Icahn School of Medicine at Mount Sinai

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Icahn School of Medicine at Mount Sinai (ISMMS) celebrated its 50th year in 2018. Over the years, the school has endeavored to fulfill its missions of education, research, patient care, and service with enthusiasm and distinction. The school was created upon the foundation of clinical and research successes of the Mount Sinai Hospital as well as service to its surrounding communities, and is now embedded in a health system comprising 8 community-based and tertiary care hospitals. The mission of the medical educational program is to produce physicians and scientists who are prepared to enter society as informed advocates and activists, able to advance clinical care and science, and capable of promoting change.

Medical Education Program Highlights

• As a result of student advocacy and efforts in 2015, the school embarked on addressing biases in all of its functional areas and launched the institution-wide Racism and Bias Initiative in 2017. Educational enhancements that focus on addressing racism and bias were implemented through all 4 years of the curriculum. Currently, the school has a robust, longitudinal curriculum on biases—including sexual orientation, gender identity, culture, disability, race, and others—that is threaded through multiple courses and clerkships. Emphasis is placed on the students’ own lived experiences before entering medical school, and on an examination of ways in which their own implicit biases influence their approach to learning medicine and engaging with patients.

• Through shared leadership and accountability in fostering the values of diversity and inclusion, ISMMS continues to enhance diversity and inclusion at all levels in the organization. The school has positioned faculty and senior administrators from diverse backgrounds into leadership, administrative, and/or teaching positions to allow students (including those in pipeline programs) the opportunity to work with and be trained by a diverse array of faculty and administrators.

• Early assurance admissions: ISMMS is the first medical school in the country to create progressive and rigorous admissions pathways for students who seek early assurance of admission. The Donald and Vera Blinken FlexMed Program allows college sophomores in any major to apply for early assurance of acceptance to the school. Once accepted, students are free to pursue their baccalaureate educational plan unencumbered by the traditional science requirements and the MCAT. Students who are accepted are expected to adhere to all of ISMMS’s program requirements before entry. The school also has a small yet innovative early assurance program for active military members.

• ISMMS provides a rich, robust, and supportive environment for faculty and students to engage in scholarly activity. There are also extensive resources to sustain a scholarly environment for faculty. The school is ranked 12th in the nation in NIH funding. Per the 2018 AAMC Operations Management Survey, the school is in the top 10% for research dollars per investigator among participating U.S. private medical schools, demonstrating the availability of research and mentorship opportunities for students.

Curriculum

Curriculum description

The MD curriculum begins in year 1 with exposure to foundational scientific principles and core patient care competencies. This is followed by the year 2 curriculum, building on these foundational principles with an emphasis on an organ system–based approach to the pathophysiology and treatment of illnesses and diseases. The clerkships in year 3 and year 4 offer exposures to and active participation in patient care across the life span in the core clinical clerkships and prepare students for residency training through experiences designed to promote advanced knowledge and skills development in an individualized manner. There are also a significant number of elective weeks in year 3 (10 weeks) and year 4 (18 weeks) to allow for career exploration.


Curriculum changes since 2010

• Flextime for all class years provides protected time to use in whatever ways students desire. This includes 1 half day per week in years 1 and 2, scheduled half days off in the required year 3 clerkships, and 1 week in year 4.

• InFocus weeks throughout the curriculum offer core training in topics critical to medical practice and biomedical research. There are 8 weeks spread over the 4-year curriculum covering the following themes:
  ◦ InFocus 1–4 in years 1 and 2: scholarship and research (basic scientific methodology, study design, research evaluation, statistical methods), East Harlem health, global health, and physician advocacy and human rights
  ◦ InFocus 5–8 in years 3 and 4: patient safety and health system science; career planning, teaching skills; leadership; law and economics of medicine
• All students are required to complete a mentored scholarly project before graduation, and approximately one-third of every class takes an additional scholarly year to pursue these interests or an additional degree. Internal funding covers all ISMMS students doing summer research across the health system. In each of the last 2 academic years, graduating students published over 300 peer-reviewed manuscripts.

• A thoughtful, relevant, and deeply impactful approach is taken to identifying key societal problems in the context of the school’s mission and the needs of its community. This focus has led to the development of para-curricular experiences such as the East Harlem Health Outreach partnership, the Human Rights and Social Justice Scholars Program, the NYC Coalition to Dismantle Racism in Health Care, the Human Rights Program, Scrubs Addressing the Firearm Epidemic, and the Racism and Bias Initiative.

• Peer-reviewed graduation distinction is held in 3 categories: global health, medical education, and research.

• PORTAL is an intensively mentored program designed to encourage career development of medical students who seek to become physician–scientists. The program guides students in designing and conducting original research studies addressing the prevention, diagnosis, prognosis, and treatment of disease. Students earn a dual MD–MSCR (Masters of Science in Clinical Research) degree, which prepares them for a future as lifelong learners and for careers in academia, research institutes, industry, or regulatory agencies.

