What sense of urgency has served as the North Star to lead us through the inevitable disagreements, debates and compromises to a collaborative conclusion? It is the imperative to educate a generation of physicians that has the drive and skills needed to improve the health of our 21st century communities and to alleviate the burden of suffering and illness on individual patients.

Our timeline tells the story of this work

In 2012, at our launch retreat entitled “Bridges to Excellence: Doing Our Best, Better,” we identified the need to build better connections between medical education and the other mission areas. We committed to designing an educational system where students were engaged partners in the care delivery systems in which they learned to care for patients. Ideas launched at this retreat have taken shape in the Clinical Microsystems Clerkship (pp. 7-8).

In 2013, our retreat was entitled “The Doctors We Want in the Systems We Need.” We agreed that translating biomedical advances into better care for patients required us to educate physicians who were personally expert in not only understanding and applying today’s knowledge but also in effectively collaborating to deliver the highest quality, most patient-centered health care (p. 13). The creative thinking at this retreat reinforced the need to expand our understanding of what constituted the ‘basic sciences’ of medical education (p. 6) and to ensure that these foundational sciences were threaded throughout the curriculum, not just relegated to the pre-clerkship years. Read more on this strategy (pp. 10-11).

At our 2014 retreat “Cultivating Inquiry as a Core Ability of the UCSF 21st Century Physician,” we recognized the sage advice of our faculty from the discovery and research mission. Our physician graduates must recognize when solving an intractable problem for
patients or populations requires pushing the boundaries between what is known and not yet known. They also must know how to ask and answer questions using the multiple domains of science that are relevant to solving complex problems like cancer, obesity, and substance abuse. The discourse from this retreat is evident in our Inquiry curriculum (p. 12).

For our 2015 retreat, “Uniquely UCSF,” we reviewed the evolution of our curriculum to make sure that the creative work of our teams would fulfill an important premise - you should know a UCSF graduate by the way that physician approaches patients, populations and problems. The assembled UCSF community members reflected on the key values embodied by the history and current work of UCSF School of Medicine:

- an obligation to engage in discovery to advance our understanding of health and illness;
- an awareness of the importance of collaborative work across professions, roles and disciplines to measurably improve our work; and
- an enduring commitment to address the health and health care needs of the most vulnerable patients and populations.

These values are clearly evident in every element of our curriculum and in the UCSF 49: a set of diseases and conditions that all graduates will master.

As this edition goes to press, we are preparing for our next retreat: “Bridges Curriculum: Land Ho!” when we will celebrate the amazing work of our community of educators, clinicians, and scientists who have designed a curriculum to educate the Uniquely UCSF 21st Century Physician: a physician who approaches patients, populations and problems with the habits of mind of inquiry, continuous improvement and health equity.

Many thanks to all who have given so freely of their intellect, creativity and time to advance the education of the next generation of physicians and to optimize the care that their patients will receive.

Warm regards,

Catherine R. Lucey, MD
Vice Dean for Medical Education
A New Curriculum for a New Era of Medicine

The new UCSF Bridges Curriculum in the School of Medicine has been designed to enable students to work within complex systems to improve healthcare and advance science for future generations of patients. We will leverage the deep and strong tradition of scholarly work and mentoring at UCSF with the flexibility, infrastructure and inquiry culture afforded by the new Bridges curriculum.

There are two primary curricular strategies:

1. Early longitudinal engagement in clinical teams with a redefinition of clinical skills to include both direct patient care skills as well as systems improvement skills, taught through continuous immersive experiences in clinical microsystems.

2. An inquiry-focused curriculum that emphasizes exploring questions at the frontiers of a diverse set of sciences to advance our understanding of human health and disease.

The Bridges Curriculum will continue teaching students the enduring skills they need to establish compassionate relationships with patients and accurately diagnose and treat illness. In addition, the curriculum will guide students in mastering the emerging physician competencies of scientific inquiry, systems improvement and team-based care to meet the challenges of 21st century health care.

This report highlights the work that has been achieved by our community of faculty, partners, students and staff for the 3 curricular phases in the Bridges Curriculum.

BRIDGES DESIGN AT A GLANCE

The Bridges Curriculum is a three-phase, fully integrated curriculum delivered over four years (figure 1):

**Foundations 1** Students gain foundational knowledge in basic and clinical sciences while building the habits of mind of an inquiring physician, contributing to the health of patients and improving the delivery of health care.

**Foundations 2** During their immersion in team-based clinical settings, students advance their patient care and systems improvement skills while revisiting core concepts in foundational science as they relate to patient care decisions.

**Career Launch** During this individualized phase of the curriculum students choose clinical experiences and a scholarly project aligned with their career goals.

Three curricular elements are woven throughout the phases: foundational sciences, clinical and systems applications, and inquiry activities.
Foundations 1

Foundations 1 is the first phase of the Bridges Curriculum, based on three main components:

1. **Foundational Sciences**  Students draw upon core scientific information and principles to provide the highest quality patient care and to advance health care for future generations. The core scientific information and principles are distributed across six domains of science (figure 3 p.12) that contribute to promoting health and treating diseases of individuals and populations. The foundational sciences curriculum is divided into 9 blocks, three of which are completely new (Health and the Individual, Health and Society, and Data and Reasoning).

2. **Clinical Microsystems Clerkships (CMC)**  Students improve patient experience and health care quality while learning and applying clinical skills by entering the workplace as functional team members at the beginning of their training. The CMC is longitudinal, immersive (1 day per week), and authentic (based in clinical microsystems at UCSF, SFGH, and SFVAMC).

3. **Core Inquiry**  Students participate in weekly, faculty-facilitated small groups to explore current, complex, and cutting-edge scientific or health care problems through the lens of two or more scientific disciplines. Through this component, students build competency in using inquiry tools from each of the six domains of science.

**HIGHLIGHTS**

- In Bridges, some traditional lecture time in the classroom will be “flipped” by packaging content into high quality modular videos, and then using the traditional classroom time for a learning activity where students apply the knowledge they have learned from the module. The Technology Enhanced Education (TEE) team transformed lectures with 57 faculty into approximately 66 hours of video content.

