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Authors

Le-Bucklin, Khanh-Van
Stamos, Michael
Youm, Julie

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The University of California, Irvine School of Medicine

Khanh-Van Le-Bucklin, MD, MEd, Michael Stamos, MD, and Julie Youm, PhD

Medical Education Program Highlights

A 5-time Apple Distinguished School honoree, the University of California, Irvine School of Medicine (UCI) has embraced technology as a core component of its medical education program for nearly a decade. In 2010, UCI made a strategic commitment to reinvent the traditional medical school curriculum for the 21st century. The iMedEd Initiative was launched, with UCI leading as one of the early adopters of innovative technologies to promote active, student-centered learning in medical education. 2020 marks the 10-year anniversary of the iMedEd Initiative, and highlights from this period include:

- A 1-to-1 iPad program for every incoming class of students since 2010
- A mature 4-year point-of-care ultrasound curriculum, most recently distinguished by the gifting of Butterfly iQ handheld ultrasound devices to each member of the class of 2023
- Use of Google Glass, virtual reality, and 3D printing to enhance knowledge acquisition and clinical skills development
- Substantial curricular redesign to support a systems-organized, clinically anchored, active learning approach

UCI's mission-based programs constitute another curricular initiative of high priority for the school. The state-supported Program in Medical Education for the Latino Community (PRIME-LC) is the school's signature mission-based program, and was designed to develop leaders, advocates, and culturally competent health care providers for California's under-resourced Latino communities. This 5-year dual-degree program includes educational sessions taught in Spanish, immersive clinical experiences locally and internationally, and a master's degree requirement. The first cohort of PRIME-LC students enrolled in 2004, and the program has continued to consistently graduate students dedicated to serving Latino communities for the past 15 years.

Following the success of PRIME-LC, 2 additional mission-based programs have been established at UCI. Leadership Education to Advance Diversity–African, Black, and Caribbean (LEAD-ABC) is a new, first of its kind, mission-based program aimed at producing future physicians who are committed to serving African, black, and Caribbean communities. Health Education to Advance Leaders in Integrative Medicine (HEAL-IM) is a mission-based program designed to provide a future generation of physicians with additional training and skills in the tools and philosophies of integrative medicine. Both of these 4-year longitudinal programs accepted their first cohort of students in 2019.

Curriculum

Curriculum description

See Supplemental Digital Appendix 1—iTEACH Curriculum Map—at <http://links.lww.com/ACADMED/A840>.

Curriculum changes since 2010

The UCI curriculum has evolved over the last 10 years from a traditional, discipline-based structure to a systems-organized approach known as iTEACH (Technology-Enhanced, Activity-Coordinated, Humanistic). iTEACH represents a temporal alignment of content organized into thematic blocks, and is a significant departure from the former traditional, discipline-based courses that previously defined the preclerkship years. By maintaining a “systems-organized” perspective, a priority on the integration of basic science and clinical content is explicitly defined, with improved student outcomes as a result. In addition to realignment of the content, iTEACH includes critical opportunities for students to engage in coordinated simulation, ultrasound, and clinical skills modules with the aim of further increasing clinical correlation with the basic sciences by enabling hands-on opportunities to situate student learning.

Assessment

The current UCI program objectives and Knowledgeable, Skillful, Altruistic, and Dutiful competency framework were developed by a taskforce consisting of faculty, residents, students, and senior administrators. In addition to the school’s defined competencies, program objectives are also mapped to the ACGME domains of competence, the Physician Competency Reference Set competencies, and the AAMC Core Entrustable Professional Activities for broader comparability. A varied and comprehensive set of assessment methods are associated with each program objective and used to determine medical students’ progress in developing the competencies required for advancement towards the MD degree. See Supplemental Digital Appendix 2—Program Objective Assessment Mapping—at <http://links.lww.com/ACADMED/A840>.

Pedagogy

The iTEACH curricular redesign featured a renewed reliance on active learning strategies with clinical correlation at its core. Common pedagogical approaches found in the curriculum are team-based learning, small-group discussion, and coordinated clinical skills modules that align with systems-organized content utilizing standardized patients, ultrasound, and simulation as foundational resource methods. Successful implementation of these changes was dependent on faculty preceptors who could provide consistent small-group instruction, feedback, and

modeling. To address this need, the Dean's Scholars program was initiated in 2018, enabled by the funding and centralization of clinical faculty resources in the Office of Medical Education. For the first cohort of this program, 12 Dean's Scholars from diverse backgrounds and specialties were recruited, interviewed, and selected through a competitive process. Dean's Scholars commit 2 half days a week to serving as content developers, small-group leaders, and clinical preceptors.

