Albert Einstein College of Medicine

Pablo A. Joo, MD, Todd Cassese, MD, Howard M. Steinman, PhD, Martin N. Penn, MBA, William Burton, PhD, Hai Jung H. Rhim, MD, MPH, and Joshua D. Nosanchuk, MD

Medical Education Program Highlights

The Albert Einstein College of Medicine (Einstein) curriculum integrates basic, clinical, behavioral, and population health sciences to produce physicians and clinician–scientists that meet the modern, evolving needs of patients and society. Students can pursue electives in the first, second, and fourth years for deeper exploration into areas of interest. A capstone scholarly paper is a graduation prerequisite.

Recent highlights:

• The Teaching Star Program enhances and supports faculty and nonfaculty instructors' teaching and assessment skills. The program begins with mandatory teaching development seminars and resources for all instructors. Course/clerkship objectives and expected teaching and assessment roles are clarified. Students complete evaluations of instructors' teaching skills after each course/clerkship, which are used as the objective basis for teaching awards and underpin a carefully documented process of improvement plans for any instructor with inadequate teaching skills.

• In 2019, Einstein's Global Health Center and the City University of New York School of Public Health and Health Policy (CUNY SPH) joined together to create an MPH program specifically designed to fit into a gap year within the Einstein MD program. Composed of online and in-person courses, the program will include a summer when students can complete an Einstein global health fellowship that fulfills the CUNY SPH fieldwork requirement. Students will engage in public health research with an Einstein mentor concurrent with MPH coursework during the gap year.

• The peer tutor program is a free service available to all Einstein students, monitored by the Office of Academic Support and Counseling (OASC). Students have the opportunity to work individually or in small groups with upper-class students who have excelled in the curriculum and have excellent interpersonal and communication skills. Peer tutors are available for all basic science courses, USMLE examinations, and subject test preparation. Through this program, students learn more effective study strategies, reinforce course material, and work with others who are facing similar challenges, facilitating their successes.

Curriculum

Curriculum description


See Figure 1—Longitudinal curricular themes.

Curriculum changes since 2010

In the last decade, the Einstein curriculum has significantly increased integration of foundational science content in the preclerkship years and substantially increased instruction by active learning throughout all 4 years. Einstein has extensively incorporated audience response systems; flipped classrooms; and self-directed, team-based, and case-based learning. Education centers in the former library stacks and a dining hall have created spaces for active learning modes of instruction. Leveraging the Educational Innovations Team, launched in 2019, we plan to continue basic and clinical sciences integration supported by modalities for prelearning that advance active learning sessions. We will be expanding our population health curriculum to more robustly address structural determinants of health faced by communities in the Bronx and developing content to assure that students can harness big data to address their patients’ health care needs.

Assessment

Einstein established internally developed institutional objectives in 1997, which were refined in 2006. In 2011, an intensive institution-wide process enabled the shift to a competency-based education model. All graduates must demonstrate competency in 7 areas: healer, scientist, advocate, educator, colleague, role model, and lifelong learner. Our competencies are linked to the Physician Competency Reference Set. With this curricular evolution, we initiated a new revision process in mid-2019 with the Medical Education Council committees, to be completed in 2020. In 2018, Einstein implemented policies expanding our assessment system to formally promote assessment for learning. As of 2019, all preclerkship courses have a developmental assessment system (e.g., assessment timelines, mechanisms for formative assessments, assessments that build on previous
content) to ensure that students can measure their progress in learning at multiple points during a course. Students can use feedback from no-stakes and low-stakes assessments to reinforce concepts, promote their planning for study, or take corrective steps before final course grades are assigned. Students who do not pass a specified number of assessments must meet for advising during the course with the course director and the OASC. Course directors also receive feedback about students’ understanding of material in real time. All students can electronically review their high-stakes multiple-choice question (MCQ) exams and discuss items and content with their instructors.

Also in 2018, a quality improvement policy was introduced for all medium- and high-stakes MCQ exams created by Einstein faculty. Exams are electronically analyzed, and those questions with > 95% or < 40% of the class answering correctly, those in which more than one answer was accepted, or eliminated questions are flagged. As a measure of overall test reliability, the Kuder-Richardson Formula 20 (KR20) value for the assessment is also reported. Faculty with training in MCQ standards review the entire exam and mark additional MCQs that do not conform to NBME format guidelines, lack clarity, or are deemed not to be core content. The faculty reviewer prepares an annotated Excel sheet highlighting flagged items and composes a report of the analysis, listing specific questions to be answered by the instructor. The instructor submits a response and meets with the reviewer to discuss the report, with the goal of changing a minimum of 10%–20% of the MCQs on the assessment each year.

As noted, there has been a concerted effort to decrease use of lectures in the foundational sciences curriculum and convert them into interactive sessions using active learning pedagogy. In the clerkship phase, students routinely participate in both ambulatory and inpatient clinical experiences as well as preceptorship in the context of patient care. There is increased use of problem-based learning, peer teaching, role play, and simulations across clerkships. There are both formative and summative assessments through OSCEs using trained standardized patients across the 4-year curriculum.