- To inform the new Clinical Microsystems Clerkship (CMC), the Foundations of Patient Care (FPC) team implemented systems improvement and clinic-based learning pilots termed “selectives.” Additionally, eight medical students and two pharmacy students participated through the Curriculum Ambassadors Program in systems-oriented workplace learning at eight different clinical microsystem sites, piloting systems improvement projects and activities that are being considered for use in the new curriculum. Read student contributions from these pilots on p.8.

- The Inquiry team piloted an inquiry case within the Brain, Mind and Behavior course. Researchers observed and evaluated this session to inform the development and implementation of the future inquiry curriculum and to inform the needs for future faculty development in the area of inquiry.

- The Assessment team devised a plan that emphasizes continuous assessment of student learning, with rich and frequent individual feedback and the promotion of lifelong learning skills. Assessments planned for Foundations 1 include multiple choice and essay questions, NBME-style practice tests and assessment of small group performance. Assessment weeks will enable students to consolidate, integrate, and apply their knowledge and skills as well as reflect on personal and professional development.
Understanding and Applying Sciences Critical to 21st Century Medicine

In Foundations 1, students will learn and apply core concepts in a broadened set of scientific disciplines using the World Health Organization’s major causes of morbidity and mortality as an organizational framework. The foundational sciences curriculum will expand the teaching of medicine to prepare students for the day-to-day work of a physician, for example, optimally using electronic health records, measuring and improving patient experience and health care outcomes, and improving population health. Some of the innovative topics and techniques coming to Foundations 1 are highlighted below.

With the expansion of content, there are still the same number of days in medical school. Bridges educators will employ a number of innovative techniques to optimize their time in the classroom by providing a mixture of interactive sessions, including case presentations, small groups, flipped classroom sessions and simulations.

“We view classroom time spent delivering content as a lost opportunity to have a more meaningful engagement with the students,” says Marieke Kruidering, PhD.

Students will learn through reading or watching video lectures. When they come to the classroom, they can apply what they have learned, and stretch their knowledge and creativity to the limits of what is currently known—and beyond.

The Bridges Curriculum includes two new courses: one focused on the individual experience of health and illness and one focused on the context of health and health care. Taught from the perspectives of the social and behavioral sciences, the content represents the latest developments in the disciplines of anthropology, ethics, health policy, integrative medicine, psychology, and social epidemiology.

“The impact of social and structural inequalities on health care, together with social and behavioral factors that are determinants of health outcomes, present ongoing challenges” says Shelley Adler, PhD. “But they also represent key intervention opportunities. Our goals are to prepare future physicians to promote population health and to advance diversity to achieve health equity.”

NATION’S FIRST MEDICAL SCHOOL COURSE INTEGRATING INFORMATICS AND CLINICAL REASONING

Alvin Rajkomar, MD, helped design the Clinical Reasoning and Data Science core block in Foundations 1. Rajkomar has outlined the main objectives in teaching healthcare science to medical students, with a focus on the electronic health record (EHR). The EHR mediates almost all information flow about patients—notes, results, orders, etc. Examples of these objectives include: 1) understanding how a click in the EHR sets off a chain of activity in a health system, each part of which can create patient safety opportunities and risks, and can generate data, 2) using the EHR to reveal the physiology of a health system, and 3) harnessing the data generated by EHRs to design improvements to the healthcare system.

“To enable current medical students to become the leaders of healthcare, they must step into the role of the far-future researcher to witness and actively participate in the use of data to understand health and health systems. Once steeped in the culture and promise of data, they will be able to see the invisible strings that connect clunky EHR interfaces to the analysis and apps that will drive new medical advances.”

-Alvin Rajkomar, MD
Engaging Learners Early in Healthcare Systems

In traditional medical education curricula, students use clinical sites to practice their doctoring skills. For example, a student visits a clinical site a couple of times to find a patient on whom to practice a physical exam. This has resulted in students being viewed as a burden on already busy clinical systems. In the Bridges Curriculum, early learners are embedded into clinical systems with explicit responsibilities to advance the quality, safety and patient experience in that system while they are learning their traditional clinical skills. The longitudinal immersion into a single site allows students to be viewed as a contributing member of a healthcare team and reinforce the concept that there is no education with patients without service to patients.

“Students enter medical school as bright, capable, motivated young people, but they have not been given opportunities to assume ‘authentic’ roles within clinical teams,” says Meg McNamara, professor of pediatrics, and clinical microsystems site director at San Francisco General Hospital.

McNamara is part of a team that, through several pilots, has created activities and roles to engage students in clinical sites by teaching them the basics of systems analysis and letting them observe healthcare systems in action, notice any problems and suggest or devise ways of making improvements. “One of the things we have been very impressed by with our pilots is that first-year students really are capable of making meaningful contributions to patient care or improving the system of care,” says McNamara.

“When students observed clinical procedures in action, they were full of thoughts, observations and suggestions about how to make things more patient-centered,” says Rachael Lucatorto, MD, assistant chief of medical service and clinical microsystems site director for San Francisco Veterans Affairs Medical Center. The students readily picked up on poor communication and noticed inefficiencies or lack of patient-centered care around procedures being done for patients.

The fact that early learners have less experience can actually be an advantage. “Without having cultural expectations and being habituated to an environment, the students are especially able to see things that don’t make sense about what we have accepted as non-negotiable ways of doing or as just the way things are,” says Lucatorto.

Both McNamara and Lucatorto emphasize that the student contributions to established healthcare teams does not happen automatically—the students need ongoing mentorship and feedback, and advice about how to operationalize ideas.

“This is a unique opportunity to push ourselves to learn more about how to formally educate future physicians in systems redesign,” says Lucatorto. “We can learn so much from the students about our own systems and how to improve them to deliver better healthcare to patients.”
RACHAEL LUCATORTO, MD is associate clinical professor and assistant chief of medical service and site director for the Internal Medical Residency Program. She serves as the clinical microsystems site director at San Francisco Veterans Affairs Medical Center.

I got interested in Bridges in part because it combines all of my professional passions: medical education, patient care and system redesign. The more clinical work I do (as well as the more administrative work I do) the more I realize that negative clinical outcomes are rarely the result of a lapse in clinical judgment or decision-making or lack of medical knowledge. Rather, they are often related to some kind of systems issue … so to deliver safe patient-centered care, we need to understand systems in which we are caring for patients and be able to improve the systems in which we function.

MEG MCNAMARA, MD is professor of pediatrics and co-director of Foundations of Patient Care. She serves as the clinical microsystems site director at San Francisco General Hospital.

