

STANDARD 6: COMPETENCIES, CURRICULAR OBJECTIVES, AND CURRICULAR DESIGN

- 1. Have educational program objectives been developed that are stated in outcome-based terms and are they linked to the competencies expected of a physician? Evaluate whether the objectives can be and are being used for the assessment of medical students' progress in achieving these competencies. Evaluate whether the educational program objectives and the objectives of individual courses and clerkships have been shared with medical students and with relevant individuals and groups responsible for curriculum planning and implementation and for medical student teaching and assessment. (6.1)**

The Emory University School of Medicine (EUSOM) implemented a substantial change of its curriculum in 2007 at which time, the program objectives were revised to resemble the general competencies adopted by ACGME. In 2013, the EUSOM revised the objectives into an outcomes framework to facilitate assessment of students and to provide a blueprint for curriculum evaluation. The Emory Outcomes Task Force developed a set of outcomes that are expressed in behavioral, assessable terms and are organized as activities and competencies expected of a physician, known as the Student Physician Activities (SPAs). (<http://med.emory.edu/education/curriculum-governance/student-physician-activities/index.html>)

The EUSOM Executive Curriculum Committee (ECC) is responsible for approving any modifications to the SPAs and for ensuring implementation of the SPAs throughout the entire curriculum. Since approval in 2014, the SPAs are beginning to be used for the assessment of medical students' progress. Overall, the SPAs will enhance the development of curriculum and assessments of student performance by making the expected behaviors of an Emory MD graduate explicit and relevant. Concurrently, the AAMC MedAPS group produced the Physician Competency Reference Set (PCRS) which is a competency framework that was built to incorporate multiple other frameworks. Using the PCRS, the EUSOM SPAs mapped to the PCRS allowing the SOM to participate in the AAMC Curriculum Inventory and to maintain its own list of core activities for medical students to demonstrate prior to graduation.

The task of explicitly connecting the SPAs to various assessment measures has been assigned to the Student Assessment Sub-committee of the Curriculum Committee and the process is currently underway. This group is charged with inventorying assessments of the SPAs to ensure adequate assessment of all items and in appropriate contexts. In addition to monitoring the assessments used in various courses and clerkships, the Student Assessment Sub-committee also oversees any assessments that are not tied to a course or clerkship. A separate but related group, the ExCEL Advisory Group (EAG), administers all OSCEs and advises faculty on development and scoring of the various clerkship-specific OSCEs using the SPAs as a guideline for development and scoring. In general, the EUSOM outcome measures emphasize observations by faculty including: OSCEs, clinical evaluations, advisor evaluations, the Professionalism Rating Form, and mentor evaluations.

The SPAs and objectives of the programs, courses and clerkships are well disseminated to the faculty, staff, and students alike. The SPAs are available publically on the School's website (<http://www.med.emory.edu/education/curriculum-governance/student-physician-activities/index.html>) and in the student handbook (<https://med.emory.edu/handbook/#38>). Students are directed to the online handbook for all matters related to their education. This directive is given at orientation sessions at the outset of each new phase of the curriculum for the students.

For leaders, such as course directors and clerkship directors, of the various curriculum components in addition to the online resources, the SPAs have been disseminated through committee meetings and other communications from the EUSOM administration. The faculty is instructed to use the SPAs to define their curriculum and student assessments in their course or clerkship. The SPAs were physically distributed to all course directors. Dissemination to other teaching faculty has occurred through the individual departments and faculty orientation sessions in preparation for teaching.

In the Foundations Phase, course directors disseminate learning objectives to faculty who teach and/or assess medical students via in-person meetings and email communication. They also post learning objectives on our electronic content management system (Blackboard) and are further reviewed in person at the beginning of each overall course and each individual learning session. In the Application and Translation Phases, clerkship directors primarily

STANDARD 6: COMPETENCIES, CURRICULAR OBJECTIVES, AND CURRICULAR DESIGN

disseminate learning objectives to faculty and residents via email communication. For students, clerkships have an in-person orientation session at the beginning of each rotation during which the clerkship's specific objectives are presented to students and assessment methods for those objectives are discussed. They also post learning objectives in a central and easily accessible online location (Blackboard). A little over half of the clerkships hold in-person meetings with faculty and residents on at least an annual basis to discuss the clerkship, learning objectives, required clinical encounters, assessment and grading. Several clerkships additionally meet with the chief residents each year to orient them to the clerkship.

In the Independent Student Analysis Report, the students comment that "96% of students felt somewhat or very satisfied with the utility of the "educational program objectives" to support learning."

