FUNCTIONS AND STRUCTURE OF A MEDICAL SCHOOL

Standards for Accreditation of Medical Education Programs Leading to the M.D. Degree

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(For schools with full accreditation surveys in 2011-2012)

Liaison Committee on Medical Education

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Table of Contents

Note that periodic revision and amendment of the standards may result in the elimination of certain numbered standards (e.g., there is no longer a standard numbered ED-45) and in the addition of standards that include letters after the numerical prefix (e.g., ED-2-A). The use of letter suffixes is not intended to indicate that such standards are subsidiary to other standards, but simply to indicate their placement with respect to surrounding standards.

Additional information about accreditation can be obtained from the LCME or the CACMS offices listed below or from the LCME Web site (www.lcme.org).

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I. INSTITUTIONAL SETTING

IS-1. An institution that offers a medical education program must engage in a planning process that sets the direction for its programs and results in measurable outcomes.

To ensure the ongoing vitality and successful adaptation of its medical education program to the rapidly changing environment of academic medicine, the institution needs to establish periodic or cyclical institutional planning processes and activities. Planning efforts that have proven successful typically involve the definition and periodic reassessment of both short-term and long-term goals for the successful accomplishment of institutional missions. By framing goals in terms

IS-13. A medical education program must be conducted in an environment that fosters the intellectual challenge and spirit of inquiry appropriate to a community of scholars.

IS-14. An institution that offers a medical education program should make available sufficient opportunities for medical students to participate in research and other scholarly activities of its faculty and encourage and support medical student participation.

> The institution is expected to provide an appropriate number and variety of research opportunities to accommodate those medical students desiring to participate. To encourage medical student participation, the institution could, for example, provide information about available opportunities, offer elective credit for research, hold research days, or include research as a required part of the curriculum. Support for medical student participation could include offering or providing information about financial support for student research (e.g., stipends).

IS-14-A. An institution that offers a medical education program should make available sufficient opportunities for medical students to participate in service-learning activities and should encourage and support medical student participation.

> "Service-learning" is defined as a structured learning experience that combines community service with preparation and reflection. Medical students engaged in service-learning provide community service in response to community-identified concerns and learn about the context in which service is provided, the connection between their service and their academic coursework, and their roles as citizens and professionals. [Definition from Seifer SD. "Service-learning: Community-campus partnerships for health professions education." *Academic Medicine*, 73(3):273-277 (1998).]
>
> "Sufficient opportunities" means that medical students who wish to participate in a service-learning activity will have the opportunity to do so. To encourage medical student participation, institutions could, for example, develop opportunities in conjunction with relevant communities or partnerships, provide information about available opportunities, offer elective credit for participation, or hold public presentations or public forums. Support for medical student participation could include offering or providing information about financial and social support for medical student service-learning (e.g., stipends, faculty preceptors, community partnerships).

IS-15. *Currently, there is no standard IS-15.*

IS-16. An institution that offers a medical education program must have policies and practices to achieve appropriate diversity among its students, faculty, staff, and other members of its academic community, and must engage in ongoing, systematic, and focused efforts to attract and retain students, faculty, staff, and others from demographically diverse backgrounds.

> The LCME and the CACMS believe that aspiring future physicians will be best prepared for medical practice in a diverse society if they learn in an environment characterized by, and supportive of, diversity and inclusion. Such an environment will facilitate physician training in:
>
> > Basic principles of culturally competent health care.
> > Recognition of health care disparities and the development of solutions to such burdens.
> > The importance of meeting the health care needs of medically underserved populations.
> > The development of core professional attributes (e.g., altruism, social accountability) needed to provide effective care in a multidimensionally diverse society.

The institution should articulate its expectations regarding diversity across its academic community in the context of local and national responsibilities, and regularly assess how well such expectations are being achieved. The institution should consider in its planning elements of diversity including, but not limited to, gender, racial, cultural, and economic factors. The institution should establish focused, significant, and sustained programs to recruit and retain suitably diverse students, faculty members, staff, and others.

II. EDUCATIONAL PROGRAM FOR THE M.D. DEGREE

A. Educational Objectives

ED-1. The faculty of an institution that offers a medical education program must define the objectives of its program. The objectives must serve as guides for establishing curriculum content and provide the basis for evaluating the effectiveness of the program.

