

# MEDICAL SCHOOL HOTLINE

## Liaison Committee on Medical Education Accreditation: Part II: The Graduation Objectives

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An essential accreditation requirement of the Liaison Committee on Medical Education, is Standard 6: *“The faculty of a medical school define the competencies to be achieved by its medical students through medical education program objectives and is responsible for the detailed design and implementation of the components of a medical curriculum that enables its medical students to achieve those competencies and objectives. The medical education program objectives are statements of the knowledge, skills, behaviors, and attitudes that medical students are expected to exhibit as evidence of their achievement by completion of the program.”*<sup>1</sup> The program objectives must be defined in outcome-based terms that allow the assessment of medical students' progress, and are made known to all medical students, faculty, residents, and others with responsibility for medical student education and assessment.

In June 2008, the John A. Burns School of Medicine (JABSOM) Curriculum Committee developed the current set of institutional graduation objectives. The committee took into account objectives and competencies defined by the Association of American Medical Colleges (AAMC) in 1998 and the Accreditation Council for Graduate Medical Education (ACGME) in 1999. The former stated the learning objectives for undergraduate medical student education, aimed to elucidate the essential attributes needed by physicians to fulfill their duties to society.<sup>2</sup> These essential attributes are:

- Physicians must be altruistic.
- Physicians must be knowledgeable.
- Physicians must be skillful.
- Physicians must be dutiful.

The ACGME stated the following general competency categories to guide medical schools to prepare graduates<sup>3</sup>:

- Patient care
- Medical knowledge
- Practice-based learning and improvement
- Interpersonal and communication skills
- Professionalism
- System-based practice

These graduation objectives were communicated with the broader community through the Hawai'i Medical Journal.<sup>4</sup> Since then, the Curriculum Committee has annually reviewed these objectives, with the last review in March 2015. This article outlines JABSOM's Graduation Objectives and describes how they are used by faculty to monitor student progress. These objectives and detailed evaluation indicators can be found on the JABSOM website.<sup>5</sup>

The JABSOM Graduation Objectives are organized under the following seven major headings:

### 1. Life-Long Learning Skills

*JABSOM graduates are life-long learners who are capable of identifying their learning needs, searching for and retrieving biomedical information, critically appraising this information and applying it appropriately to patient care.*<sup>4</sup>

This objective is assessed by the student “achieving a grade of ‘credit’ in all required courses and 4th year electives, and achieving a satisfactory evaluation in all Pre-clerkship PBL tutorials and the Triple Jump Examination.”<sup>5</sup> (The Triple Jump Examination evaluates competency in the problem-based learning (PBL) process).

### 2. The Biological Sciences

*JABSOM graduates will be able to apply the biological sciences to the practice of medicine. They can explain normal structure and function of each major organ system and alterations that occur in various illnesses.*<sup>4</sup>

Successful completion of this objective is “measured by achieving a grade of ‘credit’ in all required courses and 4th year electives, and achieving a passing score on the USMLE Step 1 Examination.”<sup>5</sup>

### 3. The Care of Patients

*JABSOM graduates care for their patients by applying clinical reasoning and problem-solving skills in performing a complete or*

*organ-specific history and physical exam, ordering appropriate diagnostic tests, performing procedural skills under appropriate supervision, and developing an appropriate therapeutic plan.*<sup>4</sup>

Successful completion of this objective is “measured by achieving a grade of ‘credit’ in all required courses and 4th year electives, and achieving a passing score on the MDED 541 Comprehensive Clinical Skills Assessment, the USMLE Step 2 Clinical Knowledge Examination and the USMLE Step 2 Clinical Skills Examination.”<sup>5</sup>

#### **4. Oral and Written Communication Skills**

*JABSOM graduates will communicate effectively by greeting their patients warmly, eliciting relevant information, understanding their perspective, responding to their feelings, educating them about their condition, and explaining further management.*<sup>4</sup>

This objective is assessed by the student “achieving a grade of ‘credit’ in all required courses and 4th year electives, and achieving a passing score on the MDED 541 Comprehensive Clinical Skills Assessment, the USMLE Step 2 Clinical Knowledge Examination and the USMLE Step 2 Clinical Skills Examination.”<sup>5</sup>

#### **5. Populational and Community Health**

*JABSOM graduates contribute to the health of communities by applying their knowledge of the epidemiology of disease, non-biological determinants of health, common biostatistical tools, and important public health measures in their role as physicians.*<sup>4</sup>

Successful completion of this objective is “measured by achieving a grade of ‘credit’ in all required courses and 4th year electives, and achieving a passing score on the MDED 541 Comprehensive Clinical Skills Assessment, the USMLE Step 2 Clinical Knowledge Examination and the USMLE Step 2 Clinical Skills Examination.”<sup>5</sup>

#### **6. Professionalism**

*JABSOM graduates are professional and ethical. They act with integrity, altruism, respect, and accountability while delivering compassionate care to their patients.*<sup>4</sup>

