



LIAISON COMMITTEE ON  
MEDICAL EDUCATION

# **FUNCTIONS AND STRUCTURE OF A MEDICAL SCHOOL**

**Standards for Accreditation of  
Medical Education Programs Leading to the MD Degree**

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LCME® *Functions and Structure of a Medical School*  
Standards for Accreditation of Medical Education  
Programs Leading to the MD Degree

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## INTRODUCTION

Accreditation is a voluntary, peer-review process designed to attest to the educational quality of new and established educational programs. The Liaison Committee on Medical Education (LCME) accredits complete and independent medical education programs leading to the MD degree in which medical students are geographically located in the United States or Canada for their education and which are operated by universities or medical schools chartered in the United States or Canada. Accreditation of Canadian medical education programs are undertaken in cooperation with the Committee on Accreditation of Canadian Medical Schools (CACMS). By judging the compliance of medical education programs with nationally accepted standards of educational quality, the LCME serves the interests of the general public and of the medical students enrolled in those programs.

To achieve and maintain accreditation, a medical education program leading to the MD degree in the U.S. must meet the standards and elements contained in this document. The accreditation process requires a medical education program to provide assurances that its graduates exhibit general professional competencies that are appropriate for entry to the next stage of their training and that serve as the foundation for lifelong learning and proficient medical care. While recognizing the existence and appropriateness of diverse institutional missions and educational objectives, local circumstances do not justify accreditation of a substandard program of medical education leading to the MD degree.

The LCME regularly reviews the content of the standards and elements, and seeks feedback on their validity, importance, and clarity from members of the medical education community, including its sponsoring organizations. Changes to existing standards and elements that impose new or additional compliance requirements are reviewed by LCME's stakeholders and are considered at a public hearing before being adopted. Once approved, new or revised standards are published in the *Functions and Structure of a Medical School* (F&S) and in the relevant version of the *Data Collection Instrument* (DCI), which will indicate when the changes become effective. Such periodic review may result in the creation or elimination of a specific standard and/or element, or a substantial reorganization of the *Functions and Structure of a Medical School* document.

The *Functions and Structure of a Medical School* is organized according to 12 accreditation standards, each with an accompanying set of elements. The language of each of the 12 LCME accreditation standards is a concise statement of the expectations of that standard. The elements of a standard specify the components that collectively constitute the standard; they are statements that identify the variables that need to be examined in evaluating a medical education program's compliance with the standard. The LCME will consider performance in all the elements associated with a specific standard in the determination of the program's compliance with that standard.

**The Glossary of Terms for LCME Accreditation Standards and Elements** has been incorporated into the *Functions and Structure of a Medical School* for the reader's convenience. The glossary provides the LCME's definitions of terms used in the *Functions and Structure of a Medical School*.

As you read this document, please note the following:

- The 12 standards are organized to flow from the level of the institution to the level of the student.
- As a background reference, tables at the end of this document provide a mapping of the standards as formatted for academic year 2014-15 to the standards and elements format in place for academic year 2018-19.

## **STANDARD 1: MISSION, PLANNING, ORGANIZATION, AND INTEGRITY**

A medical school has a written statement of mission and goals for the medical education program, conducts ongoing planning, and has written bylaws that describe an effective organizational structure and governance processes. In the conduct of all internal and external activities, the medical school demonstrates integrity through its consistent and documented adherence to fair, impartial, and effective processes, policies, and practices.

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### **1.1 Strategic Planning and Continuous Quality Improvement**

A medical school engages in ongoing planning and continuous quality improvement processes that establish short and long-term programmatic goals, result in the achievement of measurable outcomes that are used to improve programmatic quality, and ensure effective monitoring of the medical education program's compliance with accreditation standards.

### **1.2 Conflict of Interest Policies**

A medical school has in place and follows effective policies and procedures applicable to board members, faculty members, and any other individuals who participate in decision-making affecting the medical education program to avoid the impact of conflicts of interest in the operation of the medical education program, its associated clinical facilities, and any related enterprises.