I have worked with first-year medical students for a long time and I am always struck by how incredibly inspired they are about medicine when they arrive. But there is something about the system in which we train them that sometimes beats the idealism and compassion out of them. I think Bridges is a big step for beginning to retain the idealism. I am excited to see how in Bridges, the emphasis from the start on compassionate communication and empowerment in addressing things that are not working well within the system, will really help keep students inspired and ultimately improve how care is delivered.

*At the time of publication, two site directors for UCSF Parnassus, Mt. Zion, and Mission Bay were appointed: Shannon Fogh, MD, assistant professor of radiation oncology and Stephanie Rennke MD, associate professor of medicine.*
Foundations 2

Foundations 2 is the 48-week long phase where students receive their core clerkship training with an emphasis on applying foundational sciences to patient care. In a new model, one day per week will be dedicated to reinforcing and advancing student understanding of foundational science and learning the science of healthcare value.

HIGHLIGHTS

• Clinical experiences in the major specialties of clinical medicine: internal medicine, general surgery, obstetrics/gynecology, pediatrics, anesthesia, neurology, family and community medicine and psychiatry.

• Substantial time for intensive clinical experiences, which are two- to four-week clinical electives that provide opportunities for career exploration in areas other than the core clerkships, or a deeper exploration of a core clerkship specialty.

• Curricular innovations that meaningfully integrate foundational science, inquiry and clinical curricular content in the students’ clerkship experiences and prepare them for the licensing exams taken at the end of Foundations 2.

• Longitudinal experiences: One day every other week in Family and Community Medicine clerkship, and one day every-other week to spend on foundational sciences directly related to the students’ clinical training.

• In a break from the past, students will take USMLE Steps 1 and 2 exams after their clerkships.

Every physician needs to view medicine as a developing science. They need to learn what today’s facts tell us, but also need to learn where our knowledge is still incomplete.
Bringing Foundational Sciences into the Clinic

Having established the principle of having meaningful integration of foundational sciences into clinical education with the Bridges Curriculum, the challenge for educators is “How?” Patricia Cornett, MD, associate chair of education in the Department of Medicine, is part of a group that is helping to answer that question.

The backbone of Foundations 2 is the idea of consistently building upon what students learn. Specifically, revisiting foundational sciences material repeatedly, and integrating increasingly complex concepts into clinical activities as students progress through training, gives them a deeper understanding of principles over time—an idea known as “spiral learning.”

Students who learn about a disease in their early foundational sciences classes enter their Foundations 2 clinical time and work with patients with that condition. Empirical data from educational science informs us that physicians with a strong foundational understanding of science are more effective at clinical reasoning and problem solving. The spiral learning strategy of the Bridges Curriculum will provide dedicated time to refresh and deepen scientific knowledge during the clerkship years so that clinical learning is always embedded in a framework of the diverse set of sciences that physicians of the 21st century will need to solve today’s problems.

To anchor students’ journeys through the Bridges Curriculum, campus leaders have identified core syndromes and disorders—whittled down from hundreds to “the UCSF 49” that are deemed critical for every medical student to comprehend. “We want our graduates to really understand these syndromes and carry that understanding forth wherever they end up,” says Cornett. The UCSF 49 will help students to see the networks that interconnect symptoms, conditions, clinical decision-making and inquiry, and will help create physicians who are continuously integrating their knowledge and optimizing their actions while delivering healthcare.

Cornett says she envisions students integrating science and inquiry with clerkship activities in Foundations 2 as a natural progression. For example, students will learn about the genes that drive a disease, in their foundational sciences classes. Bridges faculty will mentor students to master the genetic knowledge today and to guide them to always seek the next level of understanding.

“The UCSF 49 is going to improve patient care because if you are a patient who has one of these diseases or syndromes you can be assured that the trainee who is taking care of you knows how to approach it holistically from the molecular level to the societal level and everything in between.”

-Gurpreet Dhaliwal, MD
Students will be coached to challenge their own understanding of how this knowledge impacts their care of this patient. Importantly, they also will be expected to challenge the medical profession to explore deeper understanding to help future generations of patients.

An offshoot of keeping inquiry at the forefront and continually revisiting the foundational science underlying clinical disease is that there will be no static curriculum. New discoveries are occurring daily and the curriculum will reflect this dynamic, pushing students to always look forward to what they can discover.

“This is a very different model from when I went to medical school, when we were just told what material to learn. Now we not only want students to understand that there is ongoing learning, but we want them to be involved with it to drive medical fields forward.”

- Patricia Cornett, MD

TECHNOLOGY HIGHLIGHTS

To support and ensure a successful Bridges Curriculum, the technology group surveyed stakeholders to identify key technology priorities. To meet these priorities, the Technology Enhanced Education (TEE) team provided numerous advancements in the use of novel ways to employ technology in medical education.

Highlights include:

- 100 high quality video lessons (287 modules, for a total of more than 66 hours).
- A video hosting tool that allows tagging of learning content to Bridges themes to enable “spiral learning.”
- A new student dashboard (figure 2) which will provide students and their coaches with a real-time, consolidated view of key performance data.

![Figure 2: Screenshots of the new Student Dashboard (L-R) Medical Knowledge and Professionalism.](image)
Phase 3

Career Launch

Career Launch is the final, highly individualized phase lasting 60 weeks. It includes dedicated time for students to complete a scholarly project while they pursue advanced clinical training that prepares them for their chosen career paths.

Inquiry is a thread that is woven through all four years, exposing students to questions for which there are not yet any answers, and teaching them how to deal with uncertainty. Inquiry culminates with the completion of a Deep Explore project during Career Launch.

Inquiry integrates with the curriculum in three ways:

**Core Inquiry** is aligned with the foundational sciences curriculum, continuing into the third and fourth years with a series of inquiry exercises linked to clinical clerkships. Weekly, faculty-facilitated small student groups explore current, complex, and cutting-edge scientific or health care problems through the lens of two or more scientific disciplines, giving students competency in using inquiry tools.

**Inquiry immersion** assists students in building skills in inquiry and scientific teamwork and will identify the scientific domain in which they intend to develop more advanced skills. The main feature of this component will be a variety of two-week mini-courses to explore unsolved real-world healthcare problems in depth. Students from years 1, 2 and 4 work together in peer-to-peer learning, and classes include students from other UCSF professional schools and the graduate division to provide an interprofessional perspective.

