs-institutes/departments-divisions/clinical-education.html>. Please contact [DCE@mdanderson.org](mailto:DCE@mdanderson.org) if you have any questions or trouble accessing the site.







Robert B. Baron, MD, MS



University of California  
San Francisco

# CHAPTER 4

## UNIVERSITY OF CALIFORNIA, SAN FRANCISCO SCHOOL OF MEDICINE: BUILDING A BETTER WORKFORCE FOR BETTER CARE

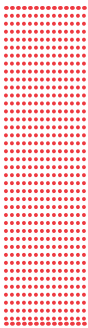
The University of California, San Francisco (UCSF) hosted a one-day conference on March 30, 2016. The conference, which was part of the Macy Foundation's *Regional Conferences on Innovations in GME* series, focused on California's health status and healthcare workforce challenges and how innovations in GME can help address both.

### CONFERENCE PLANNING

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The conference planning process was initiated and led by Robert B. Baron, MD, MS, professor of medicine and associate dean for graduate and continuing medical education at UCSF. Dr. Baron organized a planning committee to represent key GME institutional leaders and other GME stakeholders from California. All individuals who were invited to serve did so, and included:

- **Robert B. Baron, MD, MS**, *conference chair*, professor of medicine, associate dean for GME and CME, and DIO, UCSF
- **Bruce D. Blumberg, MD**, clinical professor of pediatrics, UCSF; and institutional director, GME, Northern California Kaiser Permanente
- **Dena Bullard, MHS**, coordinator, academic programs and special initiatives, University of California Office of the President
- **Lawrence C. Cheung, MD, FAAD, FASDS**, professor of medical dermatology, St. Mary's Hospital and Medical Center
- **Amy C. Day, MBA**, director of GME, UCSF
- **J. Michael Finley, DO, FACP, FACOI, FACR**, associate professor of medicine, associate dean of GME, Western University of Health Sciences/College of Osteopathic Medicine of the Pacific; and DIO, OPTI – West Educational Consortium
- **Daniel W. Giang, MD**, professor of neurology, associate dean and VP of GME, Loma Linda University



- **Sherry C. Huang, MD**, clinical professor of pediatrics, associate dean of GME, and DIO, University of California, San Diego
- **Erick Hung, MD**, associate professor of clinical psychiatry, director of curricular affairs for GME, UCSF; and chair, GME section, Western Group on Education Affairs
- **Laurence Katznelson, MD**, professor of neurosurgery and medicine, associate dean of GME, Stanford University
- **Marc C. Klau, MD, MBA**, assistant clinical professor of surgery, University of California, Irvine; and assistant regional medical director for education, learning and leadership and regional chief of head and neck surgery, Southern California Permanente Medical Group
- **Mahendr S. Kochar, MD, MACP**, professor of medicine, associate dean of GME, and DIO, University of California, Riverside
- **Gerald A. Maguire, MD, DFAPA**, professor and chair of psychiatry and neuroscience, University of California, Riverside
- **Cathryn L. Nation, MD**, associate vice president – health sciences, University of California Office of the President; and commissioner, California Health Workforce Policy Commission
- **James Nuovo, MD**, professor of family and community medicine, associate dean for GME, and DIO, University of California, Davis
- **Lawrence Opas, MD**, professor of clinical pediatrics, associate dean for GME, and DIO, University of Southern California
- **Kathy L. Perkins, MD, PhD**, clinical professor of pediatrics, associate dean for GME, and DIO, University of California, Los Angeles
- **Danielle Perret Karimi, MD**, associate clinical professor of physical medicine & rehabilitation, associate dean of GME, and DIO, University of California, Irvine
- **Tymothi Peters**, director of continuing medical education, UCSF
- **Michael W. Peterson, MD**, professor of medicine, Valley Medical Foundation; and interim associate dean and DIO, UCSF Fresno

The committee chose the target audience (California GME stakeholders), the conference structure, and the keynote speakers. Committee members also approved the site location and conference fee structure, and reviewed all submitted abstracts and served as session moderators during the conference. The committee issued a statewide call for abstracts that described ongoing GME innovations from across California—58 abstracts were received, with 15 chosen for formal presentation and 43 for poster presentation.



The invitation list was designed to include all potential individuals with an interest in GME and GME-related issues in California. Each member of the planning committee was asked to circulate electronic invitations to each of their organization's program directors, program coordinators and other GME administrative staff, government affairs representatives, other medical education and institutional leaders, and trainees. Planning committee members who were also members of the California Medical Association, the AAMC Western Group on Education Affairs, and the AAMC Group on Resident Affairs sent invitations to California members of those organizations.

Invitations also went to California members of the Association for Hospital Medical Education and to each of California's DIOs and program directors. Program directors were asked to invite their residents, fellows, faculty, and staff. The University of California Office of the President sent invitations to various California government officials and staff, including members and staff of the California State Assembly and State Senate. Invitations also went to a wide variety of other California and national stakeholders, including the California Medical Board, Primary Care Progress, patient advocacy groups, and foundations. Invitations also went to the California clinician community, including prior attendees at UCSF Continuing Medical Education activities.

## CONFERENCE OVERVIEW

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The conference was the first of its kind in California, bringing together GME leaders, workforce experts, and public health advocates to discuss what is needed and could be done to improve the health of the public by improving GME. More than 200 people attended the conference; of those, 74% were physicians. Other attendees were nurses and pharmacists (3%); other health professionals, including nurse practitioners, podiatrists, psychologists, and dentists (4%); PhDs/EdDs (3%); GME administrators (7%); and others (8%). Most of the attendees (191) were from California. Eight other states were represented, but predominantly by speakers and invited guests.

The conference began with a welcome from Program Chair Robert Baron MD, MS, and Macy Foundation President George Thibault, MD. Dr. Baron outlined three important goals for the day-long meeting. First, he wanted the conferees to better understand the state of the physician workforce in the state of California, including

“seeing where we are right now, who we have, and who we need.” Second, he wanted the conferees to share generously regarding the details of GME innovations that they are seeing and participating in at their schools, institutions, and in their regions. Third, he hoped the conference would jump start a conversation around what innovations are scalable and how to achieve scale—and how to improve the health of the public as a result.

The Foundation’s Dr. Thibault then welcomed conferees to the third regional GME meeting, explaining that the idea behind the conference series was to “celebrate the change that is occurring in GME across the country.” He went on to challenge conferees to “change the discussion about GME. Instead of talking about it as problem, let’s instead recognize it as a solution. GME is an opportunity to improve healthcare quality and delivery and to address disparities, and we should be training the next generation of physicians to lead the change.”

Following these introductory remarks, which set the tone for the day, three state and national experts on GME and workforce issues—Mr. Edward Salsberg, Dr. Sandra Hernández, and Dr. Andrew Bindman—spoke as part of the opening panel “What Does California Need to Improve Our Healthcare Workforce and the Health of the Public?” The panel also included several invited stakeholder respondents and substantial plenary discussion.

First, workforce data presented by Mr. Salsberg questioned the common belief that there is an overall national shortage of physicians. Mr. Salsberg presented data that, instead, suggest an adequate number of physicians, but a misalignment of the geographic location and the specialty mix of practicing physicians. He suggested that there is an opportunity for better aligning GME with healthcare needs and priorities, including expanding resident training opportunities in community-based settings; in team-based skills and collaboration; in caring for underserved populations; and in specialties, such as family medicine, pediatrics, and psychiatry, that help address population health and reduce disparities.

Next, Dr. Bindman further emphasized the misalignment of physicians and population in California, showing significant disparities in physician distribution throughout the state. For example, the San Francisco Bay Area has 132 physicians per 100,000 people compared with 46 physicians per 100,000 people in Southern California’s Inland Empire. These differences are also reflected by disparities in GME funding throughout regions of the state. For example, the Bay Area receives 28% of

GME funding compared with 2% in the San Joaquin Valley and 9% in the Inland Empire.

Geographic misalignment is further complicated by a lack of racial and ethnic diversity among California physicians. Dr. Hernández showed that little progress has been made in increasing the numbers of underrepresented physicians over time, including an ongoing shortage of Latino physicians. Dr. Hernández described several innovations, including a program at UC Riverside focusing on primary care and the use of telehealth to reach underserved areas of the state.

Five GME innovations were presented on the theme of “New Models of Developing and Financing GME.” These presentations included discussions of a new community-based GME consortium to sponsor and fund residency training as well as a novel six-year pathway from medical school to professional practice. These and the other innovations presented are described in the section below titled, “Selected Innovation Highlights.”

Following the morning sessions, there was an opportunity to review posters and discuss innovations with poster presenters. The afternoon included two additional sessions during which 10 more GME innovations were presented. The themes for the two afternoon innovation sessions were “Development of New GME Training Sites” and “New Interprofessional Collaborations, and Teaching and Assessment of the Competencies Needed for 21st Century Health Professionals.” The innovation sessions concluded with group discussions and report-outs to identify the most innovative ideas and the most generalizable and scalable ideas.

The conference ended with a summary of key themes, presented by the Foundation’s Dr. Thibault, who emphasized that innovations in GME are occurring even without expansion of federal GME funding. Rather, new collaborations and partnerships are leading to important new programs and offer opportunities for further expansion and improvement of GME. Dr. Thibault also highlighted the numerous ways in which residents and fellows are themselves working to build a better healthcare system. He suggested that the conference demonstrated that GME must focus on all of the competencies needed for the 21st century, but with greater individualization, more diverse training settings, and more focus on IPE and teamwork. Finally, Dr. Thibault emphasized that GME required a greater focus on personal wellness and a humane learning environment to ensure that GME produces more humane and satisfied physicians.

## SELECTED INNOVATION HIGHLIGHTS

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Attendees submitted 58 abstracts describing how innovations in GME could further healthcare reform and address health disparities. The major themes of innovation were 1) new models for developing and financing GME, 2) new training sites and new interprofessional collaborations, 3) new methods for teaching and assessment of competencies needed for 21st century physicians, and 4) the use of innovative technology in GME.

