University of Central Florida College of Medicine
Richard Peppler, PhD, Martin Klapheke, MD, and Jeffrey La Rochelle, MD

Medical Education Program Highlights

- Students complete a research project during the first 2 years of medical school as part of the Focused Inquiry and Research Experience course. This allows each student to develop skills of intellectual inquiry applicable to the practice of medicine.
- Community interprofessional education experiences in student-run clinics for uninsured patients, farm workers, and homeless, along with global health experiences, occur.
- Longitudinal curricular themes (LCTs) on culture, ethics, geriatrics, medical informatics, nutrition, and patient safety are presented throughout the curriculum.
- A 4-week elective in the third year allows students to experience clinical/research areas to assist in career planning.

Curriculum

See Supplemental Digital Appendix 1—Curriculum Description—at http://links.lww.com/ACADMED/A827.

Curriculum changes since 2010

Changes made for the first and second years:
- Increased content in biostatistics and epidemiology
- Decreased lectures with concomitant increase in small-group learning
- Students assigned a personal librarian upon matriculation
- Increased ultrasound skill instruction to complement learning in organ systems

Changes made for the third and fourth years:
- Increased number of clinical placement sites across central Florida
- Implemented 8 LCTs throughout the third year
- Implemented OSCEs in all core clerkships except surgery
- Increased monitoring of standard portions of clerkship OSCE performance over the entire third year to identify areas for individual student focus/remediation
- Added a 4-week elective in the third year
- Decreased the length of the surgery core clerkship from 12 to 8 weeks
- Increased content/simulation in the fourth-year “boot camps” for transition to residencies
- Increased number of “away” rotations allowed in the fourth year

Changes planned in the third and fourth years:
- Addition of a Practice of Medicine III course in the third year for increased longitudinal focus on clinical skills
- Increase in standardization of third-year core clerkship grading rubrics and narratives
- Addition of intersessions during the third year focused on clinical skills and LCTs

Class size changes since 2010

The class size has grown from 40 students per year in the charter class to 120 students per year; this has not changed the schools’ structure.

Assessment

Our medical education program objectives are based on the ACGME domains of competence.

See Supplemental Digital Appendix 2—Medical Education Program Objectives and Assessment Methods—at http://links.lww.com/ACADMED/A827.

Assessment changes since 2010

- The mid-third-year OSCE was deleted, and OSCEs were designed and occur in all of the 6 core clerkships except 1. The end-of-third-year OSCE is a high-stakes assessment for transition to the M4 year.
- The administration of comprehensive basic science examinations was reduced from 5 to 1 in preclerkship years.

Pedagogy

The curriculum has been very dynamic in terms of changes to module and session levels, such as altering the length and timing of modules and adjusting the portfolio of required clinical experiences. The Offices of Faculty Development, Assessment, and Education Technology collectively assist faculty members with the use of technology, assessment techniques, and different formats of instruction (e.g., team-based learning and self-learning modules). The trend has been to decrease the didactics that occur in a class setting and increase small groups, particularly using clinical cases. When lectures are used, interactive tools and learner response systems are used. Students are exposed to clinical experiences in the first 2 years in the Practice of Medicine modules, which include a Community of Practice clinical preceptor component and experiences in the clinical skills and simulation center with standardized patients or simulation. Cadaver laboratory experiences are used concomitant with medical imaging and ultrasound exposure.
Faculty continue to improve vertical and horizontal integration, complete item bank annotations, and reduce the proportion of curriculum delivered as didactic lectures.

**Changes in pedagogy since 2010**

For the second through fourth years: decreased lectures in core clerkship didactics, with increase in “flipped classroom” and increased use of simulation, small groups, and case-based learning.

**Clinical experiences**

Home visits, outpatient, residential, inpatient; Veterans Health Administration; private, public, community-based hospitals.

**Required longitudinal experiences**

LCTs are presented throughout the medical school curriculum on 8 topics: culture, health, and society; patient safety; medical nutrition; ethics and humanities; gender-based medicine; geriatrics and principles of palliative care; interprofessional education; and medical informatics.

**Clinical experience first encounter**

In the first year, students have experiences in the Community of Practice component of the Practice of Medicine module. This is continued in the second year as well.

**Required and elective community-based rotations**

During core clerkships and the third-year elective, third-year students rotate at outpatient clinics at: Orlando VA Bay Pines VA, Nemours Children’s Hospital, University Behavioral Center, Park Place Behavioral Health Care, UCF Health, Pasadena Villa, HCA-Ocala Regional, Osceola Sheriff’s Employee Clinic, HCA-North Florida Regional, Naples Healthcare System, True Health, Osceola Community Health Services, WellMed, Express Clinic, and private medical offices.

**Challenges in designing and implementing clinical experiences for medical students**

- Our school relies heavily on affiliated/volunteer faculty; hence, the most significant challenge has been the increasing requests by third-year clinical preceptors to be paid for teaching medical students.
- Technological and pedagogical problems associated with teleconferencing of third-year didactic sessions is a recurring challenge.

**Curricular Governance**

See Figure 1—Curricular governance.