**Deep Explore** primarily occurs over 30 weeks of dedicated project time during the Career Launch phase of the curriculum. Students pair with a UCSF faculty mentor to conduct scholarship in basic or clinical science research, community health initiatives, health systems improvements, or population health work in an under-resourced country. Students engage in their own discovery process to develop and disseminate their project results.

**Figure 3: UCSF six domains of science**

**Question, discover.**
Preparing 21st Century Faculty

The new concepts introduced in the Bridges Curriculum will require faculty development. Projects have been piloted over the last year to help UCSF educators fully understand the concepts of systems and quality improvement and patient safety, and prepare them to teach its principles in practice.

To jumpstart the overall faculty development in teaching for quality and patient safety, the faculty development lead for Bridges, Sandrijn van Schaik, MD, PhD, associate professor of clinical pediatrics, invited members of the American Association of Medical Colleges (AAMC) to present a day-and-a-half faculty development workshop in January called “Teaching for Quality,” that trained clinical faculty how to effectively teach quality improvement and patient safety to medical students, residents and other clinicians. All of the 34 UCSF participants have embarked upon year-long group educational projects that span the entire breadth of teaching activities.

“Physicians have been trained as individuals to be excellent in diagnosing and managing our patients, but we haven’t necessarily been trained in how to recognize when our care fails to be excellent, or what to do when we make mistakes, or how to fix a system that doesn’t work. By providing medical students and trainees with a whole new set of skills, we will have a much higher quality healthcare system,” says van Schaik.

“The skills that faculty need to be thinking about for teaching systems learning are really different from what they would typically do in clinical teaching, such as gradually progressing students through learning how to take a history or do a physical exam,” says education researcher Bridget O’Brien, PhD, associate professor in the department of medicine.

O’Brien’s team has outlined specific guiding principles for faculty and site directors who are going to be providing Clinical Microsystems experiences for students—with an emphasis on authentic contributions within clinical teams and an eye to continuous improvement of care—when Bridges fully launches. The design outlines the nuts and bolts of incorporating medical students into the workplace, beginning with figuring out space for students to work and reaching out to other staff members to help them understand, for example, what a first-year medical student knows. It covers the entire education experience, from what are easy introductory concepts to how to build opportunities for debriefing and reflection.

“Overall, the effort to educate the teachers about systems redesign and quality improvement requires a shifting of mindset to embrace new concepts,” says O’Brien, “but Bridges innovations in faculty development is the key to the ultimate goal of creating engaged physicians of the future.”
SUPPORTING A CURRICULAR REDESIGN

The development and implementation of the Bridges Curriculum prompted a re-evaluation of the Office of Medical Education (OME) to ensure administrative structures were sufficiently prepared for a curricular change. It was determined that the organization could be optimized by consolidating groups around the services OME provides—namely student services, assessment and evaluation, and faculty development and research. After approximately 18 months of planning and preparation, the organizational realignment of OME was implemented in early summer of 2015. To meet the defined service needs, the new organizational structure is aligned into three groups:

The Center for Faculty Educators (CFE) focuses on faculty development, advancement, and engagement as well as facilitating cutting edge educational research to inform best practices for Bridges educators.

The Admissions and Student Experience Team (ASET) provides a well defined and integrated student experience throughout the medical student training.

The Assessment, Curriculum and Evaluations Unit (ACE) provides curriculum design and implementation support for Bridges, coordinates student assessment and evaluation, and works on continuous process improvement.

The Administrative Leadership Team (ALT), a new leadership group comprised of senior directors over core service areas, will help guide OME administration as Bridges moves forward.

Looking Ahead

The remarkable work on the Bridges Curriculum throughout 2014-2015 has positioned us beautifully for the final stages of preparation to ensure the Class of 2020 an extraordinary experience beginning in August 2016. The hard work of UCSF faculty, staff and students has also served the purpose of continuous quality improvement of the medical education experienced by current UCSF students, especially through the organizational realignment of OME, innovations in educational technology, and pioneering programs in workplace learning.

In the coming year, the dedicated education teams plus many partners in the UCSF community will continue to innovate, plan, and – most importantly – integrate. We will continue to update the Bridges community on our work leading up to implementation next fall, including:

- recruitment of coaches for students and readying them for their roles through faculty development activities;
- engagement of microsystems and their clinical teams for student placements;
- detailed session planning across blocks including inquiry and assessment weeks; and
- continued innovation in teaching methods and technologies to provide opportunities for flexible, individualized learning.

We will weave the intricate Bridges Curriculum components and activities described above into an integrated educational experience that never wavers from its core values of diversity and inclusion and the vision of supporting medical students on an individualized journey to becoming physician-leaders who can provide compassionate care in today’s complex environment and advance science to improve the health of future communities.
Philanthropic Couple Establishes Endowment for Education Chair

UC San Francisco School of Medicine alumnus, Faustino “Tino” Bernadett Jr., MD ’80, MBA, and his wife Martha Molina Bernadett, MD, have established an endowment to support the UCSF Faustino and Martha Molina Bernadett Presidential Chair for Medical Education, the first chair in the Office of Medical Education at the UCSF School of Medicine.

Longtime UCSF supporters, Drs. Bernadett endowed the chair in recognition of their interest in medical education. As part of the Presidential Match for Endowed Chairs, their gift of $500,000 will be matched with $500,000 from UC Office of the President, thus creating an endowed chair with a value of $1 million.

The focus of the funds will be to provide support in perpetuity for medical education, including curricular development and new programs designed to prepare future clinicians for the evolving challenges of providing expert care to patients from diverse populations.

The Bernadett chair will be held by Vice Dean for Education Catherine Lucey, MD. “It is very special to me that the first-ever chair in the Office of Medical Education has been established by a School of Medicine alumnus,” Lucey said. “Together we will ensure the ongoing development and implementation of educational programs that will enhance the diversity of our students and the physician workforce in California.”