Of the 58 abstracts, 43 were presented during poster sessions and the following 15 were selected for formal presentation at the conference, highlighting the following innovations:

1. Representatives from the Valley Consortium for Medical Education in Modesto, CA, described a community-based GME-consortium model utilizing the federal Teaching Health Center program as a cost-effective method to expand GME. Both a family medicine residency and an orthopedic surgery residency have been successfully launched, growing from 29 residents to a total of 51 residents. The model relies on hybrid GME funding, using both traditional Medicare GME funding and HRSA THC-GME grant funding to support over 80% of the budget. Each stakeholder supports expenditures in excess of extramural revenues.
2. Presenters from UCSF's Institute for Health Policy Studies reviewed the six THCs in California. The paper emphasized the promise the program holds for increasing the number of primary care physicians who practice in underserved communities. All six THCs in California train family medicine residents. Three of the residency programs existed prior to the availability of HRSA funding and three are new programs. The THCs have two distinct governance models. An FQHC sponsors some of these programs, and consortia of health care providers and community-based organizations sponsor others.
3. Representatives from Zuckerberg San Francisco General Hospital's Primary Care Internal Medicine Residency described how it used Primary Care Residency Expansion funding (through HRSA) to expand the number of

residents trained each year from 18 to 24. The program is designed to train primary care physicians to care for the urban underserved. As the grant nears completion, the City and County of San Francisco will provide ongoing funding to support this residency expansion, based on the work trainees provide at the county hospital and the goal of training additional primary care providers to serve the community.

4. University of California at Davis representatives described a novel medical school and residency pathway that would allow students to complete medical school and residency training in family medicine in six years, instead of seven. The Accelerated Competency-Based Education in Primary Care (ACE-PC) program is in collaboration with Kaiser Permanente Northern California. ACE-PC students start medical school six weeks early and work through the summers. From day one of medical school, ACE-PC students are embedded in a Kaiser Permanente clinic, a relationship that continues for three years, where they learn how to manage a cohort of patients under the mentorship of a dedicated primary care physician. Kaiser's integrated health care system and patient-centered medical home promotes seamless integration between medical education and clinical practice.
5. Representatives from the GME program at Stanford University presented a color-coded dashboard to describe GME program quality that will help guide institutional decision-making about expansion of GME programs. With this tool, education quality has become the main priority in decisions about expansion. After more than two years of experience, researchers have determined that the development of this innovative protocol has provided institutional decision makers with the relevant information needed for the executive leadership to move forward in a timely fashion with strategically placed financial and programmatic support for GME.
6. Representatives from the Center for Excellence in Primary Care at UCSF described a national survey of 23 internal medicine, pediatric, and family medicine programs across the United States that identified how primary care residency programs prioritize primary care training and create high-performing teaching clinics. The paper described six themes that described successful programs. Successful residency programs 1) design resident schedules that prioritize continuity of care and eliminate tension

between inpatient and outpatient duties; 2) increase resident time spent in the primary care clinic to enhance ambulatory learning and patient access; 3) develop a small core of clinic faculty; 4) create operationally excellent practices; 5) build stable clinic teams that give residents, staff, and patients a sense of belonging; and 6) engage residents as co-leaders of practice transformation.

7. Presenters from UCSF's internal medicine residency described a resident-led interprofessional collaboration to improve admission medication reconciliation. The program increased medication reconciliation from 77% to 91% over a six-month period. Next steps include developing an evaluation tool for residents participating in future Lean events, determining the sustainability of the improvements, and assessing the quality of the admission medication reconciliation.
8. Representatives from the San Francisco VA Healthcare System presented a new patient safety curriculum that teaches a system analysis approach for assessing adverse events and near misses in their ambulatory clinic, one of five VA Centers of Excellence in Primary Care Education. The paper described a highly rated case-based approach to patient safety education for interprofessional trainees in a primary care setting. From 2011–2015, 69 internal medicine residents, 20 adult gerontology nurse practitioner (NP) students, 1 NP resident, and 1 pharmacy resident have participated in the program. Post-session surveys revealed high marks from attendees for this activity (n=160). On a 1–5 scale (1=poor, 5=excellent), attendees rated the overall quality of session as 4.6 (SD 0.7) and an estimated likelihood of making practice changes as a result of the session as 4.4 (SD 1.1).
9. Southern California Kaiser Permanente representatives described its innovative Community Medicine Fellowship. Designed for recent graduates in medicine, pediatrics, or family medicine, the fellows care for underserved patients in free clinics and FQHCs while working with community health leaders to improve healthcare delivery and access. During the 2014–2015 fellowship year, fellows worked at 37 different community clinics and saw approximately 13,600 patients. During the seven years of the fellowship, almost 100,000 underserved patients were seen in community clinics by the fellows.

10. Presenters from UCSF's department of medicine described the Health Equity Action and Leadership (HEAL) fellowship. This program recruits fellows from multiple specialties to work in hospitals in Navajo nation; the California prison system; and in international partner sites in Haiti, Mexico, Mali, Liberia, Malawi, India, and Nepal. The fellows also train nurses, social workers, dentists, and community health workers from the partner sites, creating a bi-directional interprofessional learning environment. The HEAL Initiative approach to global health fellowships recognizes the great importance of taking an interdisciplinary approach to health delivery by providing training opportunities for fellows from across the healthcare continuum.
11. Representatives from the UCSF-Zuckerberg San Francisco General family and community medicine residency presented its Advocacy, Community Engagement, Quality Improvement and Leadership Academy (ACQILA). The program provides a structured three-year curriculum on the care of underserved and vulnerable populations. Each of 15 residents entering the residency now complete a longitudinal ACQILA curriculum on topics strategically placed across training to match resident learning levels.
12. Presenters from the GME program at UCSF described their 10-year experience with an institution-wide quality improvement and financial incentive program for all residents and fellows. Each year, the program selects three all-institution goals, and residency and fellowship programs develop a fourth program-specific goal. Over the 10-year period, approximately two-thirds of the all-program goals and three quarters of the program-specific goals have been met. Formal analysis of several of the projects has demonstrated an effective return on investment for the medical center and enhanced practice-based learning and system-based practice for the residents and fellows.
13. Representatives from the GME program at the University of California, Irvine presented an innovative, interprofessional full-day orientation training session on patient safety and quality improvement processes and initiatives. The team compared simulation and didactic teaching methods, finding both to be effective. These sessions resulted in excellent short-term outcomes of success as measured by pre- and post-testing of house-staff self-assessments and medical knowledge.

14. Presenters from UCSF's pediatric residency program described a new method for the assessment of resident competence in patient handoffs utilizing an entrustable professional activity framework and the I-PASS structured clinical observation (I-PASSco). The team demonstrated that three assessments of an individual resident have high reliability to discriminate between high- and low-performing residents and to make decisions about competency and entrustment. Therefore, I-PASSco scores have the potential to serve as a measure of both an important education and patient safety outcome. More generally, the I-PASSco serves as an example of how to link educational outcomes to patient outcomes and safety.
  
15. Representatives from the UCSF Osher Center for Integrative Medicine presented a new wellness curriculum for residents in internal medicine, pediatrics, and family medicine. The curriculum, Supporting Provider Resilience by Upping Compassion and Empathy (SPRUCE), is a scalable, technology-assisted, emotion regulation and mindfulness meditation training to cope with work stress, sustain adaptive empathy, and reduce the likelihood of burnout. Although the data collection for the study is ongoing, preliminary data suggest residents benefit from a variety of approaches to delivering wellness trainings.

Forty-three additional innovations were presented in poster format. These were organized in three categories: Teaching and Assessment of the Competencies Needed for the 21st Century (22 abstracts); Development of New Teaching Sites and New Interprofessional Collaborations (16 abstracts); and Use of Innovative Teaching in GME (5 abstracts). A complete list of abstracts of all 58 innovations is available on the website below.

Among the highlights of the poster presentations in the Teaching and Assessment category were an innovative training program in preventive medicine that is a Kaiser Permanente San Francisco/UCSF collaborative effort; a clinical teaching and mentoring program at Stanford; and a resident-led quality improvement initiative to reduce blood transfusions from Cedars Sinai.

In the New Teaching Sites and IPE category there were several innovative interprofessional programs from the San Francisco VA; a cross-disciplinary rotation in LGBT care at Southern California Kaiser Permanente; and public health training



in the community from Kaiser Permanente Oakland. The innovative technologies included the use of videos, tablet devices, and social media for educational purposes.

## CONFERENCE ASSESSMENT AND NEXT STEPS

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The conference was very highly rated by planners and attendees, with 42% of attendees completing a conference evaluation. On a five-point Likert scale, the overall quality of the activity was rated 4.6. Specific elements also were highly rated, including educational content (4.5), quality of the faculty (4.7), and opportunity for interaction (4.5).

When asked how they intend to change practice as a result of the activity, 63% of respondents stated they would focus more on resident, fellow, and faculty well-being; 49% highlighted developing and maintaining a diverse workforce; 47% described teaching and assessing the competencies needed for 21st century physicians; 42% described creating new and more efficient training models; 37% mentioned increasing interprofessional care; 36% described creating improved learning environments designed to provide patient-centered, high-value care; and 33% intend to develop new training sites and new collaborations and new models of financing GME.

The planning committee noted that northern California was better represented in attendees and presentations than southern California. The committee also noted that the conference would benefit from more interprofessional attendees. Conference attendees strongly suggested that the conference be held annually. The planning committee will meet to consider this opportunity and additional follow-up strategies.

### Additional Information

Conference materials are available at <http://www.ucsfcmecme.com/2016/MOC16004/info.html#CourseOutline>.