Objectives for the medical education program as a whole serve as statements of what students are expected to learn or accomplish during the course of the program.

It is expected that the objectives of the medical education program will be formally adopted by the curriculum governance process and the faculty (as a whole or through its recognized representatives). Among those who should also exhibit familiarity with these objectives are the dean and the academic leadership of clinical affiliates who share in the responsibility for delivering the program.

ED-1-A. The objectives of a medical education program must be stated in outcome-based terms that allow assessment of student progress in developing the competencies that the profession and the public expect of a physician.

The objectives of the medical education program are statements of the items of knowledge, skills, behaviors, and attitudes that medical students are expected to exhibit as evidence of their achievement.

The educational objectives, along with their associated outcome measures, should reflect whether and how well graduates are developing these competencies as a basis for the next stage of their training.

There are several widely recognized definitions of the knowledge, skills, behaviors, and attitudinal attributes appropriate for a physician, including those described in the AAMC's Medical School Objectives Project, the general competencies of physicians resulting from the collaborative efforts of the Accreditation Council for Graduate Medical Education (ACGME) and the American Board of Medical Specialties (ABMS), and the physician roles summarized in the CanMEDS 2005 report of the Royal College of Physicians and Surgeons of Canada.

ED-2. An institution that offers a medical education program must have in place a system with central oversight to ensure that the faculty define the types of patients and clinical conditions that medical students must encounter, the appropriate clinical settings for the educational experiences, and the expected level of medical student responsibility. The faculty must monitor medical student experiences and modify them as necessary to ensure that the objectives of the medical education program are met.

ED-8. The curriculum of a medical education program must include comparable educational experiences and equivalent methods of assessment across all instructional sites within a given discipline.

Compliance with this standard requires that the educational experiences at all instructional sites be designed to achieve the same educational objec

ED-17. Educational opportunities must be available in a medical education program in multidisciplinary content areas (e.g., emergency medicine, geriatrics) and in the disciplines that support general medical practice (e.g., diagnostic imaging, clinical pathology).

ED-17-A. The curriculum of a medical education program must introduce medical students to the basic scientific and ethical principles of clinical and translational research, including the ways in which such research is conducted, evaluated, explained to patients, and applied to patient care.

The faculty of the medical education program should develop explicit learning objectives (knowledge, skills, behaviors, and attitudes) to meet the requirements of this standard. One example of relevant objectives is contained in Report IV of the AAMC's Medical School Objectives Project (Contemporary Issues in Medicine: Basic Science and Clinical Research).

There are several ways in which the medical education program can meet the requirements of this standard. They range from separate courses to integration of content within courses

ED-22. Medical students in a medical education program must learn to recognize and appropriately address gender and cultural biases in themselves, in others, and in the process of health care delivery.

The objectives for instruction in the medical education program should include medical student understanding of demographic influences on health care quality and effectiveness (e.g., racial and ethnic disparities in the diagnosis and treatment of diseases). The objectives should also address the need for self-awareness among medical students regarding any personal biases in their approach to health care delivery.

ED-23. A medical education program must include instruction

Although a course or clerkship/clerkship rotation that is short in duration (e.g., less than four weeks) may not have sufficient time to provide a structured formative assessment, it should provide alternate means (e.g., self-testing, teacher consultation) that will allow medical students to measure their progress in learning.

ED-32. A narrative description of medical student performance in a medical education program, including non-cognitive achievement, should be included as a component of the assessment in each required course and clerkship (or, in Canada, clerkship rotation) whenever teacher-student interaction permits this form of assessment.

D. Curriculum Management

1. Roles and Responsibilities

ED-33. There must be integrated institutional responsibility in a medical education program for the overall design, management, and evaluation of a coherent and coordinated curriculum.

The phrase "integrated institutional responsibility" implies that an institutional body (commonly a curriculum committee) will oversee the medical education program as a whole. An effective central curriculum authority will exhibit the following characteristics:

Faculty, medical student, and administrative participation.

Expertise in curricular design, pedagogy, and evaluation methods.

Empowerment, through bylaws or decanal mandate, to work in the best interests of the institution without regard for parochial or political influences or departmental pressures.

The phrase "coherent and coordinated curriculum" implies that the medical education program as a whole will be designed to achieve its overall educational objectives. Evidence of coherence and coordination includes the following characteristics:

Logical sequencing of the various segments of the curriculum.