- 2. Evaluate whether the faculty have defined the patient types and clinical conditions that all students are expected to encounter and the clinical skills that all students are expected to perform. Have these experiences been assigned to relevant clerkships? Is each type of patient encounter and clinical skill associated with a clinical setting and level of medical student responsibility? (6.2)**

At the EUSOM, patient types and clinical conditions that all medical school students are required to encounter are defined by and for each required clinical rotation. The patient encounters are influenced by the EUSOM SPAs, as well as national specialty guidelines, departmental committees, and by the specific populations served by the Emory clinical partners. Each clerkship defines the setting as well as the task or clinical condition as required for those patient encounters. Other than the more complete description provided by the OB-GYN clerkship, these patient types and clinical conditions are only listed and are not defined in detail. Required patient encounters are vetted at multiple levels with final authorization made by the ECC. The expected level of responsibility for all medical student patient care activities is "direct patient care with supervision" and clerkships are required to define acceptable alternatives to accomplishing learning objectives when direct patient care is not feasible to achieve any of the required encounters. Simulation is one example of an acceptable alternative that is used by several clerkships.

The SPAs are an elegant way to define the universe of skills and knowledge required of each medical student for graduation. However in a narrow interpretation, the SPAs do not fulfill the requirement of defining patient types and clinical conditions. Nor are these patient types and clinical conditions assigned to clerkships; rather the clerkships report the experience back to the ECC. There does not appear to be a master listing of faculty-defined patient types and clinical conditions that are mapped back to the clinical rotations to ensure that there are no holes in the curriculum. There is reference to the SPAs being inventoried, but also not clear if this master document exists.

- 3. Evaluate the sufficiency of self-directed learning experiences in the pre-clerkship curriculum to allow students to acquire and demonstrate lifelong learning skills. Is there enough time available for these experiences within and outside of formal class hours? (6.3)**

Overall, the curriculum is carefully designed to foster self-directed learning and substantial time, framework and resources to support these opportunities is provided. During the Foundations Phase, the EUSOM Curriculum is comprised of integrated, organ system-based modules focused first on the Healthy Human (semester 1) and then Human Disease (semesters 2 and 3). Over this time students have structured class time averaging 26 hours per week (range 19-31 hours). The ECC recently passed a policy limiting scheduled time (in class as well as time for required reading and class preparation) to no more than 32 hours per week to allow sufficient time (at least 8 hours per week) for self-directed learning opportunities.

Midway through semester 1, students begin a required outpatient experience (OPEX) which provides individual experiences for each learner. This experience is rich in topics for self-directed learning as students learn how to care

STANDARD 6: COMPETENCIES, CURRICULAR OBJECTIVES, AND CURRICULAR DESIGN

for patients. During semesters 2 and 3, the Foundations modules incorporate specific Problem Based Learning (PBL) exercises; typically 2-3 PBL cases are offered per module. For each PBL, students choose, with guidance from their small group advisor who facilitates the PBL cases, the learning issues relevant to the case under consideration. Students later reconvene to discuss the material they have explored independently. Additionally, the M2 elective during semester 3 provides students with an opportunity to define their own project which they carry out with periodic guidance from a faculty mentor. The M2 elective must result in a final written document, giving students the experience of identifying a knowledge deficit and then designing how to answer that deficit and take the project to fruition.

In the Applications and Translations Phases, there are tremendous opportunities for clinical, translational, and basic science self-directed learning. Based upon feedback from Clerkship Directors, the instruction and experience in self-directed learning provided by the Foundations Phase leave students well equipped with the skills required for the more intensive self-directed learning of their clinical years. The five months of research during the Discovery phase are also devoted, in large part, to self-directed learning. The Discovery Phase has been very productive for student-driven publications and professional research presentations, indicating that students have developed self-directed capabilities which they have applied to mastering the new skills required for research and independent patient care.

4. Comment on the adequacy of inpatient and outpatient experiences in the curriculum to allow the objectives of the educational program and the individual clerkships to be met. (6.4)

Emory medical students receive robust inpatient and outpatient experiences to allow the objectives of the educational program and individual clerkships to be met. The clinical training at Emory begins with mainly outpatient experiences in the 'pre-clinical' first and second years. Then they encounter a mixture of inpatient and outpatient in the Applications and Translation phases. The preclinical outpatient experiences (OPEX) occur over a twelve month period during students' first and second years, during which time each student works at an ambulatory clinic for two afternoons a month. OPEX allows students to practice physical exam skills and have regular clinical experiences.

Based on previous LCME feedback to EUSOM and the planning documents for the new curriculum that was implemented in 2007, the Curriculum Committee recommended 7 years ago to increase the amount of ambulatory experiences for medical students. With the addition of the Outpatient Experience (OPEX) in the first year and the 3-month Ambulatory Care Block in the Application Phase, the proportion of ambulatory versus inpatient experiences for students was thought to better meet the overall objectives for clinical education. Under the current curriculum structure, the training is approximately one-third ambulatory or outpatient experiences and two-third inpatient experiences. Of the 15 required rotations in the curriculum, six are mixed inpatient/outpatient experiences, including three that are exclusively outpatient (Ambulatory Care blocks (both Adult and Pediatric) and Emergency Medicine.