Suzanne Allen, MD, MPH



# CHAPTER 5

## UNIVERSITY OF WASHINGTON - WWAMI REGIONAL MEDICAL EDUCATION PROGRAM: WWAMI GME SUMMIT

The northwest regional conference on graduate medical education, titled the *WWAMI GME Summit*, was held March 30–April 1, 2016, in Spokane, Washington. Unlike the other five Macy regional GME conferences, for which there were few if any regional precedents, the northwest conference coincided and was combined with the fourth GME Summit in the region. WWAMI has hosted the four GME summits over the last six years. WWAMI stands for the five states that are part of the University of Washington School of Medicine’s (UWSOM) regional medical education program: Washington, Wyoming, Alaska, Montana, and Idaho. This year’s WWAMI summit focused on innovative ways for GME programs to help meet the unique healthcare workforce needs of states and regions that have large rural and frontier areas.

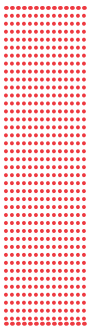
### CONFERENCE PLANNING

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Planning for the fourth WWAMI GME Summit, which was co-hosted by the Macy Foundation and the UWSOM as part of the Foundation’s regional GME conference series, started approximately five months prior to the event.

Members of the WWAMI Summit planning group included the following:

- **Suzanne Allen, MD, MPH**, *conference chair*, vice dean for academic, rural, and regional affairs, University of Washington School of Medicine
- **Gretchen Burke**, executive assistant to the vice dean, University of Washington School of Medicine
- **Bonny Chau**, administrative coordinator, University of Washington School of Medicine
- **Katie Effert**, administrative specialist, University of Washington School of Medicine



- **Byron Joyner, MD**, vice dean for GME and DIO, University of Washington School of Medicine
- **Chakrya Lam**, program operations specialist for regional affairs, University of Washington School of Medicine
- **Miranda Olsen**, director of regional affairs, University of Washington School of Medicine

Those invited to the summit included previous attendees as well as leaders and officials from hospitals, community health centers, rural health clinics, VA facilities, medical associations, hospital associations, higher education, and government officials across the five-state WWAMI region. Invitations also went to medical school leadership, medical associations, and hospital associations in Oregon, Nevada, Utah, North Dakota, and South Dakota.

The summit was designed to address the expansion of GME in the northwest and surrounding areas to develop a physician workforce for the region. The program included presentations about starting new GME programs, expanding current GME programs, and innovations showcasing how GME can help produce the physician workforce needed in the northwest. The summit included lectures and panel presentations with plenty of time in the schedule for networking amongst the participants.

## CONFERENCE OVERVIEW

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A total of 111 people attended the summit, which included individuals from the five-state WWAMI region as well as from Oregon, Nevada, and South Dakota. Conference speakers came from a variety of locations, including the WWAMI states, Maine, New York, Virginia, and Washington, DC. Participants included current administrators and faculty of GME programs, hospital leadership, area health education center (AHEC) leadership, higher education leadership, and several elected officials.

The conference began with a reception the evening of March 30th, which featured comments from Mayor Condon of Spokane, WA, and Paul Ramsey, MD, dean of UWSOM. The next morning, Dr. Ramsey delivered opening comments, which were followed by several presentations.

Byron Joyner, MD, vice dean for GME and DIO at UWSOM, reviewed the history of GME, including the legislation that created the current funding mechanisms for GME. Dr. Joyner was followed by Bianca Frogner, PhD, director of the Center for Health Workforce Studies at UWSOM and associate professor in the department of family medicine, presenting on the current state of the healthcare workforce both regionally and nationally, and some of the challenges in developing accurate predictions regarding future needs of the workforce.

Suzanne Allen, MD, MPH, vice dean for academic, rural, and regional affairs at UWSOM then presented information about GME programs around the WWAMI region, followed by Judith Pauwels, MD, director of new programs for the WWAMI Family Medicine Residency Network, who presented on how to develop a new residency program, including the practical considerations to take into account. The morning finished with Freddy Chen, MD, director of the WWAMI Family Medicine Residency Network, discussing current funding mechanisms for GME programs and potential innovative ways to consider funding in the future, including state funding and working with health systems. Lunch provided an opportunity for participants to meet by state or region to discuss together how best to move forward with expansion of current GME programs and development of new programs.

Following presentations on innovations in GME that help address creating a physician workforce for rural and frontier areas (see “Selected Innovation Highlights” below), a panel discussion featured current residents and recent graduates. These included a resident in the inaugural class of a new family medicine program; a resident in the oldest rural training track in family medicine in the United States; a recent graduate of the Spokane internal medicine residency program who plans to stay in Spokane to practice; and a recent graduate of the Idaho psychiatry residency track who stayed in Idaho to practice when he finished residency. Among the topics these panelists spoke about were the importance of role models and mentors; the burden of their student debt; and the importance of working in a place that is forward thinking, shares their values, and is training them for the future.

After dinner, C. Scott Smith, MD, MACP, national physician consultant for the Centers of Excellence in Primary Care Education of the VA Office of Academic Affiliations, and professor of medicine and medical education at the University of Washington, presented on the VA’s interprofessional education program. Smith said that IPE done well takes hard work and time, but the rewards are highly functioning teams that provide excellent care. While it is helpful to the team to understand the

work done by the different professions and having everyone work to the top of their skill level, it is also important to maintain the distinct identities of each profession.

The next morning, Scott Shipman, MD, MPH, director of primary care initiatives and workforce analysis at the AAMC, presented on the intersection of training and the changing healthcare system. He shared the important role of physicians in training in helping to transform care in the future model of care. The growing need for team-based care and efforts to improve work efficiency and effectiveness for primary care physicians will also impact the successful change of the healthcare system.

George Thibault, MD, president of the Josiah Macy Jr. Foundation, then summarized the conference. He spoke about six themes emerging from the Foundation's regional GME conference series. These themes comprised the following: 1) Medicare is not the only source of funding for GME and finding local solutions to funding GME is important; 2) partnerships and collaborations are important between academic medical centers and communities to provide GME training in multiple settings; 3) residents can help lead improvements in health care; 4) GME should be outward-looking, to serve the community where the residents are training; 5) GME should be competency-based and should match what the community needs to what the residents are learning; and 6) training in interprofessional teams is important.

## SELECTED INNOVATION HIGHLIGHTS

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Speakers and topics during an afternoon session featuring GME innovations included the following:

- **Judy Benson, MD**, director of medical education for Providence Sacred Heart Medical Center in Spokane, described utilizing a consortium as a residency program-sponsoring institution. The Spokane Teaching Health Center (STHC) consortium, comprising Empire Health Foundation, Providence Health Care, and Washington State University Spokane, was formed in 2013 to apply for HRSA's Teaching Health Center funds as a means of supporting new residency slots in family medicine and internal medicine. The HRSA funding is due to expire in 2016 and the consortium must decide how to proceed with the 10 residency slots that were created.



- **Matthew Hirschfeld, MD**, medical director of maternal child health at the Alaska Native Medical Center, described the Alaska pediatric residency track, which enables pediatric residents at Seattle Children’s Hospital to spend four months a year (for three years) working in community-based settings in Alaska. Training sites include the Yukon-Kuskokwim Health Corporation, which serves a high-risk Native population in a remote region.
- **Frank Reed, MD**, faculty at the family medicine residency of Western Montana, spoke about creating a family medicine residency program with a rural focus for all residents. The Family Medicine Residency of Western Montana is the only family medicine program in this rural region. The program, based in Missoula with some residents based out of Kalispell, involved the University of Montana, two community health centers, three primary hospitals, nine rural communities, a core faculty, and more than 300 regional physicians.
- **Brian Johnston, MD**, chief of pediatrics at Harborview Medical Center, discussed the Resident Education and Advocacy in Child Health (REACH) pathway for pediatric residents. REACH trains residents to look beyond the walls of the clinic and hospital to understand child health in a community context. Residents in these pathways explore fundamental questions related to child health through a mini-public health curriculum, community-based projects, and a two-month immersion stream that engages them either in community health locally or in global health in Kenya.
- **Peter Bates, MD**, chief medical officer for Maine Medical Center, discussed the Rural Internal Medicine Maine (RIMM) training track. The Maine Medical Center, a large, tertiary teaching hospital in Portland, established RIMM as part of its internal medicine residency program. RIMM partners with Stephens Memorial Hospital in Norway, Maine, a community of 5,000 people located 45 miles to the north of Portland in the foothills of the White Mountains. (Note: Formerly affiliated with WWAMI, Dr. Bates travels from Maine to attend the WWAMI summit when he can.)

The rural training track, rural family medicine training, and Alaska pediatric track were all developed to help fulfill physician workforce needs. The information shared from the Alaska pediatric track and the rural family medicine training program show that thus far these programs have been successful in meeting their stated missions.

The STHC consortium as a sponsoring institution has helped maximize the amount of funding for expansion of GME in Spokane. However, changes in the funding of Teaching Health Centers may challenge the continued success of this model. The advocacy pathway has generated successful community projects for underserved pediatric patients that provide residents with training opportunities in eastern Washington and graduating physicians with a strong background in advocacy for their patients. The questions and answers during this panel presentation highlighted the innovations helping to produce a well-distributed physician workforce.

## CONFERENCE ASSESSMENT AND NEXT STEPS

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Evaluations of the summit by attendees were all positive. Overall, participants felt the conference was worth their time to attend. They also felt they learned new information that will help them as they work toward creating a physician workforce for their region. They appreciated the diversity and abundance of information provided. The panel presentations, especially the presentation by the recent graduates, were the highlights. Some of the comments included:

*"Everyone was wonderful and gave great, relevant presentations. Strong work everyone!"*

*"Excellent conference. Great presentations. Look forward to future collaborations."*

*"Outstanding panel with a great deal of helpful information, very well organized . . . really well done by all."*

Overall, the planning committee felt the summit was very successful. The content of the agenda provided a good mix of information for those who are just thinking about starting a residency program to those who oversee several programs and are considering expansion of GME. For future summits, it would be nice to have more panel presentations highlighting innovations, students and residents, and organizations that are hiring the healthcare workforce. Encouraging larger participation from individuals outside the WWAMI region will enhance the discussions regarding GME, especially in very rural locations.