### **1.3 Mechanisms for Faculty Participation**

A medical school ensures that there are effective mechanisms in place for direct faculty participation in decision-making related to the medical education program, including opportunities for faculty participation in discussions about, and the establishment of, policies and procedures for the program, as appropriate.

### **1.4 Affiliation Agreements**

In the relationship between a medical school and its clinical affiliates, the educational program for all medical students remains under the control of the medical school's faculty, as specified in written affiliation agreements that define the responsibilities of each party related to the medical education program. Written agreements are necessary with clinical affiliates that are used regularly for required clinical experiences; such agreements may also be warranted with other clinical facilities that have a significant role in the clinical education program. Such agreements provide for, at a minimum the following:

- The assurance of medical student and faculty access to appropriate resources for medical student education
- The primacy of the medical education program's authority over academic affairs and the education/assessment of medical students
- The role of the medical school in the appointment and assignment of faculty members with responsibility for medical student teaching
- 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
- The shared responsibility of the clinical affiliate and the medical school for creating and maintaining an appropriate learning environment

## **1.5 Bylaws**

A medical school promulgates bylaws or similar policy documents that describe the responsibilities and privileges of its administrative officers, faculty, medical students, and committees.

## **1.6 Eligibility Requirements**

A medical school ensures that its medical education program meets all eligibility requirements of the LCME for initial and continuing accreditation, including receipt of degree-granting authority and accreditation by a regional accrediting body by either the medical school or its parent institution.

## **STANDARD 2: LEADERSHIP AND ADMINISTRATION**

A medical school has a sufficient number of faculty in leadership roles and of senior administrative staff with the skills, time, and administrative support necessary to achieve the goals of the medical education program and to ensure the functional integration of all programmatic components.

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### **2.1 Administrative Officer and Faculty Appointments**

The senior administrative staff and faculty of a medical school are appointed by, or on the authority of, the governing board of the institution.

### **2.2 Dean's Qualifications**

The dean of a medical school is qualified by education, training, and experience to provide effective leadership in medical education, scholarly activity, patient care, and other missions of the medical school.

### **2.3 Access and Authority of the Dean**

The dean of a medical school has sufficient access to the university president or other institutional official charged with final responsibility for the medical education program and to other institutional officials in order to fulfill his or her responsibilities; there is a clear definition of the dean's authority and responsibility for the medical education program.

### **2.4 Sufficiency of Administrative Staff**

A medical school has in place a sufficient number of associate or assistant deans, leaders of organizational units, and senior administrative staff who are able to commit the time necessary to accomplish the missions of the medical school.

### **2.5 Responsibility of and to the Dean**

The dean of a medical school with one or more regional campuses is administratively responsible for the conduct and quality of the medical education program and for ensuring the adequacy of faculty at each campus. The principal academic officer at each campus is administratively responsible to the dean.

### **2.6 Functional Integration of the Faculty**

At a medical school with one or more regional campuses, the faculty at the departmental and medical school levels at each campus are functionally integrated by appropriate administrative mechanisms (e.g., regular meetings and/or communication, periodic visits, participation in shared governance, and data sharing).



## **STANDARD 3: ACADEMIC AND LEARNING ENVIRONMENTS**

A medical school ensures that its medical education program occurs in professional, respectful, and intellectually stimulating academic and clinical environments, recognizes the benefits of diversity, and promotes students' attainment of competencies required of future physicians.

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### **3.1 Resident Participation in Medical Student Education**

Each medical student in a medical education program participates in one or more required clinical experiences conducted in a health care setting in which he or she works with resident physicians currently enrolled in an accredited program of graduate medical education.

### **3.2 Community of Scholars/Research Opportunities**

A medical education program is conducted in an environment that fosters the intellectual challenge and spirit of inquiry appropriate to a community of scholars and provides sufficient opportunities, encouragement, and support for medical student participation in the research and other scholarly activities of its faculty.