This investment in a centralized team of dedicated clinical faculty has provided the following benefits for the medical education program:

- Standardized clinical skills training and assessment
- Coordinated curriculum development and clinical integration opportunities
- Consistent faculty support at small-group activities
- Longitudinal mentorship for students

Clinical experiences

Students begin clinical experiences during their first year of medical school in the Patient and Community Engagement (PACE) clerkship. PACE is a longitudinal clinical rotation with a community preceptor, and was designed to provide students with consistent workplace-based opportunities to improve medical knowledge while practicing patient care, professionalism, and interpersonal and communication skills. The community setting exposes students to the unique culture of medical systems and the social determinants impacting the health of patients. During this early clinical experience, students perform a community assessment, as well as develop and implement a quality improvement project within a practice.

In the clinical years, students complete required experiences at the UCI Medical Center, 3 affiliated hospitals (Children's Hospital of Orange County, the Veterans Affairs Long Beach Healthcare System, and Long Beach Memorial Medical Center/Miller Children's Hospital), and community-based outpatient clinics. UCI does not have any regional campuses. Annual monitoring of clinical experiences demonstrates a desired balance of inpatient and outpatient experiences across the clinical years, and minimal use of alternative methods to meet core clerkship requirements. As UCI considers an increase in class size, one challenge will be the need to expand capacity in the area of obstetrics–gynecology to accommodate more learners.

Curricular Governance

Curricular governance is provided by the Curriculum and Educational Policy (CEP) Committee, whose voting members are faculty appointed by the School of Medicine Academic Senate. The CEP has 2 subcommittees: the Basic Science Course Directors Committee and the Clinical Clerkship Directors

Committee. Subcommittee membership is made up of course/clerkship directors, course/clerkship coordinators, and student representatives. The dean and medical education administrators serve as ad hoc committee members. The CEP and its subcommittees meet monthly and are responsible for reviewing all courses on a biennial schedule. The CEP Committee also reviews the phases of the curriculum, and the curriculum as a whole.

See Figure 1—Curricular governance.

Education Staff

The administrative and academic support for the planning, implementation, evaluation, and oversight of the curriculum is the responsibility of the Office of Medical Education. The Office of Medical Education also oversees the development and maintenance of tools to support curriculum delivery, monitoring, and management through an ongoing, collaborative effort by the divisions of Curricular Affairs and Educational Technology.

The Division of Education Compliance and Quality (ECQ) in the Office of Medical Education oversees the accreditation, compliance, and quality improvement activities of the medical education program, in collaboration with the CEP committee and the divisions of Student Support, Curricular Affairs, and Educational Technology. ECQ is charged by CEP to ensure the school's compliance with the CEP's policy on continuous quality improvement.

The Office of Medical Education's responsibilities reach beyond educational programming to encompass admissions, student affairs, and diversity and inclusion. It also serves as the administrative home for educational activities across the continuum, including pathway programs, graduate medical education, and continuing medical education.

Reporting to the dean, the office is led by a vice dean for medical education, 5 associate deans, 6 assistant deans, 11 faculty directors, a chief administrative officer, and 2 executive staff directors.

See Figure 2—Medical education leadership.

Faculty Development and Support in Education

Faculty development is conducted across the clinical, research, and educational enterprises of the school. To support the professional development of faculty as educators, the Office of Medical Education conducts a faculty development seminar series covering courses that include:

- Engaging Learners with Effective Didactic Teaching
- Asynchronous Learning + Audience Response
- Effective Clinical Teaching
- Podcasting, PowerPoint and Keynote Tips for Better Presentations

- Role of the Educator with Medical Students and Policy Review
- Effective Feedback

Additional faculty development opportunities are available through the Division of Teaching Excellence and Innovation on the UCI main campus. Evidence of teaching is not only considered, but required, in academic promotion and tenure decisions at UCI. Faculty must provide student evaluations of their teaching, and at least one other artifact that demonstrates their support of the university's teaching mission, such as a teaching statement, peer evaluations, or teaching awards.