Since the summit, there have been several ongoing discussions regarding expansion of GME. In Alaska, a group of physicians is continuing to work on the development of an internal medicine residency track. Several conference attendees from Alaska have been in contact with the speaker from Maine regarding this. There also has been an individual hired in Alaska to work on this. Discussions have started regarding additional rural training track programs in family medicine in Idaho as well as new family medicine programs in Washington. A DIO summit was held on October 21, 2016, which brought together the DIOs from the northwest for ongoing discussions regarding opportunities for collaboration. Discussions have started regarding future GME summits in the Northwest to continue creating the physician workforce for the Northwest and surrounding area. The next summit likely will be held in October 2017.

### **Additional Information**

Conference materials are available at <http://www.uwmedicine.org/education/wwami/wwami-conferences/gme-summit/schedule-presentations>.







Debra Weinstein, MD



# CHAPTER 6

## PARTNERS HEALTHCARE: GRADUATE MEDICAL EDUCATION INNOVATION CONFERENCE

On May 6, 2016, Partners HealthCare hosted a one-day conference in Boston, MA, as part of the Macy Foundation's *Regional Conferences on Innovations in GME* series.

### CONFERENCE PLANNING

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Conference co-hosts Dr. Debra Weinstein, vice president of GME for Partners HealthCare, and Dr. Peter Slavin, president of Massachusetts General Hospital, were responsible for planning the conference, with Dr. Slavin playing an advisory role. The hosts decided to highlight a number of specific innovations based on a request for proposals process. They also identified two overarching themes to examine: 1) the obstacles and enablers of innovation and 2) disseminating innovation.

A planning committee was convened and provided essential input regarding the conference, including speakers, schedule, and the organization and content of sessions, especially the breakout sessions. In addition, the planning committee selected the 12 innovations to be presented from among 45 that were submitted, based on an iterative process of individual scoring and group discussion.

Planning committee members represented a range of locations and types of institutions, specialties, roles, and interests within GME. A number of planning committee members have held national GME leadership roles in addition to their institutional responsibilities, affording an even broader perspective. Four among the planning group are ACGME Parker J. Palmer Courage to Lead awardees. The planning group included the following:

- **Debra Weinstein, MD**, *conference chair*, vice president for GME, Partners HealthCare System
- **Roseanne Berger, MD**, senior associate dean for GME, University of Buffalo
- **Carol A. Bernstein, MD**, vice chair for education and director of residency training in psychiatry, New York University School of Medicine
- **John Patrick T. Co, MD, MPH**, director of GME, Partners HealthCare System
- **Rosemarie L. Fisher, MD**, director/associate dean of GME, Yale-New Haven Hospital and Yale University School of Medicine
- **Ted A. James, MD, MHCM, FACS**, director of clinical simulation lab and program director for patient safety and quality improvement, University of Vermont Medical School
- **Jennifer S. Myers, MD, FHM, FACP**, associate DIO for quality and safety in GME, University of Pennsylvania Health System
- **Fred Schiavone, MD**, vice dean for GME and DIO for GME, State University of New York Stony Brook
- **Linda Thomas-Hemak, MD**, president/CEO, The Wright Center Medical Group and The Wright Center for Graduate Medical Education

A “save-the-date” notice was distributed in December 2015 to all designated institutional officials in the northeastern states, utilizing contact information available from the ACGME website. DIOs were asked to circulate the invitation among colleagues who might be interested in attending. Additional reminders were sent, providing links to the online conference registration site. Target participants included GME leaders, educators, researchers, and trainees, along with representatives from health professions education and relevant national organizations. Interested individuals in other roles were also welcome to register. Continuing medical education credit was offered.

In retrospect, relying on others to forward the conference announcement was not optimal. We did hear that some who may have been interested in attending were not aware of the conference in time to participate. This raises the question of whether it would be helpful to create and maintain a database of medical educators, with contact information, and perhaps a listserv, for the future.



## CONFERENCE OVERVIEW

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A pre-conference dinner for speakers and planning committee members on May 5th set the stage for highly engaged discussions when the full group of participants convened the next day. Time for informal discussion and networking was built into the program during the breakfast, lunch, and closing reception. Ninety individuals (including speakers) registered to attend, and approximately 80 participated. Registrants included 21 GME program directors/associate directors, 18 institutional GME leaders (DIOs and associate/assistant deans), 12 medical and/or other health professions faculty, 8 students/residents/fellows, 8 deans/CEOs/CMOs/CAOs, and 3 GME administrators. Additional roles represented included a director of professional development, a GME education specialist, an IPE leader; simulation experts; and quality/safety leaders. At least eight medical specialties and a large number of subspecialties were represented.

Participants came from seven states (Connecticut, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Vermont) and 28 teaching institutions. In addition, several national medical education-related organizations were represented: ACGME, the AAMC, The Arnold P. Gold Foundation, and the VA, as well as the Josiah Macy Jr. Foundation. Of note, two participants came from the northwest after attending their own regional conference, the WWAMI Summit. Finding the experience so useful, they travelled cross-country to attend the northeast conference to learn more about GME innovation.

Dr. Don Berwick, widely known as an innovator in healthcare improvement, opened the conference presentations. He set the stage for the day by describing some of the fundamental changes underway in healthcare, underscoring that today's residents will practice in a system fundamentally different from the one in which they are now training. He conveyed some of the concerns and challenges relating to GME that were noted by the Institute of Medicine's Committee on GME Financing and Governance (which Dr. Berwick co-chaired) and acknowledged that reforming GME is not easy. Finally, Dr. Berwick highlighted examples of radical care redesign arising in the US and around the world, providing inspiration for the innovation needed in GME.

The next portion of the conference focused on the presentation and discussion of the 12 selected GME innovations, highlights of which are included below. Brief (10-minute) presentations focused on the key goals, methods and outcomes of each

innovation. Discussion after each cluster of thematically linked innovations provided opportunities for clarification, sharing of similar experiences, and ideas for next steps.

The topic for afternoon break-out sessions was “Obstacles and Enablers of Innovation.” Groups were asked to highlight key obstacles—other than time and money—and discuss what they have seen or imagined as effective enablers. The groups were asked to concentrate on the dynamics at play at one of three levels: a) programs and institutions; b) national organizations; or c) public policy.

At the institutional level, competing priorities and the inability to see beyond current limitations were cited as significant obstacles, along with a siloed approach to educational planning (within specialties and departments) and an inherent resistance to importing good ideas “not invented here.” Not surprisingly, the tension between “service” and education arose as an issue: resident and fellow activities continue to be heavily influenced by institutional care delivery needs that often do not align well with learning needs or curricular priorities. This issue has long frustrated both educators and trainees, and prioritizing curricular goals in program planning is increasingly difficult as fiscal constraints and clinical “production pressures” intensify. Similar obstacles emerged when considering the role of national organizations: insufficient priority placed on education; a lack of communication across specialties; and the absence of a mechanism to endorse new educational technologies to stimulate broad implementation.

Enablers of innovation at the institutional level were thought to include the following: advocacy aimed at showing how the innovation aligns with institutional priorities; having an influential champion; utilizing strong relationships; sharing success stories; and ensuring adequate preparation, careful planning, and persistence. It was suggested that medicine could study and apply effective models for cultivating innovation from other disciplines. Also, some called for more publications about innovations, even in advance of solid outcomes data, and suggested a dynamic online source of information may be useful.

A lack of funding was cited as both the dominant obstacle and, perhaps, the greatest potential enabler of GME innovation at the national policy level. Participants also commented on suboptimal use of available GME funding and inadequate public dialogue about GME. Interestingly, the discussion ended by harking back to Dr. Berwick’s talk and noting that the “tectonic shifts” in health care

are generally seen as obstacles (“how can we reengineer GME if we don’t know what the healthcare system will look like?”), but this instability may in fact be the single greatest enabler of change.

“Disseminating Innovation” was the topic of the final session. Dr. David Blumenthal, president of The Commonwealth Fund and a member of the Macy Foundation Board of Directors, gave an introductory presentation on this topic, noting the attributes of a successful innovation and encouraging participants to remember that we are in the “innovation diffusion business.” Dr. Blumenthal then facilitated a panel of speakers who brought perspectives honed by their experience in academic publishing (Gregory Curfman, MD, editor-in-chief, Harvard Health Publications; former executive editor, *New England Journal of Medicine*); public policy (Karen Fisher, JD, chief public policy officer, AAMC; former senior health counsel, U.S. Senate Finance Committee); and consumer advocacy and accreditation (Paige Amidon, MBA, MPH, senior vice president, communications, ACGME and former vice president for health at *Consumer Reports*).

## SELECTED INNOVATION HIGHLIGHTS

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Twelve innovations, spanning a range of topics, were selected for brief presentations over three sessions. The planning committee felt strongly that presentations should be selected based on quality, rather than on coverage of specific topics or to achieve geographic distribution of home institutions.