**Decentralized curricular governance**

Budgets are developed at the user level and presented by the associate dean for faculty and academic affairs (ADFAA) to the budget committee of the college. Ultimately, the entire college budget is approved by the enterprise and the dean. The medical education program is a high priority, and these funds are provided through the ADFAA. Each module and clerkship have created a budget to handle the specifics of their respective programs. The operating budgets that support the medical education program are centralized in the Office of Faculty and Academic Affairs, which includes the Office of Planning and Knowledge Management, the health sciences library, the Clinical Skills and Simulation Center, the anatomy laboratory, and faculty development and continuous professional development. The Clinical Skills and Simulation Center budget, through the Office of Faculty and Academic Affairs, provides for equipping the facilities and for its operation. This includes funds for the hiring, training, and use of standardized patients within modules and for OSCEs conducted within the core clerkships and at the end of the third year. The support for the anatomy laboratory includes personnel, supplies, equipment, and the purchase of cadavers from the Anatomical Board. Funding for student research projects and funds to present at meetings are available for students. Faculty salary lines reside in the respective departments in which the faculty appointment is based, even though faculty are involved in the delivery of the MD program.

**Education Staff**

The responsibility for the medical education program has been delegated to the ADFAA, who reports directly to the dean. The ADFAA is supported by 2 assistant deans of medical education who provide administrative and academic support for the curriculum with a focus on preclinical and clinical sciences. Other individuals who report to the ADFAA include:

- Assistant dean of planning and knowledge management, who oversees the functions of strategic planning, assessment, educational technology, data and knowledge management, and LCME interface
- Assistant dean of clinical skills and simulation, who provides support to the educational program for teaching and assessing clinical skills within the modules and core clerkships (OSCEs) and for high-stakes OSCEs at the end of the second and third academic years
- Director of the health sciences library, whose librarians and staff members assist faculty and students with information resources and mobile technologies
- Director of the anatomy laboratory, a licensed funeral director/embalmer who supervises 18 individuals responsible for cleaning the laboratory
- Director for faculty development, a coordinator of continuous professional development and staff responsible for the appointment/credentialing and reappointment of the 2,400 nonsalaried core and affiliated/volunteer faculty
- Academic assistant deans at each of the major affiliate hospitals (Flagler; HCA Regional Medical Centers at Osceola, Ocala, and North Florida; NCH Healthcare Systems; Nemours Children’s Hospital; Orlando VAMC; and Bay Pines VA Healthcare System)
The Office of Faculty and Academic Affairs is managed by a director and associate director along with 14 full-time coordinators and administrators who support the instructional modules and clerkships, respectively. Coordinators assist faculty members with the administration of the educational program. There are 2 coordinators for the first-year and second-year programs, respectively. Two coordinators handle the administration and coordination of the Practice of Medicine 1 and 2 modules, and 2 coordinators and a staff member support the Focused Inquiry and Research Experience 1 and 2 modules. There are 7 clerkship administrators and an associate director for respective clerkships in the third and fourth years. These individuals are responsible for the administrative details associated with the clerkships: orientation, educational activities, student schedules, examinations, OSCEs, and final evaluation.
The Office of Faculty and Academic Affairs is responsible for undergraduate medical education, continuous professional development, nonsalaried faculty appointment, faculty development, planning and knowledge management (to include assessment, educational technology, and knowledge management), the clinical skills and simulation center, and the anatomy laboratory.

See Figure 2—Medical education leadership.

**Department of Medical Education**

The Department of Medical Education is 1 of the 5 academic units of the college, where 20% of the faculty, including librarians, are based. It is composed of faculty who have either a PhD or MD degree and are responsible for most of the content in the preclerkship curriculum.

**Faculty Development and Support in Education**

**Professional development for faculty as educators**

Faculty are supported by the college's Office of Faculty Development (OFD) and multiple college and university department programs to advance their teaching and assessment skills. Programming within this office occurs on an ad hoc basis, through a series of workshops and/or web-based resources. The ad hoc or personalized approach allows the faculty development professionals (and other medical education faculty members) to work with small groups of faculty members on devising learning objectives, developing appropriate content, identifying appropriate teaching methods, developing formative and summative assessments, and linking assessments to objectives. Workshops are scheduled to facilitate faculty members’ understanding of innovative pedagogical techniques, learning theory, and educational technology resources. The OFD collaborates with the Office of Planning and Knowledge Management to present programs related to educational technology and assessment services. There is significant support provided to assist faculty in developing and delivering PowerPoint presentations, case-based materials, self-learning modules, web-based materials, and student assessments. The Office of Educational Technology operates the Faculty Collaboration Center, where faculty obtain individualized instruction related to educational technology, as well as collaborate with other faculty and instructional designers to improve preparation and delivery of content.

**Role of teaching in promotion and tenure**

The academic mission requires all faculty members to engage in scholarship and scholarly activity. This requires the dissemination and acceptance of new knowledge by one’s peers. For core faculty, their efforts in these areas are assessed during the annual evaluation process and are considered for promotion. Each of the academic units in the college has established criteria for faculty who are in a tenure track and aspire to be awarded tenure and/or be considered for promotion. The tenure probationary period is 9 years. Criteria for promotion of nontenure track faculty have also been established by departments. Clinical departments have established criteria (clinical track) for promotion for physicians (core faculty) who are in practice 50% of their time or more. Separate criteria have also been developed for those nontenure track faculty (research or teaching) who function as part of a scientific team of scientists working with a primary investigator. Promotion and tenure (P&T) assistance is provided for faculty at the departmental, college, and university levels. Several departments have a formal mentorship program whereby mentors provide guidance on P&T timelines, review P&T packets, and explore scholarly interests and opportunities.