FY 2015 Medical Education Fundraising

Figure 5: Total giving breakdown by donor
UCSF Medical Education

Scholarship at-a-glance

Honors & Awards
- 69 awards
  - awarded to 119 faculty & trainees

Grants
- 41 grants
  - funded by 25 agencies

158 total publications
- Peer reviewed 93%
- Other 7%

399 workshops, lectures & presentations

49 faculty invited to give lectures

20 countries

# of Lectures Given
- 76 in 2013
- 167 in 2014
Honors and Awards

NATIONAL AND INTERNATIONAL HONORS AND AWARDS

- Belew, Cynthia. Excellence in Teaching Award, American College of Nurse-Midwives.
- Brock, Tina. Fellow, American Pharmacists Association.
- Carley, Annette. Richardson DNP Scholarship, National Association of Pediatric Nurse Practitioners (NAPNAP).
- Chang, Anna. 2014 Outstanding Service Award, Education Committee, American Geriatrics Society.
- Elkin, David. George Sarlo Prize for Excellence in Teaching, Sarlo Foundation.
- Eng, Jessica. Faculty Scholar, John A. Hartford Foundation.
- Esserman, Laura. Journal of Women’s Health Award for Outstanding Achievement in Women’s Health (2014), Journal of Women’s Health.
- Jull-Patterson, David. Top Trainer, American Psychology Association HIV Office for Psychology Education.
- Lowenstein, Dan. N. Houston Merritt Lecturer, American Academy of Neurology.
- Martinez, Alma. 2014 Faculty Advisor Service Award, Latino Medical Student Association.
- Topp, Kimberly. President (elected), American Association of Anatomists.
- Vaderhobi, Ram. Appointed Dental School Liaison, Academy of Cosmetic Dentistry.
- West, Daniel. Walter W. Tunnessen, Jr MD Award for Advancing Pediatric Resident Education, Association of Pediatric Program Directors.

REGIONAL HONORS AND AWARDS

- Bachhuber, Melissa; O’Sullivan, Patricia; Teherani Arianne; and O’Brien, Bridget. Cooke Award for the Scholarship of Teaching and Learning for Using Design Based Research to Advance Systems-Oriented Workplace Learning Experiences.
- Chin-Hong, Peter. Commencement Speaker, Class of 2015, UCSF School of Medicine.
- Cooke, Molly. UCSF 150th Anniversary Alumni Excellence Award, Alumni Association of UCSF.
- Eng, Jessica. Leading Tidal Change Fellow, Tideswell at UCSF.
- Francis, Paul. Best Faculty Teacher in Pediatrics, UC Merced San Joaquin Valley Prime Medical Education Program.
- Fulton, Tracy. Long Award for Excellence in Teaching, Class of 2017, UCSF School of Pharmacy.
- Hauer, Karen; Oza, Sandra; Kogan, Jennifer; Stankiewicz, Corrie; Stenfors-Hayes, Terese; ten Cate, Ollie; Batt, Joanne; O’Sullivan, Patricia. Cooke Award for the Scholarship of Teaching and Learning for How Clinical Supervisors Form Trust in Their Trainees: A Qualitative Study.
- Jackson, Rebecca. 2015 Outstanding Medical Student Teaching in Core Clerkship, Obstetrics, Gynecology and Reproductive Sciences, UCSF School of Medicine.
- Jackson, Rebecca. 2015 Outstanding Resident Teaching Award, UCSF School of Medicine.
- Kruidering, Marieke. Outstanding Teacher Award, UCSF School of Pharmacy.
• Lomen-Hoerth, Catherine MD, PhD, Neurology, Pathways Mentor Award, UCSF Pathways.
• Lucey, Catherine. UCSF 150th Anniversary Alumni Excellence Award, Alumni Association of UCSF.
• Miller, Carol. 2014 Dr. Martin Luther King, Jr. Diversity Award, Chancellor’s Office of Diversity and Outreach, UCSF.
• Mitrovic, Igor. Dean’s Recognition for Excellence in Teaching, UCSF School of Pharmacy.
• Murr, Andrew. Inducted into Gold Headed Cane Society, Gold Headed Cane Honor Society, UCSF School of Medicine.
• Papadakis, Maxine. 2014 Chancellor’s Diversity Award for Disability Service, Chancellor’s Office of Diversity and Outreach, UCSF.
• Rohde, Dana. Apple Award, UCSF School of Pharmacy.
• Sanchez, Henry. Teacher of the Year Award, California School of Pediatric Medicine, Samuel Merritt University.
• Schwartz, Brian. Apple Award, UCSF School of Pharmacy.
• Topp, Kimberly. The Last Lecture, Class of 2015, UCSF School of Medicine.
• Yang, Serena. Best Faculty Teacher in Pediatrics, UC Merced San Joaquin Valley Program in Medical Education.

SCHOOL OF MEDICINE
CONVOCATION AWARD WINNERS

Teaching Excellence Award for Cherished Housestaff (TEACH)
• Christine Hessler, MD, Neurology
• Sean Kivlehan, MD, Emergency Medicine
• Vivek Murthy, MD, Medicine
• Katie Raffel, MD, Medicine
• Chris Vercammen-Grandjean, MD, Medicine

Teaching Award for Clinical Faculty
• Gurpreet Dhaliwal, MD, Medicine
• Laura Norrell, MD, Gynecology and Reproductive Sciences
• Michael Reid, MD, Medicine
• Dolores Shoback, MD, Medicine
• Amy Whittle, MD, Pediatrics

Osler Distinguished Teaching Award
• Kanade Shinkai, MD, PhD, Dermatology

ESSENTIAL CORE TEACHING AWARDS (ECTA)

• Timothy Berger, MD, Dermatology. Inspirational Teacher
• Gary Chan, MD, Medicine. Outstanding Foundations of Patient Care Preceptor
• Joe Derisi, PhD, Biochemistry & Biophysics. Outstanding Lecture
• Amber Fitzsimmons, DPTSc, PT, Anatomy and Physical Therapy and Rehabilitative Science. Commitment to Teaching
• David Jull-Patterson, PhD, Psychiatry. Inspirational Teaching
• Lauren Lederle, MS3, Medicine. Excellence in Student Small Group Teaching
• Meyeon Park, MD, Medicine. Excellence in Faculty Small Group Teaching
• Henry Sanchez, MD, Pathology. Innovative Teacher
• Allison Schneider, MS3. Outstanding Contribution to an Elective: MSP
• Hilary Seligman, MD, Medicine. Excellence in Faculty Small Group Teaching
• Patrick Treseler, MD, PhD, Pathology. Outstanding Lecture Series
• Emily Watkins, MS4, Graduated Class of 2014. Excellence in Student Small Group Teaching