### **3.3 Diversity/Pipeline Programs and Partnerships**

A medical school has effective policies and practices in place, and engages in ongoing, systematic, and focused recruitment and retention activities, to achieve mission-appropriate diversity outcomes among its students, faculty, senior administrative staff, and other relevant members of its academic community. These activities include the use of programs and/or partnerships aimed at achieving diversity among qualified applicants for medical school admission and the evaluation of program and partnership outcomes.

### **3.4 Anti-Discrimination Policy**

A medical school does not discriminate on the basis of age, creed, gender identity, national origin, race, sex, or sexual orientation.

### **3.5 Learning Environment/Professionalism**

A medical school ensures that the learning environment of its medical education program is conducive to the ongoing development of explicit and appropriate professional behaviors in its medical students, faculty, and staff at all locations and is one in which all individuals are treated with respect. The medical school and its clinical affiliates share the responsibility for periodic evaluation of the learning environment in order to identify positive and negative influences on the maintenance of professional standards, develop and conduct appropriate strategies to enhance positive and mitigate negative influences, and identify and promptly correct violations of professional standards.

### **3.6 Student Mistreatment**

A medical education program defines and publicizes its code of professional conduct for the relationships between medical students, including visiting medical students, and those individuals with whom students interact during the medical education program. A medical school develops effective written policies that address violations of the code, has effective mechanisms in place for a prompt response to any complaints, and supports educational activities aimed at preventing inappropriate behavior. Mechanisms for reporting violations of the code of professional conduct are understood by medical students, including visiting medical students, and ensure that any violations can be registered and investigated without fear of retaliation.

## **STANDARD 4: FACULTY PREPARATION, PRODUCTIVITY, PARTICIPATION, AND POLICIES**

The faculty members of a medical school are qualified through their education, training, experience, and continuing professional development and provide the leadership and support necessary to attain the institution's educational, research, and service goals.

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### **4.1 Sufficiency of Faculty**

A medical school has in place a sufficient cohort of faculty members with the qualifications and time required to deliver the medical curriculum and to meet the other needs and fulfill the other missions of the institution.

### **4.2 Scholarly Productivity**

The faculty of a medical school demonstrate a commitment to continuing scholarly productivity that is characteristic of an institution of higher learning.

### **4.3 Faculty Appointment Policies**

A medical school has clear policies and procedures in place for faculty appointment, renewal of appointment, promotion, granting of tenure, remediation, and dismissal that involve the faculty, the appropriate department heads, and the dean and provides each faculty member with written information about his or her term of appointment, responsibilities, lines of communication, privileges and benefits, performance evaluation and remediation, terms of dismissal, and, if relevant, the policy on practice earnings.

### **4.4 Feedback to Faculty**

A medical school faculty member receives regularly scheduled and timely feedback from departmental and/or other programmatic or institutional leaders on his or her academic performance and progress toward promotion and, when applicable, tenure.

### **4.5 Faculty Professional Development**

A medical school and/or its sponsoring institution provides opportunities for professional development to each faculty member in the areas of discipline content, curricular design, program evaluation, student assessment methods, instructional methodology, and research to enhance his or her skills and leadership abilities in these areas.

### **4.6 Responsibility for Educational Program Policies**

At a medical school, the dean and a committee of the faculty determine the governance and policymaking processes of the program.

## **STANDARD 5: EDUCATIONAL RESOURCES AND INFRASTRUCTURE**

A medical school has sufficient personnel, financial resources, physical facilities, equipment, and clinical, instructional, informational, technological, and other resources readily available and accessible across all locations to meet its needs and to achieve its goals.

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### **5.1 Adequacy of Financial Resources**

The present and anticipated financial resources of a medical school are derived from diverse sources and are adequate to sustain a sound program of medical education and to accomplish other programmatic and institutional goals.