The presentations were grouped into sessions based on three themes that emerged from the selected abstracts:

1. Professional Development of Residents: Evaluation, Coaching, and Individualized Training
  - *System for Improving and Measuring Procedural Learning (SIMPL): Leveraging Mobile Technology to Facilitate Real-Time Feedback and Continuous Assessment of Trainees* by Jordan Bohnen, MD, MBA, Massachusetts General Hospital
  - *Surgical Education: Coaching Residents to be Team Leaders and Patient Collaborators* by Lauren DeCaporale-Ryan, PhD, University of Rochester Medical Center

- *Reaching Their Personal Best: Professional Development Coaching for Residents* by Kerri Palamara McGrath, MD, Massachusetts General Hospital
- *Dartmouth Pediatric Individualized Competency-based Curriculum (PICC)* by Kimberly Gifford, MD, Children's Hospital, Dartmouth-Hitchcock

## 2. Interprofessional Education and Practice

- *Simulation-based Interprofessional Team Training at Brigham and Women's Hospital* by Charles Pozner, MD, Brigham and Women's Hospital
- *Say Goodnight Rounds* by Sherri Sandel, MD, Lenox Hill Hospital
- *From Mission to Action: Two Post-residency Multidisciplinary and Interprofessional Programs to Create Community Health Leaders* by Derri Shtasel, MD, Partners HealthCare
- *Growing Your Own: Hospital Recruitment and Retention* by Richard Terry, DO, Arnot Ogden Medical Center

## 3. Curriculum Development (which also included a presentation on development of new GME programs to enhance physician recruitment into an underserved area)

- *Clinical Skills Assessment of Cross-Cultural Communication Skills* by Wendy Miller, MD, University of Connecticut School of Medicine
- *The National Neuroscience Curriculum Initiative: A Multi-site Collaboration to Create Shared Curriculum Resources for Teaching Neuroscience to Psychiatry Residents* by David Ross, MD, Yale University
- *Focle Rounds: Focusing on the Clinical Learning Environment through the Development and Implementation of a Novel Graduate Medical Education Leadership Walk-Rounds Program* by Ilene Rosen, MD, University of Pennsylvania

- *Development of an Inter-specialty Patient Safety and Quality Improvement Core Curriculum* by John Patrick Co, MD, MPH, Partners HealthCare

Those proposals not selected for “live” presentation were included in the conference brochure if authors chose to re-submit them in the requested format, and 20 of these were included.

Each of the innovation presentation sessions generated a good deal of interest and vigorous discussion. Polling via an audience response system prompted participants to rate each of the 12 presentations in terms of the innovation’s relevance to their own institution, their assessment of institutional readiness to implement a similar innovation, and the likelihood that institutional leadership would provide support. Overall, ratings of relevance were higher than readiness or likelihood of support. The innovations considered most applicable via this straw poll were:

- **National Neuroscience Curriculum Initiative**, launched from the Yale Adult Psychiatry residency program as a multi-site collaboration to create shared curriculum resources for teaching neuroscience. It focuses on active, experiential approaches rooted in principles of adult learning. All materials, including facilitator’s guide resources, were designed to allow anyone, anywhere to implement them.
- **Reaching Their Personal Best: Professional Development Coaching for Residents**, a professional development/coaching program at Massachusetts General Hospital (MGH) in which coaches serve in a non-evaluative role and receive training in positive psychology principles and a strengths-based coaching model. The coaching relationship allows residents to connect with a faculty member who comes to know the resident and provides meaningful guidance throughout residency. The pair can address typical issues faced by residents in a low-stakes setting, and examining resident achievements can build confidence and increase well-being.
- **System for Improving and Measuring Procedural Learning (SIMPL)**, a mobile technology developed to improve the collection of feedback and performance assessments for surgical residents across the US. The application combines evidence-based assessment methodologies with a user-friendly interface, allowing residents and faculty to complete high-quality, personalized assessments with as few as four “taps” on their smartphones.

- **Inter-Specialty Patient Safety and Quality Improvement Core Curriculum**, a cross-specialty “core” patient safety/quality improvement (PS/QI) curriculum, which is linked to competency assessment and integrated with an institution’s overall approach to teaching and engaging staff in PS/QI. Developed at MGH by a task force of PS/QI experts, GME leaders, educators, and trainees, the curriculum framework addresses competency objectives, delivery mechanisms, and assessment, and is applicable across all GME programs.

## CONFERENCE ASSESSMENT AND NEXT STEPS

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The conference affirmed that innovation is alive and well in GME. Dedicated educators at various types of teaching institutions are focused on improving GME in order to enhance our trainees’ education and achieve better health outcomes for individuals and society at an affordable cost. Participants appreciated the opportunity to communicate about their work and to connect with colleagues, especially since conferences are becoming more difficult to access as budgets get tighter.

Several comments made during discussion segments pointed to a goal of expanding communication between GME leaders at different institutions. While many institutions have vibrant communities of medical educators and researchers, the people most directly charged with GME oversight—i.e., those trying to navigate between regulatory constraints, budget limitations, and lofty aspirations—may be isolated from others facing that set of challenges. Professional associations and national meetings are critical resources in this regard, but could be supplemented by a database of medical educators with their contact information, and/or by a listserv, Facebook group, or other easy communication tool. Similarly, a dynamic database of “works in progress” and projects in need of collaborators could help bring people together for multi-center projects.

Informal feedback from participants at the end of the conference was uniformly positive. Conversations during the closing reception seemed to converge on a few points:

- The opportunity to gather in person with like-minded colleagues also focused on improving GME was deeply appreciated, especially at a time

when teaching institutions are struggling to support multiple missions with increasingly constrained resources, and when many educators feel that education is being undervalued.

- A number of participants made new connections with colleagues and intend to pursue these after the conference, with plans for further sharing of experiences and materials, and for potential future collaborations.
- Some participants seemed to assume that the conference will be an annual event, and expressed interest in participating should this occur.
- The predominant “take-away” was not information about particular innovations or leads on potential collaborations, but rather a general sense of optimism and renewed inspiration about pursuing this work.

Several participants sent notes indicating their appreciation. Comments included:

- “The conference yesterday was inspirational! I particularly loved the emphasis on meaningful measurement, dissemination, and advocacy. I am planning to follow up with several of the speakers—the cross-fertilization has begun!”
- “This was my first GME-related event and I found it both informative and encouraging. I left feeling incredibly excited and interested in becoming more involved with GME moving forward.”
- “I left feeling very optimistic about the possibility for accelerating innovation in GME.”

Not surprisingly, many of the innovations we learned about are single institution, single program, or single specialty efforts, not yet widely known or applied. Some have been published and others are aiming for publication. Disseminating information about these early efforts is essential to stimulate further testing and refinement of these projects and then—if they are successful and generalizable—broader implementation in order to achieve maximal impact. Fortunately, several medical education journals have article types designed specifically as vehicles for publishing innovations without requiring robust research results or a demonstration of long-term impact. These include *Academic Medicine’s* “Innovation Report,” *Medical Education’s* “Really Good Stuff: Lessons Learned through Innovation in

Medical Education,” and *Journal of Graduate Medical Education’s* “Educational Innovation.”

Unfortunately, we don’t have a mechanism within GME (or in medical or health professions education generally) for planning, coordinating or funding large-scale education research, along the lines of a “National Institute for Medical and Health Professions Education Research,” as was suggested in the 2011 Macy Foundation GME Conference Report. This makes it particularly important for us to communicate actively about our individual efforts and our shared aspirations for even more ambitious educational innovation.

In terms of next steps, we plan to poll conference participants in three to six months to learn whether they have pursued any connections with colleagues or have taken steps toward implementing any ideas discussed at or inspired by the conference. We also ask will assess interest in attending similar regional meetings in the future and seek suggestions about in-person gathering and/or virtual communities.

## **Additional Information**

Conference program and abstracts are available at <http://www.partners.org/assets/documents/Graduate-Medical-Education/GME-innovation-conf.pdf>.











Joseph C. Kolars, MD



# CHAPTER 7

## UNIVERSITY OF MICHIGAN MEDICAL SCHOOL: ACCOUNTABLE GRADUATE MEDICAL EDUCATION: LINKING GME TO HIGH-VALUE HEALTH CARE

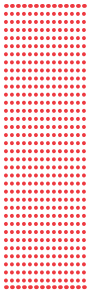
The University of Michigan hosted a two-day conference entitled *Accountable Graduate Medical Education: Linking GME to High-Value Health Care* in Ann Arbor, MI, on May 23–24, 2016. The conference was part of the Macy Foundation's *Regional Conferences on Innovations in GME* series.

### CONFERENCE PLANNING

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In the fall of 2015, Dr. Joseph C. Kolars, senior associate dean for education and global initiatives and Josiah Macy Jr. professor of health professions education at the University of Michigan Medical School, assembled a planning committee with input from a number of GME leaders in the region. The goal was to have broad representation from across the midwestern United States as well as varying types of institutions (i.e., university, community, VA, etc.), and medical professions (e.g., primary care, specialist, allopathic, osteopathic). Beginning in October 2015, the following individuals agreed to serve on the planning committee and participate in monthly phone calls to shape the approach.

- **Joseph C. Kolars, MD**, *conference chair*, University of Michigan
- **John Andrews, MD**, associate dean for GME and vice chair for education, department of pediatrics, University of Minnesota
- **J. Sybil Biermann, MD**, associate dean for GME, professor of orthopedic surgery, and DIO, University of Michigan School of Medicine
- **Barbara F. Brandt, PhD**, director, National Center for Interprofessional Practice and Education, University of Minnesota
- **Stanley Hamstra, PhD**, vice president, milestone research and evaluation, department of education, ACGME



- **Eric Holmboe, MD**, senior vice president, milestone development and evaluation, department of education, ACGME
- **Steve Kasten, MD**, associate professor of plastic surgery, associate director of craniofacial anomalies program, and director of integrated plastic surgery residency program, University of Michigan Health System
- **Jill Patton, DO**, program director and vice chair, department of medicine, Advocate Lutheran General Hospital, Chicago, IL
- **Eric J. Scher, MD**, chair, department of medicine and vice president for medical education, Henry Ford Hospital, Detroit, MI
- **Mamta (Mimi) K. Singh, MD**, physician director of Center of Excellence, Louis Stokes Cleveland VA Medical Center, and associate professor of medicine, Case Western Reserve University School of Medicine
- **Eric J. Warm, MD**, professor of medicine, director of internal medicine residency program, and medical director of resident ambulatory practice, University of Cincinnati
- **John Watt, MD**, director of medical education, St. Joseph Mercy Health System, Ann Arbor, MI

Invitations were extended to GME leadership at institutions in eight midwestern states: Michigan, Ohio, Indiana, Wisconsin, Minnesota, Iowa, Illinois, and Missouri. Individuals on the ACGME sponsoring institutions list and the AAMC committee directory from these states received a total of four emails (save the date, call for proposals, registration invitation, and reminder) beginning in December 2015. ACGME-designated institutional officials were asked to pass along the email notices to program directors and administrators at their respective institutions. Planning committee members recruited individuals from their own institutions with a special emphasis on the recruitment of collaborators working in IPE.