Teach. inspire.
KAISER AWARDS FOR EXCELLENCE IN TEACHING

- Avak Howsepian, MD, MA, PhD, Psychiatry, UCSF Fresno. Fresno Medical Education Program
- Steven Lane, MD, MPH, Family and Community Medicine. Volunteer Clinical Faculty
- Rachael Lucatorto, MD, Medicine. Classroom Setting
- Diane Slivka, MD, Medicine. Inpatient Care Setting
- Nicole Strauss Schroeder, MD, Orthopaedic Surgery. Ambulatory Care Setting, Orthopaedic Surgery

ACADEMIC SENATE DISTINGUISHED FACULTY AWARDS

Distinction in Teaching Awards
- Katherine Julian, MD, Medicine
- David M. Naeger, MD, Radiology and Biomedical Imaging

Distinction in Mentoring
- Anita Sil, MD, PhD, Microbiology and Immunology, School of Medicine

TEACHING SCHOLARS PROGRAM (TSP) GRADUATES

- Charnjeet Brar, MD, Pediatrics, UCSF Fresno. Developing a Faculty Development Workshop on Time Management for Leaders.
- Peter Chin-Hong, MD, MAS, Medicine. Opening Doors to Academic Medicine: The pre-health undergraduate program (PUP) at UCSF.
- Maria Dall’Era, MD, Medicine. Practice Improvement using Virtual Online Training: Creation of an Interactive Mobile App to Teach Clinical Reasoning to Medical Students.

- Doranne Donesky, RN, PhD, Physiological Nursing, School of Nursing. Development of a Palliative Care Minor for Advanced Practice Nursing Students.
- Jessica Eng, MD, MS, Medicine. VA COACH: An Interprofessional, Home-based Learning Experience for Pre-Clerkship Medical Students.
- Gerald Hsu, MD, Medicine, VAMC. Capturing how Medical Students Integrate Interdisciplinary Content Using Concept Maps.
- Elizabeth Joyce, PhD, Microbiology and Immunology. Needs Assessment for the First-year Dental Student.

- Ben Li, MD, Obstetrics, Gynecology and Reproductive Sciences. Building a Reproductive Genetics Curriculum through an EPA Framework.
- Michael McMaster, PhD, Cell and Tissue Biology. Developing the Faculty of the Future: Academic Dental Careers Fellowship Program.
- Saras Ramanathan, MD, Ophthalmology. Mentorship of the Cataract Surgery Educator: Is there room for improvement?

- Kanade Shinkai, MD, PhD, Dermatology. Correlation between Medical Student Clinical Reasoning and Clinical Skills on a Standardized Patient Clinical Performance Exam.
- Steven Tringali, DO, Medicine, UCSF Fresno. A Targeted Needs Assessment for an Inpatient Procedure Curriculum.
- Pinelopi Xenoudi, DDS, MS, Orofacial Sciences. Vertical integration of Pre-Doctoral Periodontics in the UCSF Dental School Curriculum.
TEACH FOR UCSF CERTIFICATE PROGRAM

Teach for UCSF Certificate in General Teaching: 35 hours of instruction with skills assessments.

- Lela R. Bachrach, MD, Associate Clinical Professor, Volunteer, Pediatrics
- Michael L. Coppolino, MD, MSc, Assistant Clinical Professor, Volunteer, Medicine
- Mark A. Dellinges, DDS, Clinical Professor, Preventive and Restorative Dental Sciences
- Christopher Fee, MD, Associate Professor of Clinical Emergency Medicine, Emergency Medicine
- Marla B. Ferschl, MD, Associate Clinical Professor, Anesthesia and Perioperative Care
- Nina I. Garga, MD, Assistant Clinical Professor, Neurology
- Alissa M. Peterson, MD, Assistant Clinical Professor, Psychiatry
- David Jull-Patterson, PhD, FT, Clinical Professor, Volunteer, Psychiatry
- Thomas T. Reid, MD, MA, Assistant Clinical Professor, Medicine

Teach for UCSF Certificate in Simulation Teaching: 24 hours of instruction with skills assessments.

- Pamela Bellefeuille, RN, MN, CNS, Clinical Professor, Physiological Nursing
- David Jull-Patterson, PhD, FT, Clinical Professor, Volunteer, Psychiatry

NEW MEMBERS

- Madhavi Dandu, MD, MPH, Medicine
- Vanja Douglas, MD, Neurology
- Jacque Duncan, MD, Ophthalmology
- Erick Hung, MD, Psychiatry
- Descartes Li, MD, Psychiatry
- Catherine Lucey, MD, Medicine
- Andrea Marmor, MD, MSEd, Pediatrics
- David Naeger, MD, Radiology and Biomedical Imaging
- Kristina Sullivan, MD, Anesthesia and Perioperative Care

MATCHED ENDOWED CHAIR PROGRAM

- Erick Hung, MD, Endowed Chair in Psychiatry Medical Student Education
- Ann Poncelet, MD, Mr. & Mrs. David George Rowe & Stephen W. Rowe Endowed Chair for Teaching in Neurology
- Kanade Shinkai, MD, PhD, Endowed Chair in Dermatology Medical Student Education
- Emma Webb, MD, Academy Chair for Education in Radiology and Biomedical Imaging
- Elisabeth Wilson, MD, MPH, Permanente Medical Group Teaching Chair in Primary Care
HAILE T. DEBAS ACADEMY OF MEDICAL EDUCATORS
EXCELLENCE IN TEACHING AWARDS

Anesthesia and Perioperative Care
Kristine Breyer, MD
Chris Choukalas, MD
Karin Sinavsky, MD

Biochemistry and Biophysics
Hiten Madhani, MD, PhD

Cardiovascular Research Institute
Brian Black, PhD

Cellular and Molecular Pharmacology
Danica Galonic Fujimori, PhD

Emergency Medicine
James Hardy, MD
Roneesha Knight, MD
Craig Smollin, MD

Epidemiology and Biostatistics
Michael Kohn, MD, MPP
Jeffrey Martin, MD, MPH

Medicine
Melissa Bachhuber, MD
Abigail Eastburn, MD
James Frank, MD
Michael Nejad, MD
Sandra Oza, MD
Shalini Patel, MD
Rajni Rao, MD
Steve Stoltz, MD
Sunny Wang, MD