This objective is assessed by the student “achieving a grade of ‘credit’ in all required courses and 4th year electives, and achieving a passing score on the MDED 541 Comprehensive Clinical Skills Assessment, the USMLE Step 2 Clinical Knowledge Examination and the USMLE Step 2 Clinical Skills Examination.”<sup>5</sup>

#### **7. Personal Health and Well-Being**

*JABSOM graduates know how to maintain their personal health and well-being and can state strategies to cope with stress and access resources available for treating depression, substance abuse, and other forms of physician impairment.*<sup>4</sup>

This objective is measured by the students’ “creation of a personal health and well-being plan for the preclerkship, clerkship, and postgraduate periods of their medical education and the

ability to role play safety and wellness practices in the clinical setting.”<sup>5</sup> For the latter, students are observed applying skills such as debriefing critical incidents and trained to recognize potentially unsafe patient encounters.

Incoming medical students are informed of the program objectives during orientation week. They are displayed prominently on posters lining the hallway leading to classrooms on the third floor of the Medical Education Building. Similar posters are displayed at JABSOM clinical departments. The graduation objectives are also placed on the JABSOM website, within the “General Guide to the MD Program,” and in course handbooks. Finally, all JABSOM course and clerkship student evaluation forms contain rating items that reflect the graduation objectives, providing further reinforcement for faculty and students.

Courses have learning objectives aligned with the graduation objectives that advance students towards their achievement. The following, excerpted from the MDED 552 (Cardiovascular and Pulmonary Problems) handbook for first year medical students, illustrates the course objectives that are aligned with Professionalism.

**OBJECTIVE 6:** MDED 552 students will be professional and ethical, demonstrate an enthusiasm for medicine, and value honor, integrity, altruism, respect, accountability, excellence, scholarship, and leadership while delivering compassionate care to their patients.

Students will exhibit the highest standards of professional and ethical behavior by demonstrating to the satisfaction of faculty:

- A. Knowledge of the theories and principles that govern ethical decision-making including those related to the major dilemmas in medicine, with special attention to:
  - Ethical issues surrounding gifts from patients
  - Refusal of blood transfusions
  - Dealing with medical errors
  - Physician-assisted suicide
  - Leaving against medical advice
- B. The ability to interact with patients such that each patient feels they have been treated by a compassionate and competent physician in whom they trust, with special attention to:
  - Writing a condolence letter
- C. Respect for others, honesty, integrity and an absence of arrogance, rudeness, and coercion in all interactions with patients, their families, colleagues, and others with whom physicians must interact with in the practice of medicine.
- D. Altruism and a commitment to advocate at all times for the interests of one’s patients over one’s own interests, with a special attention to:
  - The physician’s duty to care for patients with infections even if it increases their chances of getting a deadly illness
- E. A professional appearance and demeanor.
- F. Self-awareness of personal limitations and the need for life-long learning.
- G. Performance that continually improves as a result of honest self-reflection and an openness to feedback.
- H. Punctuality and the completion of assignments, duties, surveys, forms, immunizations, and other school and professional requirements on a timely basis.
- I. A willingness to teach and support others.

On an annual basis, the JABSOM Curriculum Committee reviews both internal and external outcomes that reflect student achievement of the graduation objectives and the overall quality of the educational program.<sup>6,7</sup> The JABSOM Program Evaluation plan consists of a set of specific surveys.

- Students complete surveys of all required courses and segments of the curriculum.
- The “Intern Survey” asks JABSOM graduates nearing the end of their intern year, how well their education prepared them for residency training.
- The “Program Director” survey asks residency program directors supervising JABSOM graduates how well they performed in comparison to residents who graduated from other schools.
- The “Alumni Survey” asks JABSOM graduates to reflect on the value of their education six years after graduation.
- The Curriculum Committee monitors student responses on the AAMC Graduation Questionnaire completed by all graduating seniors.
- Internal reviews of required courses and clerkships occur every three years that incorporate LCME accreditation standards serve a valuable peer-review purpose for educational quality improvement.

Whenever a deficiency or concern is identified in any survey, a quality improvement plan is initiated and monitored by the Curriculum Committee. JABSOM also monitors student per-

formance in the National Resident Matching Program, board certification of graduates, and other outcomes that measure program quality.

The information collected to date indicate that JABSOM students are successful in achieving the school’s Graduation Objectives.

- The average score of JABSOM students on the USMLE Step 1 Exam has exceeded the national average in nine of the last ten reported years (2005-2014).
- All JABSOM graduates pass an internally-developed standardized patient exam assessing their clinical skills.
- JABSOM students are successful in obtaining competitive residency positions in a variety of specialties through the National Resident Matching Program.
- The percentage of JABSOM students who strongly agreed or agreed with the statement, *Overall I am satisfied with the quality of my medical education* on the AAMC Graduation Questionnaire exceeded the national average for all schools in nine of the last eleven years (2005-2015).
- All JABSOM graduates, in the Class of 2013, responded either *Good* or *Excellent* on the Intern Survey when asked to rate their preparation *To provide competent medical care to my patients*.
- For the Class of 2013, 97% of the Program Directors (32/33) responded *Good* or *Excellent* when rating JABSOM graduates as *Providing competent medical care to patients*.