## CONFERENCE OVERVIEW

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Nearly 220 individuals from 57 institutions registered for the conference, and 205 attended. Eight states were represented (Illinois; Indiana; Michigan; Minnesota; Missouri; Ohio; Washington, DC; and Pennsylvania). Registrants included 13 DIOs, 41 program directors, 31 administrators, and 33 trainees as well as faculty and representatives from other health science disciplines. Of the 53 abstracts that were submitted, 51 were chosen for poster presentation and several were also featured during the breakout sessions.

Paul Batalden, MD, from the Institute for Healthcare Improvement and Dartmouth University School of Medicine, opened the conference with a keynote presentation on “GME and Better Value Healthcare Service.” After reviewing ACGME’s evolution on outcomes and competencies, he explored the differences between making goods or products and providing services. More attention needs to be placed on what is necessary to arrive at high-value services and on the requirement that these be “co-produced” by the relevant stakeholders, which to date often have not included patients and families. “The co-production of public services is an economical way of providing service, solving community challenges,” Dr. Batalden said.

Dr. Batalden posed the following questions to the audience that served as a framework for the discussion period.

1. How should a professional learn to co-produce a service with a patient?
2. What capabilities should a professional learn to discern the capabilities and interests of patients to co-produce a service?
3. How should professionals learn to elicit an understanding of the patient’s assets that might contribute to healthcare service co-production?
4. How should we learn to measure the outcomes of co-produced services?
5. How should we learn to build knowledge of the efficacy of an almost infinite number of combinations of “patient goal + good science?”

One of the key recommendations from the Institute of Medicine’s report *GME that Meets the Nation’s Health Needs* is to focus on the structure and location of programs to meet public need. Mr. Chris Allen, CEO of Authority Health, addressed this topic in his presentation “New GME Models: Teaching Health Centers—Lessons Learned from Detroit.” He explained the genesis of Authority Health, which is now the largest of the Teaching Health Centers funded by the US Department of Health and Human Services (HHS) as a result of the ACA. Currently, these centers can be found in 27 states.

As with all teaching health centers, Authority Health is community-based rather than hospital-based, and it focuses on population health with the mission “*To coordinate efforts to improve population health of residents of the City of Detroit and Wayne County by assuring access to care.*” The main academic partner is the Michigan State University College of Osteopathic Medicine. At present, Authority Health has 70 trainees distributed across five residencies and one fellowship. Included is a curriculum that results in a population health certificate developed by the Michigan

Public Health Training Center at the School of Public Health at University of Michigan. Attendees learned how to collaborate and partner with teaching health centers such as Authority Health while trying to incorporate concepts of primary healthcare that is accountable to the needs of society.

Following these presentations, two concurrent break-out sessions covered GME innovations related to improving patient-centered care and, specifically, to using simulation to improve patient care. Discussion of these innovations appears in *Selected Innovation Highlights* below.

During lunch, several different table-based discussion groups were available for participants to join. Topics included 1) using Epic to measure resident-related performance; 2) resident wellness; 3) resident-led quality and safety committees; and 4) applying the ACGME milestones.

**Using Epic:** An informal ‘show of hands’ found Epic to be the most common electronic medical record (EMR) platform used by conference attendees. During this lunch gathering, participants shared frustrations with obtaining information on their residents from the system in a reportable format. Add-on options as well as other EMR products were discussed. All agreed on the importance of incorporating IT analysts into the teams and sharing with them the importance of resident data.

**Resident Wellness:** Participants agreed that residents struggle with wellness, that self-care is not often embraced or supported within the training environment, and that faculty members generally do not model good wellness behaviors. There is a great need for trainees to learn wellness behaviors, spanning both physical and mental health, which they can carry into their continued professional lives. Clarity is often missing as to who is responsible for wellness—is it the program, the institution? The advantages of interprofessional approaches to wellness were explored. Self-care curricula are now being defined and implemented at some institutions. Additionally, the need for wellness is not just for the residents, but for all healthcare workers in the community. Attendees shared different approaches and dimensions that are taking place at their own institutions.

**Resident-led Quality and Safety Committees:** Residents in attendance gathered to discuss how their institutions utilize trainees to play leadership roles in quality and safety committees. Examples and variances in approaches were discussed.



**Applying the ACGME milestones:** Dr. Stan Hamstra from the ACGME facilitated this discussion, using it as an opportunity to run a focus group on how program directors and their associates are making use of the milestones. Examples and case studies were explored to demonstrate how the ACGME is hoping that milestone data can be used to improve programs and to satisfy society's expectations that stewardship over the accreditation process is good and getting better. Assessment rating validity was explored. Some of the approaches and milestone measurements can be applied broadly across many disciplines while others are unique to only their trainees. Programs are calling for the ACGME to make it easier to collect data that are being requested. Opportunities for streamlining the process and improving the clarity of what is being requested were discussed. Dr. Hamstra emphasized that the ACGME wants to move forward with approaches that encourage innovation within programs.

Two more concurrent break-out sessions followed lunch. One featured GME innovations related to obtaining personalized outcomes data for residents. Details on these innovations appear in "Selected Innovation Highlights" below. The other session explored how ACGME competencies and milestones can be linked to improvements in the value of care. The ACGME's Dr. Eric Holmboe led off this session with an overview of the shift in assessment strategies by the ACGME. A milestone-based approach was initiated as a formative assessment framework to enhance the quality of the judgment of the resident's underlying competency or ability.

The milestones are not used to make decisions regarding program accreditation status, but rather, in the spirit of continuous quality improvement (CQI), to identify gaps in training, or weaknesses in the data collection process to enhance the quality of the curricula and validity of assessment data. As each trainee in an accredited program is rated on each milestone twice per year, the ACGME has access to 4.2 million data points annually. Multiple examples were shared on how the ACGME is using variances, trajectories, and other patterns to understand program performance data for continuous quality improvement. Areas where milestones are perceived to be having a positive impact include the quantity and quality of feedback to residents, the facilitation of curricular improvements, and improving the assessment skills of faculty.

This was followed by two presentations from the University of Michigan on pilot programs that focus on the "handoff" of milestones from medical school (i.e., graduating medical students) to program directors (i.e., incoming interns). Pilot work

on entry-level milestones in emergency medicine, pediatrics, surgery, and OB/GYN residency will be provided by a 'Milestone-Based Medical Student Evaluation Form' to program directors after University of Michigan medical students have matched to their programs.

Additionally, there is a new "Transition to Pediatric Internship" elective in which the students are both educated and assessed, and the information is passed to the residency training programs with individualized learning plans. The incorporation of 'boot camps' into the milestone assessment of fourth-year medical students was reviewed. Program directors are asked to report back on the efficacy of these assessments and usefulness in determining competency and thus tailoring of responsibility and education. During the discussion period, the challenges of developing faculty and achieving their engagement in milestone evaluation were noted.

The day concluded with a plenary review of the day's discussion followed by a reception and poster session featuring innovations in GME.

The second day of the conference was co-led by Frank Ascione, director of the Michigan Center for Interprofessional Education, and Barbara Brandt, director of the National Center for Interprofessional Practice and Education (NCIPE) at the University of Minnesota. This half-day portion of the conference was designed to address the following topics:

- What are the national drivers to link IPE and GME today?
- What is the current evidence that IPE makes a difference, or not? What is the current state of research linked to quality improvement?
- How can we take advantage of innovations in medical education and other professions to stimulate IPE innovation across the health professions education continuum?
- How can the clinical & community environments be leveraged to intentionally learn about interprofessional, team-based practice in real-time, particularly in the face of current realities of GME?
- How can IPE be integrated into the ACGME milestones and requirements of other professions?

- How can GME and other post-graduate (e.g., pharmacy, dentistry, nursing, psychology, and others) be engaged to meaningfully prepare all professions together to be “collaboration-ready” for practice in today’s evolving US healthcare delivery system in new models of care (e.g., oral health, behavioral health, care coordination, integration of health care, and value- and outcomes-based models)?

After a brief history of the field, Dr. Brandt described NCIPE as a neutral convener to facilitate scholarship, coordination, and national visibility. She mentioned placing more emphasis on the phrase “interprofessional education and collaborative practice” so as to distinguish it from “education for education’s sake.” She also mentioned the need to move beyond “academic tourism,” where learners simply rotate among different disciplines or domains but don’t get the chance to witness or participate longitudinally in collaborative practice. To date, the NCIPE is involved with over 90 projects across various campuses around the country.

The focus needs to be on generating more evidence that demonstrates the value proposition of collaborative practice and IPE. The challenges of focusing this movement on learners when, in fact, considerable time has been spent with faculty who have not yet grasped the value of IPE were noted. This led to a panel discussion with health professionals from mental health, pharmacy, nursing, and social work with vigorous audience participation. The need to elevate the competencies of collaborative practice and “teammanship” was noted. A common organizing framework of “what specific problems can we solve together?” was offered. The importance of balancing a provider’s identity as both a particular kind of health professional and a member of a collaborative, interprofessional team was stressed.

Finally, Dr. Eric Holmboe from the ACGME spoke to the importance of IPE to the ACGME. While focused on GME standards and accreditation, GME cannot and should not exist in a vacuum. The patient needs to be at the center of the health system and GME will continue to learn and help shape this system. The session ended with review of the “Education in Pediatrics Across the Continuum Project,” one of the major initiatives between medical schools and pediatric residency programs to establish a competency-based, as opposed to a time-based, curriculum. Students enter into this during the 2nd year of medical school and have a guaranteed spot in the pediatric residency program. Of note, they don’t receive grades, but have meaningful assessments, particularly over longitudinal experiences where contact with a limited number of faculty is emphasized.