The Curriculum Committee continues to oversee the mixture of time students spend in outpatient and inpatient settings. Through the Required Clerkships Subcommittee and its regular review of clerkships, the balance between clinical settings and the overall clerkship objectives is evaluated regularly. The Independent Student Analysis Report demonstrates high satisfaction amongst students with 99% of students satisfied with the Applications phase clerkships and 98% satisfied with the Translation phase training.

5. Evaluate whether sufficient time is available in the curriculum for electives that supplement required learning experiences. (6.5)

EUSOM ensures that students are given ample elective opportunities and has dedicated time for those electives, mostly during the Translations phases, in order for students to be able to pursue diverse interests in medicine. Specifically, the curriculum requires that every student complete 2 weeks of elective time in the Human Disease phase and 12 required weeks (with 4 additional weeks available at student's option) of elective rotations in the Translations phase. Students are encouraged to use this elective time for the enrichment of their individual education and for

STANDARD 6: COMPETENCIES, CURRICULAR OBJECTIVES, AND CURRICULAR DESIGN

personally tailored future career exploration. To allow a large diversity of interests to be met, electives can be intramural or extramural. Furthermore, students at EUSOM are given guidance in several ways to help them choose electives that will add to their medical training. The Independent Student Analysis report found that “all students expressed satisfaction with the M4 elective curriculum (100%), and 82% of students were very satisfied.” Students commented that they “found elective opportunities to be plentiful and provided ample options for career exploration and development (100% satisfied).” The current curriculum allows for adequate time for our students to pursue electives to supplement their required learning. One area of ongoing discussion is the exact timing of electives with respect to completing the Discovery phase and timing in regard to the ERAS residency application and residency interviews.

6. Evaluate the availability of service-learning and community service activities and the adequacy of time students have to participate. Does the medical school support service-learning/community service and provide information to medical students about these opportunities. (6.6)

EUSOM provides abundant opportunities for participation in community service. Each of the four Societies sponsors a student-directed community service activity each year. Every student is given the opportunity to participate in community service through his or her society membership. In addition, a wide variety of other opportunities for medical student participation in community service are featured throughout the 4-year curriculum; many are student-run and reflect Emory’s legacy of commitment to service and volunteer work. Students are made aware of potential community service opportunities through a school-sponsored, annual Fall Student Organization Fair, as well as through a robust network of emails, class announcements, social media, and peer-to-peer communication throughout the year. These methods appear effective in making the students aware of opportunities as they arise.

A potential area for improvement would be additional faculty development and dedicated time for the Small Group Society Advisors to convert each Society’s annual community service activity into a service learning activity. Though students naturally discuss these experiences with each other and their mentors, including a debriefing or reflective component as part of the community service activity, an integrated, reflective structure for the activities would formally facilitate service learning.

That being said, as evidenced by the school data from the AAMC Graduation Questionnaire and the independent student survey, many students participate in community service and service learning throughout the four-year curriculum. Student survey data show that 96.3% of students are satisfied with their opportunities for service learning.

7. Does the medical school exist in an environment that permits the interaction of medical students with other learners, including other health professions students, graduate students, residents, and physicians engaging in continuing medical education? (6.7)

EUSOM is situated in a large academic health center, the Woodruff Health Sciences Center of Emory University (WHSC), which provides an environment full of a vast array of opportunities for medical students to interact with residents, practicing physicians, graduate students, and students of other health professions. The close proximity and collegial environment of students and faculty in WHSC encourages medical students to take advantage of the opportunities available.

Medical students interact regularly and meaningfully with residents and practicing physicians in the course of patient care and mutual learning activities such as grand rounds or other CME events. This occurs in hospitals and clinics of Emory University Hospital, Grady Memorial Hospital, Children’s Healthcare of Atlanta, and the Atlanta Veterans Administration Hospital. While on their required clerkships in these large, urban hospitals, students consistently work and learn alongside residents and physician faculty members.

STANDARD 6: COMPETENCIES, CURRICULAR OBJECTIVES, AND CURRICULAR DESIGN

Medical students participate in several structured events with health professions students from other WHSC programs. These IPE and team-training events are designed to teach skills of interprofessional practice. Students from all programs are then expected to employ these skills at the patient care venues where WHSC students train. In addition to interacting with other students, medical students participate on patient care teams with healthcare providers from other professions including: physician assistants, nurses, advanced practice nurses, and physical therapists.

Although there are few organized, large-scale, events or activities in which medical students and graduate students in biomedical sciences interact, medical students are well aware of the many research labs that operate on campus and they recognize that they are welcome to involve themselves at those labs, in addition to the Discovery Phase requirements, if they so choose. Several medical students study with MPH students on Global Health Projects and about 15% of medical students complete their required Discovery Phase project in a laboratory where they work with graduate students on a daily basis.

- 8. Does the medical education program consist of at least 130 scheduled weeks? (6.8) = YES**