Content that is coordinated and integrated within and across the academic periods of study (i.e., horizontal and vertical integration).

Methods of pedagogy and medical student assessment that are appropriate for the achievement of the program's educational objectives.

Curriculum management signifies leading, directing, coordinating, controlling, planning, evaluating, and reporting. Evidence of effective curriculum management includes the following characteristics:

Evaluation of program effectiveness by outcomes analysis, using national norms of accomplishment as a frame of reference.

Monitoring of content and workload in each discipline, including the identification of omissions and unplanned redundancies.

Review of the stated objectives of each individual course and clerkship (or, in Canada, clerkship rotation), as well as the methods of pedagogy and medical student assessment, to ensure congruence with programmatic educational objectives.

Minutes of the curriculum committee meetings and reports to the faculty governance and deans should document that such activities take place and should report on the committee's findings and recommendations.

ED-34. The faculty of a medical education program must be responsible for the detailed design and implementation of the components of the curriculum.

Faculty members' responsibilities for the medical education program include, at a minimum, the

curriculum so that each medical student will acquire appropriate competence in general medical care regardless of subsequent career specialty.

ED-38. The committee responsible for the curriculum at a medical education program, along with program's administrational leadership, must develop and implement policies regarding the amount of time medical students spend in required activities, including the total number of hours medical students are required to spend in clinical and educational activities during clinical clerkships (or, in Canada, clerkship rotations).

Attention should be paid to the time commitment required of medical students, especially during the clinical years. Medical students' hours should be set after taking into account the effects of fatigue and sleep deprivation on learning, clinical activities, and health and safety.

ED-39. The chief academic officer of a medical education program must be responsible for the conduct and quality of the educational program and for ensuring the adequacy of faculty at all instructional sites.

ED-40. The principal academic officers at each instructional site of a medical education program must be administratively responsible to the program's chief academic officer.

ED-41. The faculty in each discipline at all instructional sites of a medical education program must be functionally integrated by appropriate administrative mechanisms.

The medical education program should be able to demonstrate the means by which faculty at each instructional site participate in and are held accountable for medical student education that is consistent with the objectives and performance expectations established by the course or clerkship (or, in Canada, clerkship rotation) leadership. Mechanisms to achieve functional integration may include regular meetings or electronic communication, periodic visits to all instructional sites by the course or clerkship rotation leadership, and sharing of student assessment data, course or clerkship/clerkship rotation evaluation data, and other types of feedback regarding faculty performance of their educational responsibilities.

ED-42. A medical education program must have a single standard for the promotion and graduation of medical students across all instructional sites.

ED-43. A medical education program must assume ultimate responsibility for the selection and assignment of all medical students to all instructional sites or educational tracks. There must be a process whereby a medical student with an appropriate rationale can request an alternative assignment when circumstances allow for it.

A medical education program having multiple instructional sites or distinct educational tracks is responsible for determining the specific instructional site or track for each medical student. That responsibility should not preclude medical students from obtaining alternative assignments if appropriate reasons are given (e.g., demonstrable economic or personal hardship) and if the educational activities and resources involved allow for such reassignment. It is understood, however, that movement among campuses may not be possible (e.g., because the instructional sites may offer different curricular tracks).

ED-44. In a medical education program, medical students assigned to each instructional site should have the same rights and receive the same support services.

ED-45. *Currently, there is no standard ED-45.*

E. Evaluation of Program Effectiveness

ED-46. A medical education program must collect and use a variety of outcome data, including national norms of accomplishment, to demonstrate the extent to which its educational objectives are being met.

> The medical education program should collect outcome data on medical student performance, both during program enrollment and after program completion, appropriate to document the achievement of the program's educational objectives. The kinds of outcome data that could serve this purpose include performance on national licensure examinations, performance in courses and clerkships (or, in Canada, clerkship rotations) and other internal measures related to educational program objectives, academic progress and program completion rates, acceptance into residency programs, and assessments by graduates and residency directors of graduates' preparation in areas related to medical education program objectives, including the professional behavior of its graduates.

ED-47. In assessing program quality, a medical education program must consider medical student evaluations of their courses, clerkships (or, in Canada, clerkship rotations), and teachers, as well as a variety of other measures.

> It is expected that the medical education program will have a formal process to collect and use information from medical students on the quality of courses and clerkships/clerkship rotations. The process could include such measures as questionnaires (written or online), other structured data collection tools, focus groups, peer review, and external evaluation.