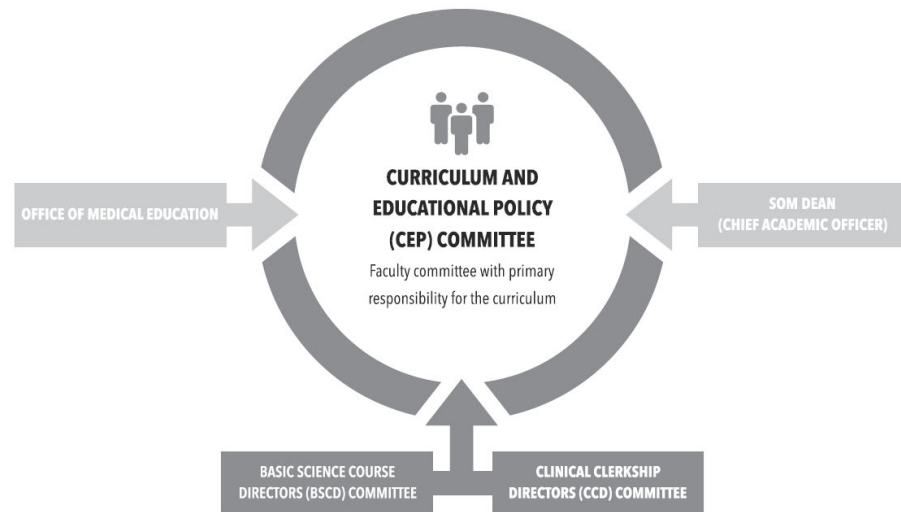


Figure 1. Curricular governance.

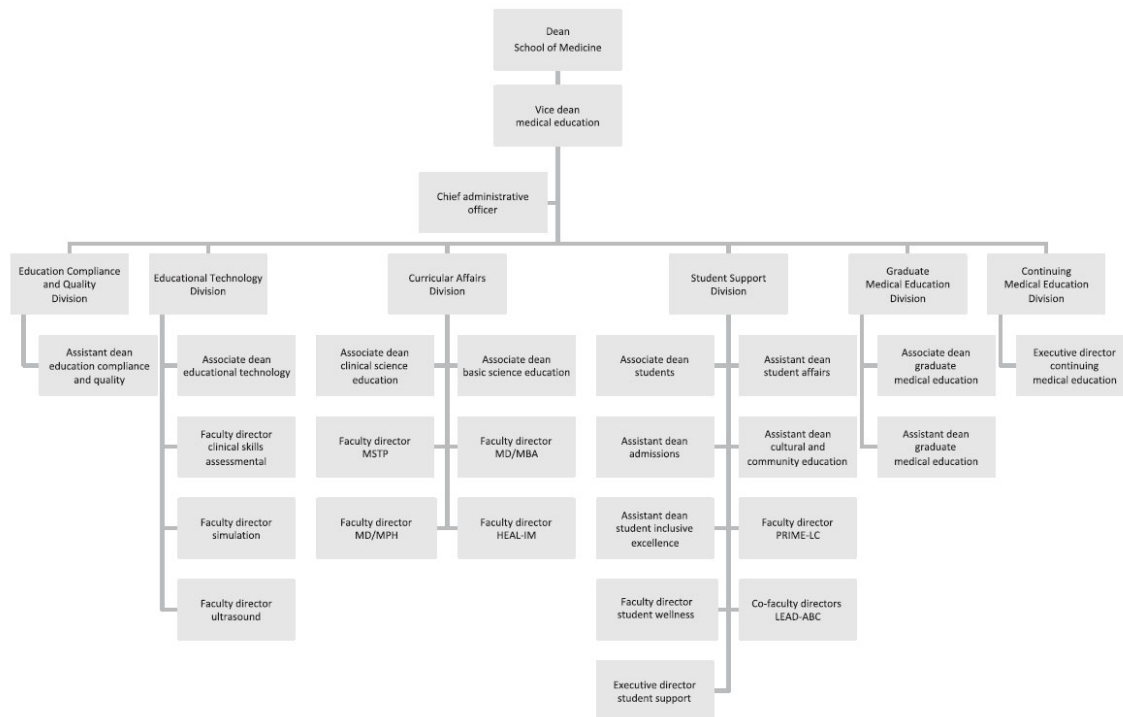


Figure 2. Medical education leadership.

Supplemental digital content for this article is available at <http://links.lww.com/ACADMED/A840>.

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School URL: <https://www.som.uci.edu>.