## SELECTED INNOVATION HIGHLIGHTS

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GME innovations focused around the following topics were presented and discussed during the conference.

**What interventions and ‘experiments’ in GME programs are leading to improvements in patient-centered care?** First, presenters from Advocate Lutheran General Hospital in Chicago presented the following three examples of efforts to link better GME to better patient care:

- *The Advocate Primary Care Transformation Collaborative* redesigned primary care practices with the patients in mind to build relationships, service, and reliability utilizing a patient-centered medical home model.
- *The Professionals Accelerating Clinical and Educational Redesign (PACER)* program is a new three-year program involving nine institutions and 27 primary care residencies, with Advocate Lutheran General Hospital developing as a regional hub. Faculty serve as coaches for quality improvement initiatives that are resident-led, longitudinal, team-based, interprofessional, and focused on specific care objectives (e.g., performance on diabetes management indicators).
- *The Advocate Ronald McDonald Care Mobile in Pediatric Residency Training* has so far involved 51 residents traveling in mobile-care units to schools in underserved areas. The social determinants of health are a major focus for the trainees. Trainee evaluation addresses key milestones, including gathering essential and accurate information about patients; communicating effectively with patients, families, and the public, as appropriate, across a broad range of socioeconomic and cultural backgrounds; and humanism, compassion, integrity, and respect for others.

Presenters from Henry Ford Health System in Detroit then discussed how care delivery and outpatient curriculum redesign can build a foundation for improved patient outcomes. They noted that traditional clinical education is often unequipped for complex health care issues. Their Academic Patient-Centered Medical Home Curriculum and Care Delivery Transformation initiative focuses on improved outcomes for patients with conditions such as hypertension and diabetes.

The Initiative's Ambulatory Patient-Centered Team Care Clinic is an urban general internal medicine practice that has been a certified patient-centered medical home since 2007. It serves approximately 25,000 complex patients through four clinic pods staffed by interprofessional teams, including a total of 90 resident physicians. To date, there have been high rates of physician and patient uptake with improvements in specific care parameters (e.g., fasting blood sugar goals) as well as positive physician attitudes on interdisciplinary approaches. It demonstrates that care delivery and outpatient curriculum redesign can build a foundation for improved patient outcomes.

**How can simulation-based training improve patient care?** This session began with an introduction to the University of Ottawa Skills and Simulation Centre, followed by the natural history of simulation (i.e., establishment, justification, and scholarship). An overview of systematic reviews, key studies, and areas for further research (e.g., systematic test of impact, outcome measures, causal inferences, dissemination) was presented to the group. This was followed by subgroup discussions on the topics below:

- Attribution/contribution of residents to patient care
- Isolating the effects of clinical intervention on patient outcome
- Clinical registry/EMR data – potential, feasibility, and logistics
- Transfer of learning from the simulator environment to the clinical context
- Systematic reviews beyond “technology-enhanced simulation” (and beyond Kirkpatrick’s hierarchy)
- Broaden research or further demonstration in a specific area of clinical practice

Subsequent group discussion brought forward exemplars along with the following recommendations:

1. Simulation with teams is attractive and meaningful. While it is often difficult to isolate the contribution of a single team member, changes in overall team performance can be measured. Consider who should be involved in the simulation—who is on the team? Which team members

should be learners and which should be educators? What level of learner should be involved for each role?

2. When trying to measure outcomes, keep in mind there are process issues involved in addition to individual factors. Also, improvements in the process and efficiency of education can be studied. Time to task and level of autonomy can also be measured.
3. When designing simulation, be creative in the outcomes chosen. Don't presume that everything has to be a randomized, controlled trial or has to always capture a patient outcome. We should struggle to show how simulation can be linked to patient-centered goals (e.g., increased patient satisfaction).
4. Retention of simulation-based learning requires more attention.
5. Transfer of learning to the patient is challenging and requires creativity. Low-frequency and/or high-stakes events are prime choices for simulation, which, by definition, do not lend themselves to impact in the clinical setting.
6. Not everything should be simulated just because it can be.

Major challenges in simulation are adequate personnel and support, lack of validation studies, and the establishment of meaningful performance standards. In addition, we need more transparency regarding the challenges presented by the combined educational/healthcare delivery system so that 'continuous improvement in the learning process' becomes an essential, desired element of the system.

**Obtaining personalized outcomes-data for residents.** The importance of resident personal outcome data was reviewed, including the growing evidence on the relationship between outcomes patterns of a residency and the subsequent practice patterns of residents after they graduate. In other words, where you train has a marked downstream influence (i.e., "imprinting") on your performance once in practice. Examples were then provided by three different programs on their approach to linking resident performance data to patient outcomes.

- University of Cincinnati organizes residents into integrated practice teams for their clinics. They meet weekly to reflect on their performance and what they would like to improve. The interdependence of the team is emphasized and they have published on an approach to obtaining data necessary to transform practice.
- Louis Stokes Cleveland VA Medical Center presented the “Transforming Outpatient Care” initiative, which it is conducting in partnership with four other VA medical centers. For primary care, all patients are all enrolled in patient-aligned care teams (PACT). Residents rotate through a 12-week longitudinal immersive outpatient experience that alternates with a 12-week inpatient experience for physician residents (for a total of four 12-week blocks). A pair of residents co-managed a panel of 250 patients where patient outcomes are tracked and compared with the performance of panels at their own institution as well as that of other VAs. This model has demonstrated improvements such as presentation of panel patients to the emergency room for low-acuity issues.
- St. Joseph Mercy Hospital in Ann Arbor, MI, presented an approach to creating individualized outcomes data in which residents gather the data. In brief, the need to improve discharge summaries of transitional year interns was identified. Twelve interns audit anonymous charts quarterly (240 discharge summaries total) and render scores based on established Joint Commission criteria. Documents scoring >90% are considered high quality. These trainee-generated data are then shared with the authors who demonstrate their improvement quarterly when compared with a reference group who are not engaged in the program.

In addition to presentations of the innovations highlighted above, a dynamic poster session allowed participants to view 51 posters on specific examples of initiatives showing GME and IPE approaches to improving care. Author attendance was staggered over the two-hour period so as to maximize opportunities for interaction. This was a particularly important venue for trainees, who were often authors and primary presenters, on the posters.

## CONFERENCE ASSESSMENT AND NEXT STEPS

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Overall, the committee was pleased with the conference. The engagement of a diverse group of constituents, including trainees, was high, as was the quality of the discussions; the 'right conversations' appeared to be taking place. Learners appeared eager to embrace a movement that highlighted their importance in the transformation of our health system, and we were gratified to see their high participation in this conference.

Some notable observations include the embracing of continuous quality improvement in education and the importance of going beyond what is necessary for accreditation compliance. Data are of fundamental importance to future directions; if we cannot measure it, we cannot improve it. And with the current EMRs, we are able to capture considerable data, but we need to figure out how to harvest and put them to use. Finally, the importance of faculty development was a recurrent theme. In the spirit of CQI, the planning committee realized that making use of more, smaller groups could have facilitated more discussion. Had we anticipated the number of attendees who participated in the meeting, the conference would have been redesigned with this in mind.

We had two post-conference surveys; one that was collected within two weeks of the conference and one two months later. Our innovation to return most of the registration fee to those who responded worked! We had 128 responders to part one of the survey and 107 responders to the second part. Those who responded felt that the conference was a good use of their time (4.5/5), that they came away with a better understanding of how to advocate for GME in terms of the benefits it brings to patient care (4.1/5), were motivated to make changes in their own GME conference as a result of the conference (4/5), and met potential collaborators at the conference (4/5). Eighty-four percent expressed an interest in gathering again to continue work on the issues discussed. For part two (two months later), 60% responded that participation in the conference triggered new GME innovations linking GME to high-value care. Respondents (69%) also realized opportunities to optimize interprofessional education opportunities to provide higher value care. Finally, 35% have new collaborators as a result of the conference.

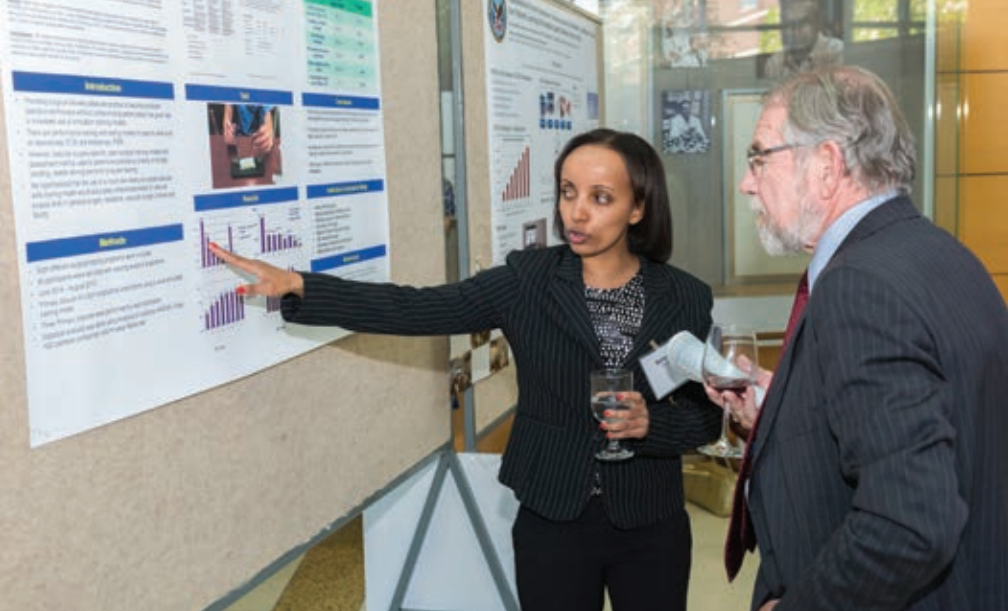
### **Additional Information**

Conference materials, including abstracts, presentation slides, handouts, and more, are available at <http://macymidwestgme.medicine.umich.edu/>.