III. MEDICAL STUDENTS

A. Admissions

1. Premedical Requirements

MS-1. Through its requirements for admission, a medical education program should encourage potential applicants to acquire a broad undergraduate education, including study of the humanities, the natural sciences, and the social sciences.

2. Selection

MS-3. The faculty of an institution that offers a medical education program must develop criteria, policies, and procedures for the selection of medical students that are readily available to potential and current applicants and their collegiate advisors.

MS-4. The final responsibility for selecting students to be admitted for medical study must reside with a duly constituted faculty committee.

> Persons or groups external to the medical school may assist in the evaluation of applicants but should not have decision-making authority.

MS-5. A medical education program must have a sufficiently large pool of applicants who

Because graduates of U.S. and Canadian medical schools may practice anywhere in their respective countries, it is expected that an institution that offers a medical education program will recognize its collective responsibility for contributing to the diversity of the profession as a whole. To that end, a medical education program should work within its own institutions and/or collab its u0

The institution that offers a medical education program is expected to establish protocols or

In providing financial aid services and debt management counseling, the medical education program should alert medical students to the impact of noneducational debt on students' cumulative indebtedness.

MS-24. A medical education program should have mechanisms in place to minimize the impact of direct educational expenses on medical student indebtedness.

As key indicators of the medical education program's compliance with this standard, the LCME and the CACMS consider average medical student debt, including the debt of current students and graduates and trends over the past several years; the total number of medical students with scholarship support and average scholarship support per student; the percentage of total financial need supported by institutional and external grants and scholarships; and the presence of activities at the programmatic or institutional levels to enhance scholarship support for medical students. In addition, the LCME and the CACMS will consider the entire range of other activities in which the program could engage (e.g., limiting tuition increases, supporting students in acquiring external financial aid).

MS-25. An institution that offers a medical education program must have clear and equitable policies for the refund of a medical student's tuition, fees, and other allowable payments.

3. Health Services and Personal Counseling

MS-26. A medical education program must have an effective system of personal counseling for its medical students that includes programs to promote the well-being of medical students and facilitate their adjustment to the physical and emotional demands of medical education.

MS-27. A medical education program must provide medical students with access to diagnostic, preventive, and therapeutic health services.

MS-27-A. The health professionals at a medical education program who provide psychiatric/psychological counseling or other sensitive health services to a medical student must have no involvement in the academic assessment or promotion of the medical student receiving those services.

MS-28. A medical education program must make health insurance available to each medical student and his or her dependents and provide each medical student with access to disability insurance.

MS-29. A medical education program should follow accepted guidelines in determining immunizations requirements for its medical students.

A medical education program in the U.S. should follow guidelines issued by the Centers for Disease Control and Prevention, along with those of relevant state agencies. A medical education program in Canada should follow the guidelines of the Laboratory Center for Disease Control and relevant provincial agencies.

MS-30. A medical education program must have policies that effectively address medical student exposure to infectious and environmental hazards.

The medical education program's policies regarding medical student exposure to infectious and environmental hazards should include: 1) the education of medical students about methods of prevention; 2) the procedures for care and treatment after exposure, including a definition of financial responsibility; and 3) the effects of infectious and environmental disease or disability on medical student learning activities. All registered students (including visiting students) should be informed of these policies before undertaking any educational activities that would place them at risk.

C. The Learning Environment

MS-31. In a medical education program, there should be no discrimination on the basis of age, creed, gender identity, national origin, race, sex, or sexual orientation in any of the program's activities.

MS-31-A: A medical education program must ensure that its learning environment promotes the development of explicit and appropriate professional attributes in its medical students (i.e., attitudes, behaviors, and identity).

The medical education program, including its faculty, staff, medical students, residents, and affiliated instructional sites, shares responsibility for creating an appropriate learning environment. The learning environment includes both formal learning activities and the attitudes, values, and informal "lessons" conveyed by individuals who interact with the medical student. These mutual obligations should be reflected in agreements (e.g., affiliation agreements) at the institutional and/or departmental levels.