Obstetrics, Gynecology and Reproductive Sciences
Kirsten Salmeen, MD

Ophthalmology
Allan Flach, MD, PharmD

Otolaryngology - Head and Neck Surgery
Matthew Russell, MD

Pathology
Han Lee, MD, PhD

Pediatrics
Naomi Bardach, MD
Lisa Goodman, MD
Maries Joseph, MD
Ellen Laves, MD
Stephen Rosenthal, MD
Anne Slavotinek, MD, PhD
Karen Sun, MD

Physical Therapy and Rehabilitation Science
Amber Fitzsimmons, PT, MS, DPTSc

Physiology
Phillip Sabes, PhD

Psychiatry
Danielle Roselin, MD
Nicholas Rosenlicht, MD

Radiology and Biomedical Imaging
Maureen Kohi, MD
Andrew Phelps, MD

Surgery
Hueylan Chern, MD
Barnard Palmer, MD
Grants

EXTRAMURAL


6. Long M (PI; Site Director), Chen HC (Site Co-Director), West D (Co-PI; Site Co-Director), Dandekar A (Site Co-Director). Education in Pediatrics across the Continuum- A Competency Based Education Pilot. American Association of Medical Colleges (AAMC) and the Josiah Macy Jr. Foundation. July 2013-June 2016.


21. Satterfield J (PI). The UCSF SBIRT (Screening, Brief Interventions, and Referrals to Treatment) Collaborative Education Project. Substance Abuse and Mental Health Services Administration (SAMHSA)/Center for Substance Abuse Treatment (CSAT). September 2010-June 2015.


In 2014, the Haile T. Debas Academy of Medical Educators, in partnership with the UCSF Program in Interprofessional Education, and the UCSF Library and Center for Knowledge Management administered the grant program “Innovations Funding for Education 2015.” The program supports faculty who research, create and implement new ways of teaching complex diagnostic and treatment skills that will advance the quality of health care. The program supports development of new curricular elements, focused faculty development undertakings, comparison of pedagogical approaches and innovative approaches to learner assessment. Open to all faculty, these intramural grants serve as a catalyst for the development of curriculum that addresses the constantly changing ways in which health-care providers practice.

Academy of Medical Educators Innovations Funding
- Calton B. Preparing Trainees to Communicate Effectively with Seriously Ill Patients through a Targeted Communications Curriculum.
- Danhaive O. The Golden Hour: An Interdisciplinary approach focused to teach, develop, and assess EPA during Neonatal Resuscitation.
- Duong J. Inpatient Consult Etiquette - A Primary Team’s Perspective.
- Ekman E. SPRUCE: Supporting Provider Resilience by Upping Compassion and Empathy.
- Hersevoort S. Integrated Mental Health Education.
- Horton C. Teaching the Triple AIM at SFGH.
- Lelkes E. Creation of a Basic Science Consultation Service for the Clinical Setting.
- Lo L. Applying Critical Kidney Physiology in the Clinical World.
- Vance S. Enhancing Pediatric Trainees’ and Students’ Knowledge in Providing Care to Transgender Youth.

UCSF Program in Interprofessional Education Innovations Funding
- Finlayson E, Kaplan J, Horvath H. Integrating Interprofessional Learners in High-Risk Surgical Patient Care.

UCSF Instructional Grants in Interprofessional Education
OTHER INTRAMURAL

- Tong L (PI). Adapting Systems Analysis Methodology to Study Negative Outcomes in Medical Education: Medical Students Dismissed for Academic Reasons. Dean’s Funds, UCSF School of Medicine. September 2014-June 2015.

Publications

PEER REVIEWED PUBLICATIONS

<table>
<thead>
<tr>
<th>No.</th>
<th>Author(s)</th>
<th>Title</th>
<th>Journal</th>
<th>Year</th>
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<td>32.</td>
<td>Dhalliwal G, Sehgal NL.</td>
<td>Demystify leadership in order to cultivate it.</td>
<td>Acad Med.</td>
<td>2014</td>
<td>91(11)</td>
<td>1441</td>
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OTHER PUBLICATIONS


Presentations

INVITED LECTURES

1. Aronson L, Ofri D, Lerner B. Keynote; Why We Need Stories in Medicine: Louise Aronson in Conversation with Danielle Ofri and Barron Lerner. Master Scholars Program in Humanistic Medicine, New York University School of Medicine, Spring 2015 Colloquium. New York, NY, March 2015.


5. Aronson L. Keynote; Public Medical Communication: Transforming Health Care with Your Voice, Pen or Keyboard. dotMED Conference. Dublin, Ireland, December 2014.


20. Bowen J. Grand Rounds; Duty Hours, Shift Work, and Patient Care Discontinuity: Implications for Diagnostic Reasoning. Department of Medicine, Oregon Health and Science University. Portland, OR, June 2015.


23. Brock T. Bridge-Building: Insights into Interprofessional Education. University of Nottingham School of Pharmacy, Nottingham, United Kingdom, May 2015.


26. Brzezinski M. Visiting Professor Grand Rounds; Advanced Teaching Skills for the Fast-Paced OR: How to Educate Successfully when Faced with High Clinical Workload, Lack of Protected Time, and Limited Funding. MD Anderson Cancer Center. Houston, TX, 2015.


29. Brzezinski M. Visiting Professor Grand Rounds; Advanced Teaching Skills for the Fast-Paced OR: How to Educate Successfully when Faced with High Clinical Workload, Lack of Protected Time, and Limited Funding. University of Texas at Houston. Houston, TX, 2015.


32. Campbell A. Invited Moderator: Department of Surgery Annual Education Retreat. Department of Surgery, Baylor University School of Medicine. Houston, TX, October 2014.

33. Campbell A. Houston We Have a Problem: Lessons Learned from the San Francisco Plane Crash. National Medical Association Annual Scientific Symposium, Trauma and Acute Care Surgery Session. Honolulu, HI, August 2014.

34. Campbell A. The Net & Social Media-Agents of Change or White Noise? South West Area Network (SWAN) XXII Conference, Trauma Department, Liverpool Hospital. Sydney, Australia, July 2014.