### **5.2 Dean's Authority/Resources**

The dean of a medical school has sufficient resources and budgetary authority to fulfill his or her responsibility for the management and evaluation of the medical curriculum.

### **5.3 Pressures for Self-Financing**

A medical school admits only as many qualified applicants as its total resources can accommodate and does not permit financial or other influences to compromise the school's educational mission.

### **5.4 Sufficiency of Buildings and Equipment**

A medical school has, or is assured the use of, buildings and equipment sufficient to achieve its educational, clinical, and research missions.

### **5.5 Resources for Clinical Instruction**

A medical school has, or is assured the use of, appropriate resources for the clinical instruction of its medical students in ambulatory and inpatient settings and has adequate numbers and types of patients (e.g., acuity, case mix, age, gender).

### **5.6 Clinical Instructional Facilities/Information Resources**

Each hospital or other clinical facility affiliated with a medical school that serves as a major location for required clinical learning experiences has sufficient information resources and instructional facilities for medical student education.

### **5.7 Security, Student Safety, and Disaster Preparedness**

A medical school ensures that adequate security systems are in place at all locations and publishes policies and procedures to ensure student safety and to address emergency and disaster preparedness.

### **5.8 Library Resources/Staff**

A medical school provides ready access to well-maintained library resources sufficient in breadth of holdings and technology to support its educational and other missions. Library services are supervised by a professional staff that is familiar with regional and national information resources and data systems and is responsive to the needs of the medical students, faculty members, and others associated with the institution.

### **5.9 Information Technology Resources/Staff**

A medical school provides access to well-maintained information technology resources sufficient in scope to support its educational and other missions. The information technology staff serving a medical education program has sufficient expertise to fulfill its responsibilities and is responsive to the needs of the medical students, faculty members, and others associated with the institution.

### **5.10 Resources Used by Transfer/Visiting Students**

The resources used by a medical school to accommodate any visiting and transfer medical students in its medical education program do not significantly diminish the resources available to already enrolled medical students.

### **5.11 Study/Lounge/Storage Space/Call Rooms**

A medical school ensures that its medical students have, at each campus and affiliated clinical site, adequate study space, lounge areas, personal lockers or other secure storage facilities, and secure call rooms if students are required to participate in late night or overnight clinical learning experiences.

### **5.12 Required Notifications to the LCME**

A medical school notifies the LCME of any substantial change in the number of enrolled medical students; of any decrease in the resources available to the institution for its medical education program, including faculty, physical facilities, or finances; of its plans for any major modification of its medical curriculum; and/or of anticipated changes in the affiliation status of the program's clinical facilities. The program also provides prior notification to the LCME if it plans to increase entering medical student enrollment on the main campus and/or in one or more existing regional campuses above the threshold of 10 percent, or 15 medical students in one year or 20 percent in three years; or to start a new or to expand an existing regional campus; or to initiate a new parallel curriculum (track).

## **STANDARD 6: COMPETENCIES, CURRICULAR OBJECTIVES, AND CURRICULAR DESIGN**

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 enable its medical students to achieve those competencies and objectives. 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.

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### **6.1 Program and Learning Objectives**

The faculty of a medical school define its medical education program objectives in outcome-based terms that allow the assessment of medical students' progress in developing the competencies that the profession and the public expect of a physician. The medical school makes these medical education program objectives known to all medical students and faculty. In addition, the medical school ensures that the learning objectives for each required learning experience (e.g., course, clerkship) are made known to all medical students and those faculty, residents, and others with teaching and assessment responsibilities in those required experiences.

### **6.2 Required Clinical Experiences**

The faculty of a medical school define the types of patients and clinical conditions that medical students are required to encounter, the skills to be performed by medical students, the appropriate clinical settings for these experiences, and the expected levels of medical student responsibility.