Clinical experiences

Einstein students participate in clinical activities in all 4 years of the curriculum. In years 1 and 2, students participate in 1 half day per week preceptorships in ambulatory, emergency medicine, and inpatient services of the Montefiore Health System and Jacobi Hospital Health System, as well as other community-based practices affiliated with the school. Sites used in years 3 and 4 include inpatient and outpatient services of affiliated municipal, state, voluntary, and academic medical center hospitals and clinics located in the Bronx, Queens, Long Island, and Westchester and Rockland counties.

Einstein students participate in the Clinical Experience Module (CEM) of the Introduction to Clinical Medicine (ICM) course during the preclerkship phase of the curriculum. Assignments to clinical sites are based on student preference and a lottery system, and students visit the same site, typically working with the same preceptor for a full year or even for both years 1 and 2, thus...
Albert Einstein having a longitudinal mentoring experience with the provider as well as getting to know the site's patient population and other health professions staff.

In the third year, students spend 1 half day per month away from clerkships, to participate in the Patients, Doctors, and Communities course. This course provides a safe place for reflection and debriefing challenging experiences in the clerkship and serves as a curricular element to teach and assess advanced clinical skills and ethics. It also provides opportunity for students to assess their professional identity formation.

As noted, students start the CEM of the ICM course in the fall of their first year, participating in near weekly experiences throughout the preclerkship curriculum. Additionally, as part of the communication module of ICM, students visit medical and psychiatric wards where they interact with patients under observation.

Einstein students have required community-based rotations as part of the ICM course in years 1 and 2 as well as in components of the family medicine, obstetrics, internal medicine, pediatrics, surgery, psychiatry, neurology, and geriatrics clerkships. There is a required community-based project in the family medicine clerkship. Additionally, required fourth-year rotations in ambulatory medicine have community-based features. Myriad ambulatory opportunities are available to students through fourth-year electives both at the school and away, available through VSAS. Einstein has a formal Office for Community-Based Service Learning that oversees a diverse range of engagement, educational, research, and leadership opportunities for students. Since 1999, students have operated a free clinic serving uninsured adults in the Bronx.

Current challenges to our clinical education include the consolidation of health care systems, which has led to closing or restructuring services offered by historical affiliates. Additionally, the current financial model at our clinical affiliates is based on the relative value unit, which can have a negative impact on the time and interest faculty members have in providing clinical education. The founding of new medical schools in close proximity has also created clinical capacity stress. It is difficult to maintain a fair, reliable system to assess all of our learners’ competencies across multiple clinical sites with different types of faculty working. We are working to develop sufficient resources to provide reliable and high-quality clerkship OSCEs.

### Curricular Governance

See Figure 2—Curricular governance.

### Education Staff

Einstein’s Office of Medical Education (OME) is responsible for ensuring delivery of the curriculum. In addition to deans for biomedical and clinical sciences, staff in OME support our electronic curriculum by assisting faculty in uploading resources to our learning management system (LMS) and administering exams. The Educational Innovations team of instructional designers assists course and clerkship directors in creating teaching and assessment initiatives that incorporate evidence-based best practices in educational technology and active learning. We also provide support for the educational technologies used at Einstein, including the LMS, a lecture capture system, and an audience response system. We require students to evaluate courses and clerkships, lecturers, and small-group facilitators using an online evaluation tool. We have implemented several programs to monitor the activity of the curriculum and continually drive process improvement.

The primary role of the OME is to expertly deliver and robustly assess Einstein’s curriculum to produce physicians who will excel in diverse future activities. Within OME, the Office of Diversity runs a state-funded program for grade 7–12 students that provides preparative opportunities for advancement in science and medicine, which is followed by an extension program for college students. We also run a diversity summer research program for college sophomores and juniors. The Office of Student Affairs is a close partner with OME in actualizing the primary role of medical education staff and faculty.

See Figure 3—Educational staff organizational chart.
Faculty Development and Support in Education

The Office of Faculty Development (OFD) offers a comprehensive program of workshops, workshop series, and full-day seminars that promote research seminars and clinical faculty in enhancing their educational and professional skills. The OFD also sponsors major annual events such as Davidoff Education Day, which includes a keynote lecture from a national leader in medical education; the Assessment Summit, which trains course and clerkship leaders in best practices in assessing learners; and the Summer Intensive for New Medical Educators focused on faculty new to teaching within 5 years. Teaching is a key component of the promotion process as it is considered a “major leg” in determining promotion. A teaching portfolio is required for faculty in the educator tracks and is strongly encouraged for all faculty undergoing consideration for promotion. Among the various components, the portfolio requires student evaluations provided by OME. To be considered for promotion or tenure, all faculty must document their teaching contributions.