# CONFERENCE CHAIR BIOGRAPHIES



## **Suzanne Allen, MD, MPH**

As the vice dean for academic, rural and regional affairs at the University of Washington School of Medicine (UWSOM), Suzanne Allen works broadly across academic affairs and regional affairs to enhance the excellence of medical education for the UWSOM and the five-state WWAMI (Washington, Wyoming, Alaska, Montana, and Idaho) region. WWAMI started in 1971 and is accredited through the UWSOM and provides publically supported medical education for citizens of the participating states. WWAMI students complete the classroom phase of the curriculum in their home state, and then their required and elective clinical rotations may be completed at locations across the five-state region.

In addition to serving as the vice dean, Dr. Allen holds a clinical professor faculty position within the department of family medicine at the UWSOM. Dr. Allen is an attending physician at the Family Medicine Residency of Idaho and an active physician in the department of family medicine at Saint Alphonsus Regional Medical Center and Saint Luke's Medical Center, located in Boise, Idaho. Dr. Allen is committed to medical education and rural health care.

## **Robert B. Baron, MD, MS**

Dr. Robert Baron is professor of medicine, associate dean for graduate and continuing medical education, and designated institutional official (DIO) at the University of California, San Francisco (UCSF). He holds a master's degree in nutrition from the University of Wisconsin, Madison, and an MD from UCSF. He did his residency training in UCSF's Primary Care Internal Medicine Residency Program (1978–1981). A member of the UCSF faculty since 1981, Dr. Baron directed the UCSF Primary Care Internal Medicine Residency from 1989 until 2006, training over 300 residents for primary care and general internal medicine careers. Innovations in the program included early adoption of resident-led quality improvement projects and interprofessional learning with advanced nursing and pharmacy students.

In 2000, he became associate dean for continuing medical education (CME) at UCSF and leads UCSF's extensive CME program of over 200 professional development activities per year. He also initiated and leads the UCSF MOC Portfolio Program. In 2006, Dr. Baron also assumed the role of associate dean for GME and DIO for UCSF. In this position, he oversees UCSF's 86 ACGME-accredited residency and fellowship training programs, over 50 non-ACGME programs, and over 1,450 trainees. Dr. Baron is a member of the Association of American Medical Colleges (AAMC)'s group on resident affairs steering committee and is chair of the Society for General Internal Medicine (SGIM) health policy/education committee. He recently completed terms as chair of the AAMC Integrating Quality steering committee, the Accreditation Council for Continuing Medical Education (ACCME) Accreditation Review Committee, and the World Congress on Continuous Professional Development.

A practicing primary care general internist, Dr. Baron has received numerous teaching and leadership awards including the ACGME's Parker J. Palmer "Courage to Lead Award" and has been recognized as one of "America's Top Doctors." Under his direction, UCSF was recently selected as one of the ACGME's eight "Pathway Innovators."

## **Diane C. Bodurka, MD, MPH**

Dr. Bodurka is professor of gynecologic oncology, vice president for medical education, and DIO at The University of Texas MD Anderson Cancer Center. A graduate of the University of California, Dr. Bodurka received her MD degree from Georgetown University School of Medicine. She did her residency training in The University of Alabama's Obstetrics and Gynecology Residency Program, and fellowship training in The University of Texas MD Anderson Cancer Center's Gynecologic Oncology Fellowship Program. As a gynecologic oncologist, Dr. Bodurka performs surgery on women with gynecologic cancers. Her extensive and outstanding clinical experience has been recognized by her patients and colleagues, as demonstrated by her consistent inclusion as one of "America's Top Doctors," "Best Doctors in America," and "America's Top Oncologists."

A member of the MD Anderson faculty since 1996, Dr. Bodurka directed the MD Anderson Cancer Center Gynecologic Oncology Fellowship Program from 1996 until 2012. She served first as an associate director, and shortly thereafter as director, training over 160 fellows for gynecologic oncology careers. The program is widely believed to be one of the nation's most prestigious and largest program in the

country producing clinician scholars (physician-scientists) well-prepared to advance the field of gynecologic oncology. In 2013, Dr. Bodurka assumed the role of vice president for clinical education and DIO for MD Anderson Cancer Center. In this position she oversees 75 training programs and over 1,800 trainees. Her goal is to provide outstanding graduate medical education imbedded in an environment of high-quality and safe patient care.

## **Donald W. Brady, MD**

Donald Brady is a board-certified general internist, a fellow in the American Academy on Communication in Healthcare (AACH), and a Past-Chair of the AAMC Group on Resident Affairs Steering Committee. He graduated from Vanderbilt University School of Medicine and did his residency in internal medicine at Vanderbilt University Medical Center. In 1993, Dr. Brady joined the faculty at Emory University School of Medicine. While at Emory, he helped establish the internal medicine residency's primary care track, serving as its director for a decade and from 1999-2007 was the co-director of the J Willis Hurst Internal Medicine Residency Program. Dr. Brady returned to Vanderbilt in October 2007 as Associate Dean for GME and DIO. In 2010, he was invited by ACGME-I to serve as the institutional site visitor for mock accreditation reviews in the Republic of Singapore. Later in 2010, and again in 2011 and 2012, that country's National University Hospital System and National Healthcare Group Residency Programs hired him as a Special Advisor to guide them in their accreditation journey.

In 2013, he was promoted to Senior Associate Dean for GME and Continuing Professional Development. That same year, he established both the House Staff Choosing Wisely Steering Committee (chaired by residents, this interdepartmental committee seeks to implement Choosing Wisely initiatives within the medical center) and the House Staff Leadership Collaborative (a collaboration between the Chiefs of Staff, Chief Medical Informatics Officer, hospital administration, and residents/fellows to work together on process improvement initiatives within VUMC to improve quality and promote patient safety. In addition to his administrative roles, he works as a general internist on the ward service at Vanderbilt University Hospital. Within VUMC, he serves on many committees, including the Clinical Enterprise Executive Committee, Quality Steering Committee, Corporate Compliance and Integrity Committee, and the Medical Center Medical Board (and its Executive Committee). Dr. Brady's main interests are in medical education, doctor-patient communication, and physician wellness. He has received numerous teaching awards, including

being named the Clinician-Educator of the Year by the Southern Society of General Internal Medicine in 2002 and was a finalist for the Parker J. Palmer Courage To Lead Award in 2013 and 2016. He serves currently on the Board of Directors for ACGME as well as ACGME's Sponsoring Institution 2025 Task Force and its Task Force on Physician Wellbeing. Previously, he served as the Chair of the Board of Directors for AACH in 2014, President of AACH in 2013, Chair of the Faculty Senate at Vanderbilt University for 2013-2014, and formerly as the Chair of the Board of Regional Leaders for the Society of General Internal Medicine.

## **Joseph C. Kolars, MD**

Joseph C. Kolars, MD is Josiah Macy Jr. Professor of Health Professions Education and senior associate dean for education and global Initiatives at the University of Michigan Medical School. He obtained his MD degree from the University of Minnesota Medical School, pursued internal medicine training in Minneapolis, and completed his post-graduate training in gastroenterology at the University of Michigan in 1989. After serving as associate chair for medicine and residency program director, Dr. Kolars left the University of Michigan to establish a western-based healthcare system in China in conjunction with Shanghai Second Medical University. He lived with his family in Shanghai for three years.

In 1999, he joined the faculty at Mayo Clinic in Rochester, MN, and served as internal medicine residency program director for five years. In June 2009, he moved to the University of Michigan, where he oversees the associate deans responsible for the education programs as well as global health initiatives for the medical school. Between 2007–11, he worked closely with the Bill and Melinda Gates Foundation to partner medical schools in the US with those in sub-Saharan Africa. He currently serves as co-director for the University of Michigan Medical School – Peking University Health Science Center Joint Institute for Clinical and Translational Research. Current interests in medical education focus on innovations and the transformation of learning systems to more explicitly align with better health.

## **Debra Weinstein, MD**

Dr. Debra Weinstein is vice president for graduate medical education at the Partners HealthCare System. In this role, she oversees more than 280 GME programs with approximately 2,200 residents and fellows, and has been responsible for a number of initiatives that have served as national models for innovation in GME. After



receiving her MD from Harvard Medical School, Dr. Weinstein completed clinical training in internal medicine and gastroenterology at Massachusetts General Hospital (MGH), was selected as chief resident, and later served as associate chief and director of residency training in medicine. She is an associate professor of medicine at Harvard Medical School and is involved in teaching and research related to graduate medical education.

Dr. Weinstein also is a director of the MGH Institute for Health Professions, an independent graduate school affiliated with the MGH. Previously, she served on the board of the Accreditation Council on Graduate Medical Education (ACGME) and chaired the Massachusetts Medical Society's committee on publications as well as the Association of American Medical Colleges' group on resident affairs. Dr. Weinstein has led or served on several national task forces related to graduate medical education, including chairing the May 2011 Macy Foundation conference focused on reforming GME. She was recently a member of the Institute of Medicine's Committee on the Governance and Financing of GME, and serves as deputy editor of the journal *Academic Medicine*. Dr. Weinstein was a 2006–7 American Council on Education Fellow and is a recipient of the ACGME's Parker J. Palmer Courage to Lead Award.

Copy Editor: Jesse Y. Jou

Production Editor: Yasmine R. Legendre

Designed by: Vixjo Design, Inc.

Thank you to all the conference sites for providing photos for this monograph.

ISBN# 978-0-914362-60-9

Printed in U.S.A. with soy-based inks on paper containing post-consumer recycled content and produced using 100% wind-generated power

Josiah Macy Jr. Foundation

44 East 64th Street, New York, NY 10065 [www.macyfoundation.org](http://www.macyfoundation.org)





ISBN# 978-0-914362-60-9