### **6.3 Self-Directed and Life-Long Learning**

The faculty of a medical school ensure that the medical curriculum includes self-directed learning experiences and time for independent study to allow medical students to develop the skills of lifelong learning. Self-directed learning involves medical students' self-assessment of learning needs; independent identification, analysis, and synthesis of relevant information; and appraisal of the credibility of information sources.

### **6.4 Inpatient/Outpatient Experiences**

The faculty of a medical school ensure that the medical curriculum includes clinical experiences in both outpatient and inpatient settings.

### **6.5 Elective Opportunities**

The faculty of a medical school ensure that the medical curriculum includes elective opportunities that supplement required learning experiences and that permit medical students to gain exposure to and deepen their understanding of medical specialties reflecting their career interests and to pursue their individual academic interests.

## **6.6 Service-Learning**

The faculty of a medical school ensure that the medical education program provides sufficient opportunities for, encourages, and supports medical student participation in service-learning and community service activities.

## **6.7 Academic Environments**

The faculty of a medical school ensure that medical students have opportunities to learn in academic environments that permit interaction with students enrolled in other health professions, graduate and professional degree programs, and in clinical environments that provide opportunities for interaction with physicians in graduate medical education programs and in continuing medical education programs.

## **6.8 Education Program Duration**

A medical education program includes at least 130 weeks of instruction.

## **STANDARD 7: CURRICULAR CONTENT**

The faculty of a medical school ensure that the medical curriculum provides content of sufficient breadth and depth to prepare medical students for entry into any residency program and for the subsequent contemporary practice of medicine.

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### **7.1 Biomedical, Behavioral, Social Sciences**

The faculty of a medical school ensure that the medical curriculum includes content from the biomedical, behavioral, and socioeconomic sciences to support medical students' mastery of contemporary scientific knowledge and concepts and the methods fundamental to applying them to the health of individuals and populations.

### **7.2 Organ Systems/Life Cycle/Primary Care/Prevention/Wellness/Symptoms/Signs/Differential Diagnosis, Treatment Planning, Impact of Behavioral and Social Factors**

The faculty of a medical school ensure that the medical curriculum includes content and clinical experiences related to each organ system; each phase of the human life cycle; continuity of care; and preventive, acute, chronic, rehabilitative, end-of-life, and primary care in order to prepare students to:

- Recognize wellness, determinants of health, and opportunities for health promotion and disease prevention
- Recognize and interpret symptoms and signs of disease
- Develop differential diagnoses and treatment plans
- Recognize the potential health-related impact on patients of behavioral and socioeconomic factors
- Assist patients in addressing health-related issues involving all organ systems

### **7.3 Scientific Method/Clinical/Translational Research**

The faculty of a medical school ensure that the medical curriculum includes instruction in the scientific method (including hands-on or simulated exercises in which medical students collect or use data to test and/or verify hypotheses or address questions about biomedical phenomena) and in 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).

### **7.4 Critical Judgment/Problem-Solving Skills**

The faculty of a medical school ensure that the medical curriculum incorporates the fundamental principles of medicine, provides opportunities for medical students to acquire skills of critical judgment based on evidence and experience, and develops medical students' ability to use those principles and skills effectively in solving problems of health and disease.

### **7.5 Societal Problems**

The faculty of a medical school ensure that the medical curriculum includes instruction in the diagnosis, prevention, appropriate reporting, and treatment of the medical consequences of common societal problems.

## **7.6 Cultural Competence and Health Care Disparities**

The faculty of a medical school ensure that the medical curriculum provides opportunities for medical students to learn to recognize and appropriately address gender and cultural biases in themselves, in others, and in the health care delivery process. The medical curriculum includes instruction regarding the following:

- The manner in which people of diverse cultures and belief systems perceive health and illness and respond to various symptoms, diseases, and treatments
- The basic principles of culturally competent health care
- The recognition and development of solutions for health care disparities
- The importance of meeting the health care needs of medically underserved populations
- The development of core professional attributes (e.g., altruism, accountability) needed to provide effective care in a multidimensional and diverse society

## **7.7 Medical Ethics**

The faculty of a medical school ensure that the medical curriculum includes instruction for medical students in medical ethics and human values both prior to and during their participation in patient care activities and requires its medical students to behave ethically in caring for patients and in relating to patients' families and others involved in patient care.