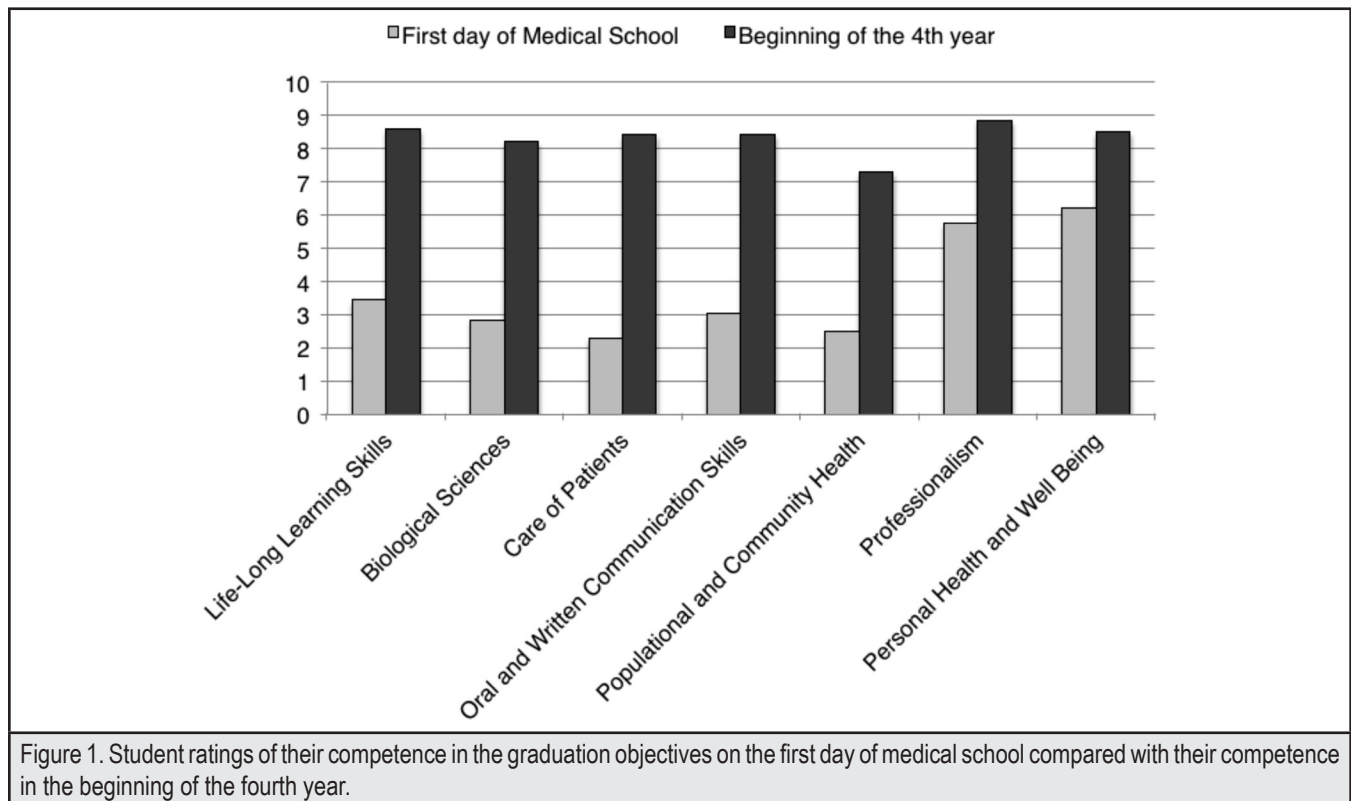


Figure 1. Student ratings of their competence in the graduation objectives on the first day of medical school compared with their competence in the beginning of the fourth year.

At the beginning of their senior year, students complete a survey to ascertain how well JABSOM's Graduation Objectives are being met. Sixty-two items from the Graduation Objectives are rated on a ten point scale on which 1 = "Not at all" to 10 = "Very much". In addition students are asked to think back to "Day 1" at JABSOM and rate the same items. A composite of the findings from the Class of 2012 is presented in Figure 1.

There were gains in all seven graduation objectives as rated by the students, and items that pertained to medically-specific objectives had the largest increases (objectives 1-5), while interpersonal items had smaller increases (objectives 6-7).

### Summary

JABSOM's graduation objectives have seven years of proven success since they were first developed in 2008. These objectives serve as the organizing principles for curricular content, student evaluations, and program assessment. The school's Curriculum Committee and its sub-committees monitor student achievement of the objectives as a measure of program quality. Outcome data to date suggest that JABSOM students meet the objectives of the medical school curriculum and are prepared to undertake the challenges of their chosen profession as physicians.

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