It is expected that a medical education program will define the professional attributes it wishes its medical students to develop in the context of the program's mission and the community in which it operates. Such attributes should also be promulgated to the faculty and staff of the medical education program. As part of their formal training, medical students should learn the importance of demonstrating the attributes of a professional and understand the balance of privileges and obligations that the public and the profession expect of a physician. Examples of professional attributes are available from such resources as the American Board of Internal Medicine's Project Professionalism or the AAMC's Medi

The medical education program's policies also should specify mechanisms for the prompt handling of such complaints and support educational activities aimed at preventing inappropriate behavior.

MS-33. A medical education program must publicize to all faculty and medical students its standards and procedures for the assessment, advancement, and graduation of its medical students and for disciplinary action.

MS-34. A medical education program must have a fair and formal process in place for taking any action that may affect the status of a medical student.

The medical education program's process should include timely notice of the impending action, disclosure of the evidence on which the action would be based, an opportunity for the medical student to respond, and an opportunity to appeal any adverse decision related to promotion, graduation, or dismissal.

MS-35. Medical student educational records at a medical education program must be confidential and made available only to those members of the faculty and administration with a need to know, unless released by the medical student or as otherwise governed by laws concerning confidentiality.

MS-36. A medical student enrolled in a medical education program must be allowed to review and challenge his or her records.

MS-37. A medical education program should ensure that its medical students have adequate study space, lounge areas, and personal lockers or other secure storage facilities at each instructional site.

IV. FACULTY

A. Number, Qualifications, and Functions

FA-1. *There is currently no standard FA-1*.

FA-2. A medical education program must have a sufficient number of faculty members in the subjects basic to medicine and the clinical disciplines to meet the needs and missions of the program.

In determining the number of faculty needed for the medical education program, the program should consider the other responsibilities that its faculty may have in other academic programs and in patient care activities required to conduct meaningful clinical teaching across the continuum of medical education.

FA-3. A person appointed to a faculty position in a medical education program must have demonstrated achievements commensurate with his or her academic rank.

FA-4. A member of the faculty in a medical education program must have the capability and continued commitment to be an effective teacher.

Effective teaching requires knowledge of the discipline and an understanding of curricular design and development, curricular evaluation, and methods of instruction. Faculty members involved in teaching, course planning, and curricular evaluation should possess or have ready access to expertise in teaching methods, curricular development, program evaluation, and medical student assessment. Such expertise may be supplied by an office of medical education or by faculty and staff members with backgrounds in educational science.

Faculty involved in the development and implementation of a course, clerkship (or, in Canada, clerkship rotation), or larger curricular unit should be able to design the learning activities and corresponding student assessment and program evaluation methods in a manner consistent with sound educational principles and the institution's stated educational objectives.

A community physician appointed to the faculty of a medical education program, on a part-time basis or as a volunteer, should be an effective teacher, serve as a role model for medical students, and provide insight into contemporary methods of providing patient care.

Feedback should be provided by departmental leadership or, if relevant, by other programmatic or institutional leadership.

FA-11. A medical education program must provide opportunities for professional development to each faculty member to enhance his or her skills and leadership abilities in education and research.

C. Governance

FA-12. At a medical education program, the dean and a committee of the faculty should determine policies for the program.

The committee that, with the dean, determines policies for the medical education program typically consist. Medic

Specification of the responsibility for treatment and follow-up when a medical student is exposed to an infectious or environmental hazard or other occupational injury.

If department heads of the medical education program are not also the clinical service chiefs at affiliated institutions, the affiliation agreement must confirm the authority of the department head to ensure faculty and medical student access to appropriate resources for medical student education.

The medical education program should advise the LCME and the CACMS, when applicable, of anticipated changes in affiliation status of the program's clinical facilities.

ER-10. In the relationship between a medical education program and its clinical affiliates, the educational program for medical students must remain under the control of the program's faculty at each instructional site.

Regardless of the location in which clinical instruction occurs, department heads and faculty of the medical education program must have authority consistent with their responsibility for the instruction and assessment of medical students.

The responsibility of the clinical facility for patient care should not diminish or preclude opportunities for medical students to undertake patient care duties under the appropriate supervision of the medical education program's faculty and residents.

D. Information Resources and Library Services

ER-11. A medical education program must have access to well-maintained library and information facilities that are sufficient in size, breadth of holdings, and information technology to support its educational and other missions.

At the medical education program, there should be physical or electronic access to leading biomedical, clinical, and other relevant periodicals, the current numbers of which should be readily available. The library and other learning