## **7.8 Communication Skills**

The faculty of a medical school ensure that the medical curriculum includes specific instruction in communication skills as they relate to communication with patients and their families, colleagues, and other health professionals.

## **7.9 Interprofessional Collaborative Skills**

The faculty of a medical school ensure that the core curriculum of the medical education program prepares medical students to function collaboratively on health care teams that include health professionals from other disciplines as they provide coordinated services to patients. These curricular experiences include practitioners and/or students from the other health professions.



## **STANDARD 8: CURRICULAR MANAGEMENT, EVALUATION, AND ENHANCEMENT**

The faculty of a medical school engage in curricular revision and program evaluation activities to ensure that medical education program quality is maintained and enhanced and that medical students achieve all medical education program objectives and participate in required clinical experiences and settings.

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### **8.1 Curricular Management**

A medical school has in place an institutional body (e.g., a faculty committee) that oversees the medical education program as a whole and has responsibility for the overall design, management, integration, evaluation, and enhancement of a coherent and coordinated medical curriculum.

### **8.2 Use of Medical Educational Program Objectives**

The faculty of a medical school, through the faculty committee responsible for the medical curriculum, ensure that the medical curriculum uses formally adopted medical education program objectives to guide the selection of curriculum content, review and revise the curriculum, and establish the basis for evaluating programmatic effectiveness. The faculty leadership responsible for each required course and clerkship link the learning objectives of that course or clerkship to the medical education program objectives.

### **8.3 Curricular Design, Review, Revision/Content Monitoring**

The faculty of a medical school are responsible for the detailed development, design, and implementation of all components of the medical education program, including the medical education program objectives, the learning objectives for each required curricular segment, instructional and assessment methods appropriate for the achievement of those objectives, content and content sequencing, ongoing review and updating of content, and evaluation of course, clerkship, and teacher quality. These medical education program objectives, learning objectives, content, and instructional and assessment methods are subject to ongoing monitoring, review, and revision by the faculty to ensure that the curriculum functions effectively as a whole to achieve medical education program objectives.

### **8.4 Program Evaluation**

A medical school collects and uses a variety of outcome data, including national norms of accomplishment, to demonstrate the extent to which medical students are achieving medical education program objectives and to enhance medical education program quality. These data are collected during program enrollment and after program completion.

### **8.5 Medical Student Feedback**

In evaluating medical education program quality, a medical school has formal processes in place to collect and consider medical student evaluations of their courses, clerkships, and teachers, and other relevant information.

### **8.6 Monitoring of Completion of Required Clinical Experiences**

A medical school has in place a system with central oversight that monitors and ensures completion by all medical students of required clinical experiences in the medical education program and remedies any identified gaps.

### **8.7 Comparability of Education/Assessment**

A medical school ensures that the medical curriculum includes comparable educational experiences and equivalent methods of assessment across all locations within a given course and clerkship to ensure that all medical students achieve the same medical education program objectives.

### **8.8 Monitoring Student Time**

The medical school faculty committee responsible for the medical curriculum and the program's administration and leadership ensure the development and implementation of effective policies and procedures 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 clerkships.

## **STANDARD 9: TEACHING, SUPERVISION, ASSESSMENT, AND STUDENT AND PATIENT SAFETY**

A medical school ensures that its medical education program includes a comprehensive, fair, and uniform system of formative and summative medical student assessment and protects medical students' and patients' safety by ensuring that all persons who teach, supervise, and/or assess medical students are adequately prepared for those responsibilities.