37. Chang A. Discussion; Step Back. American Medical Association Accelerating Change in Medical Education Meeting. Chicago, IL, October 2014.
45. Chou C. Keynote Address. Frank H. Netter School of Medicine, Quinnipiac University. North Haven, CT, 2014.
49. Cooke M. Visiting Professor; Getting Serious about Lifelong Learning. Alpha Omega Alpha Society, Upstate Medical University. State University of New York. Syracuse, NY, March 2015.
67. Dhaliwal G. Conversations about High Value Care. Division of General Internal Medicine, Ohio State University. Columbus, OH, May 2015.

69. Dhaliwal G. Case Conferences. Tsukuba Medical Center. Tsukuba, Japan, February 2015.


74. Irby DM. Motivation Theory: Can it Offer Clues for Engaging Faculty Members in the Educational Mission? St. Michael’s Hospital/University of Toronto. Toronto, ON, Canada, June 2015.


78. Kuo A. Grand Rounds: UCSF Pediatric Leadership for the Underserved Program. Pediatric Residency Program, Texas Tech University Health Sciences Center. Lubbock, TX, August 2014.


80. Lin M. Visiting Professorship; Department of Emergency Medicine, McMaster University School of Medicine. Hamilton, ON, Canada, October 2014.


83. Loeser H. Keynote; Mentoring of Value, and Academic Necessity. Inauguration for Teaching Academy, University of Vermont College of Medicine. Burlington, VT, March 2015.

84. Loeser H. Keynote; Academies, Lessons Learned (for Planning Committee’s design workshop, “Teaching Academies”). Stanford University School of Medicine. Palo Alto, CA, July 2014.

85. Long M. Meet the Medical Education Professor. Pediatric Residency Program, Stanford University School of Medicine. Stanford, CA, August 2014.


95. Lucey CR. Tosteson Visiting Professor; Managing Professionalism Lapses: Moving from Executioner to Educator. Harvard University School of Medicine and the Shapiro Institute for Education and Research. Boston, MA, June 2015.

96. Lucey CR. Tosteson Visiting Professor; What Is Basic about Science in Medical Education? Harvard University School of Medicine and the Shapiro Institute for Education and Research. Boston, MA, June 2015.

97. Lucey CR. Distinguished Professor; Problem Lists to Illness Scripts. Highland Hospital, University of Rochester Medical Center. Rochester, NY, May 2015.


107. O’Sullivan P. Who Wants to be a Faculty Developer? McMaster University Masters of Science in Health Sciences Education. Hamilton, Ontario, Canada, June 2015.

108. O’Sullivan P. EPAs: Assessments That Happen All the Time. McMaster University Masters of Science in Health Sciences Education. Hamilton, Ontario, Canada, June 2015.


120. Sanchez H. Pathology Review for the USMLE Step 1. Poznan University of Medical Sciences. Poznan, Poland, June 2015.


122. Sanchez H. Pathology Review for the USMLE Step 1. University of Sharjah College of Medicine. Sharjah, United Arab Emirates, August 2014.

123. Saxe J. Advanced Nursing Practice: Ethical and Legal Perspectives. Chinese University of Hong Kong, The Nethersole School of Nursing. Hong Kong, China, September 2014.


137. Shunk RL, Keene T. Overview of Center of Excellence in Primary Care Education with Implications for Health Policy. American College of Physicians and American Association of Nurse Practitioners Interprofessional Team Meeting. Philadelphia, PA, March 2015.

138. Shunk RL, Keene T. Overview of Center of Excellence in Primary Care Education. Patient Centered Primary Care Collaborative (PCPCC). Washington, DC, November 2014.


159. West D. Grand Rounds; Better Handoffs and Safer Care: Preliminary Results of the I-PASS Study. MD Anderson Cancer Center. Houston, TX, August 2014.
166. Yang S. Keys to Success in Resident Research. China Medical University. Taichung, Taiwan, December 2014.
Workshops

15. Chen HC. Application of EPAs in Undergraduate Medical Education. University of New Mexico. Albuquerque, NM, April 2015.
17. Chen HC. Pre-Clerkship or Doctoring Entrustable Professional Activities. University of New Mexico. Albuquerque, NM, April 2015.
48. Kelly T, West D, Balmer D. Designing Surveys to Effectively Measure Outcomes in Research, Quality Improvement, and Educational Projects. Pediatric Academic Societies (PAS) Meeting. San Diego, CA, April 2015.


58. Long M, Butani L. Questioning as an Effective Teaching Tool. Stanford School of Medicine, Pediatric Residency Program. Palo Alto, CA, November 2014.


75. Papadakis M. Medical Student Professionalism. University of Oklahoma, Office of Medical Education. Oklahoma City, OK, January 2015.


96. West D. Better Handoffs and Safer Care: Preliminary Results of the I-PASS Study Grand Rounds. MD Anderson Cancer Center. Houston, TX, August 2014.

97. West D. I-PASS Handoff Process: Evidence-Based Approach for Better Handoffs and Safer Care. MD Anderson Cancer Center. Houston, TX, August 2014.

SUBMITTED PRESENTATIONS


24. Carley A. Evidence-Based Project Planning: A Course Series that Benefits Acute Care Neonatal/Pediatric Learners as well as their Clinical Mentors. Academy of Neonatal Nursing Advanced Practice Meeting. Chicago, IL, March 2015.


54. Garlin A, Myo M, Azzam A. An Introductory Medical School Course Structured Around Core Competencies and Based on Principles of Self-Regulated Learning and Play Prepares Students Well for Problem-Based Learning (PBL). Ottawa and Canadian Conference on Medical Education. Ottawa, ON, Canada, April 2015.


114. Teherani A. Panel: Powerful Partnerships - How Five Medical Schools are Re-Imagining Medical Education. Western Group on Educational Affairs (WGEA) Meeting. San Diego, CA, April 2015.


116. Ten Cate O. Entrustable Professional Activities in Undergraduate Medical Education. Association for Medical Education in Europe (AMEE) Annual Meeting. Milan, Italy, September 2014.


The “Uniquely UCSF” 21st Century Physician

A UCSF Graduate will be recognized by the way he or she approaches patients, populations and problems.
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Pictured: Photos from the Class of 2015 graduation ceremony
UCSF Mt. Zion Medical Center, one of five clinical sites for the Bridges Clinical Microsystems Clerkship.