• The Primary Care Scholars Program (PCSP) is a selective program that prepares students to meet the rising health needs of local and global communities. The program provides training, mentorship, and longitudinal experiences in primary care. It creates a forum for collaboration with fellow students, faculty, scientists, and trainees, all of whom are passionate about improving primary care through direct care, research, quality improvement, and advocacy. The PCSP offers students who remain in primary care practice in underserved communities $80,000 in loan forgiveness.

• The Ramon Murphy, MD Program for Global Health Education is dedicated to improving the health of underserved communities around the world. The program offers innovative curricula and provides real-world experience in the classroom and in the field at domestic and international partner sites. The Global Health Scholars Program is a 5-year MD–MPH dual-degree scholarship program that offers advanced coursework, mentorship, and field experiences to prepare medical students for careers in global health.

Assessment

The medical education program objectives are designed to reflect the knowledge, skills, and attitudes expected of all graduating students. These objectives are encompassed in the following 4 competencies, which guide the curriculum. Each is further defined by behaviorally described objectives.

Competency 1, patient care:
• History taking
• Physical examination
• Procedural skills
• Clinical reasoning
• Medical decision making
• Communication skills

Competency 2, scientific and medical knowledge:
• Organ structure and function
• Characteristics and mechanisms of disease
• Healing and therapeutics
• Social determinants of health
• Health care resources and delivery systems
• Ethical principles of medical practice and research

Competency 3, learning, scholarship, and collaboration:
• Self-awareness and commitment to self-improvement
• Methods of investigation, analysis, and dissemination
• Teamwork

Competency 4, professionalism and advocacy:
• Service
• Leadership and accountability
• Honesty and integrity
• Empathy
• Respect

Assessments are linked to every medical education program objective. These assessments incorporate multiple modalities including multiple-choice exams, standardized patients, direct observation with patients, reflections, team projects, oral and written presentations, and self-directed learning activities. All objectives are assessed using both formative and summative assessments to help students monitor their progression.

Assessment changes since 2010
• Formative assessments to guide learning in all courses and clerkships
• Standardization of the clinical performance assessment form with descriptive anchors for use across all clerkships
• Standardization of NBME subject examination weight in clerkship grades
• Option to take NBME Customized Assessment Services exams throughout years 1 and 2 to guide learning
• Incorporation of self-directed learning activities throughout years 1 and 2 to build skills and receive formative feedback on one’s ability to identify and synthesize relevant literature and appraise the credibility of information sources
• Summary statement for the Medical Student Performance Evaluation (MSPE): ISMMS follows closely the recommendations of the AAMC MSPE Task Force for the structure and content of the MSPE; the school stopped ranking students or using ranking qualifiers as part of the MSPE in 2017
As of 2018 ISMMS does not participate in the Alpha Omega Alpha Honor Society for medical students, a decision based on the historic racial inequities in the selection of honorees, both at ISMMS and nationally.

Clinical experiences
ISMMS is embedded in a health system comprising 8 community-based and tertiary care hospitals. Students are able to rotate through all of these sites for both inpatient and outpatient experiences. Additional outpatient experiences are provided by affiliated local health centers and primary care providers. Inpatient experiences in several clerkships are also available through rotations at a Veterans Affairs hospital and a public city hospital.

Learners first encounter clinical experiences in the doctoring course Art and Science of Medicine (ASM). During year 1, ASM students meet in small groups with 2 copreceptors, a physician, and a social worker, and visit patients in both inpatient and outpatient settings. In year 2, ASM students advance their clinical exposure with patients, gaining clinical reasoning as well as advanced communication and collaboration skills.

Challenges in designing and implementing clinical experiences include:
- Faculty preceptors faced with challenges regarding time to teach and supervise
- Ensuring comparability of experiences across clinical sites
- Providing continual training regarding teaching skills for house staff and faculty

Curricular Governance
The Executive Oversight Committee has the authority to set medical education program objectives; establish educational requirements; establish and approve curricular and assessment content; ensure content integration, coordination, and coherence; evaluate educational outcomes; and review/approve all policies related to curricular and student affairs. There are 22 voting members representing faculty, course/clerkship directors, and students from all class years.

Education Staff
ISMMS's Department of Medical Education oversees the curriculum and program administration. Functional offices within the department include:

- Curricular Affairs
- Student Affairs
- Admissions and Recruitment
- Assessment and Evaluation
- Continuing Medical Education
- Graduate Medical Education

There are 35 faculty with primary appointments in medical education and 105 faculty with secondary appointments.

Faculty Development and Support in Education
The Institute for Medical Education (IME) resides under the auspices of the Department of Medical Education. There are significant opportunities and resources available for professional development related to teaching, assessment, evaluation, and research skills from the IME. Faculty development is provided by the IME at all sites throughout the health system. Since AY 2018–2019, the IME has 3 faculty who devote 20% of their effort to providing faculty development at all sites in the health system. Medical Education Grand Rounds Are Broadcast Throughout The Health System, as well as recorded for on-demand viewing.

The Center for Multicultural Affairs (CMCA) also provides research skill development, mentorship, and networking opportunities for faculty who identify as underrepresented in medicine. Funding to support professional development activities comes from a variety of sources, including individual clinical departments, the Department of Medical Education, the CMCA, IME, and the ISMMS dean’s office.

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Reference