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### **9.1 Preparation of Resident and Non-Faculty Instructors**

In a medical school, residents, graduate students, postdoctoral fellows, and other non-faculty instructors in the medical education program who supervise or teach medical students are familiar with the learning objectives of the course or clerkship and are prepared for their roles in teaching and assessment. The medical school provides resources to enhance residents' and non-faculty instructors' teaching and assessment skills, and provides central monitoring of their participation in those opportunities.

### **9.2 Faculty Appointments**

A medical school ensures that supervision of medical student learning experiences is provided throughout required clerkships by members of the school's faculty.

### **9.3 Clinical Supervision of Medical Students**

A medical school ensures that medical students in clinical learning situations involving patient care are appropriately supervised at all times in order to ensure patient and student safety, that the level of responsibility delegated to the student is appropriate to his or her level of training, and that the activities supervised are within the scope of practice of the supervising health professional.

### **9.4 Assessment System**

A medical school ensures that, throughout its medical education program, there is a centralized system in place that employs a variety of measures (including direct observation) for the assessment of student achievement, including students' acquisition of the knowledge, core clinical skills (e.g., medical history-taking, physical examination), behaviors, and attitudes specified in medical education program objectives, and that ensures that all medical students achieve the same medical education program objectives.

### **9.5 Narrative Assessment**

A medical school ensures that a narrative description of a medical student's performance, including his or her non-cognitive achievement, is included as a component of the assessment in each required course and clerkship of the medical education program whenever teacher-student interaction permits this form of assessment.

### **9.6 Setting Standards of Achievement**

A medical school ensures that faculty members with appropriate knowledge and expertise set standards of achievement in each required learning experience in the medical education program.

### **9.7 Formative Assessment and Feedback**

The medical school's curricular governance committee ensures that each medical student is assessed and provided with formal formative feedback early enough during each required course or clerkship to allow sufficient time for remediation. Formal feedback occurs at least at the midpoint of the course or clerkship. A course or clerkship less than four weeks in length provides alternate means by which a medical student can measure his or her progress in learning.

### **9.8 Fair and Timely Summative Assessment**

A medical school has in place a system of fair and timely summative assessment of medical student achievement in each course and clerkship of the medical education program. Final grades are available within six weeks of the end of a course or clerkship.

### **9.9 Student Advancement and Appeal Process**

A medical school ensures that the medical education program has a single standard for the advancement and graduation of medical students across all locations and a fair and formal process for taking any action that may affect the status of a medical student, including 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 advancement, graduation, or dismissal.

## **STANDARD 10: MEDICAL STUDENT SELECTION, ASSIGNMENT, AND PROGRESS**

A medical school establishes and publishes admission requirements for potential applicants to the medical education program, and uses effective policies and procedures for medical student selection, enrollment, and assignment.

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### **10.1 Premedical Education/Required Coursework**

Through its requirements for admission, a medical school encourages potential applicants to the medical education program to acquire a broad undergraduate education that includes the study of the humanities, natural sciences, and social sciences, and confines its specific premedical course requirements to those deemed essential preparation for successful completion of its medical curriculum.

### **10.2 Final Authority of Admission Committee**

The final responsibility for accepting students to a medical school rests with a formally constituted admission committee. The authority and composition of the committee and the rules for its operation, including voting privileges and the definition of a quorum, are specified in bylaws or other medical school policies. Faculty members constitute the majority of voting members at all meetings. The selection of individual medical students for admission is not influenced by any political or financial factors.

### **10.3 Policies Regarding Student Selection/Progress and Their Dissemination**

The faculty of a medical school establish criteria for student selection and develop and implement effective policies and procedures regarding, and make decisions about, medical student application, selection, admission, assessment, promotion, graduation, and any disciplinary action. The medical school makes available to all interested parties its criteria, standards, policies, and procedures regarding these matters.

### **10.4 Characteristics of Accepted Applicants**

A medical school selects applicants for admission who possess the intelligence, integrity, and personal and emotional characteristics necessary for them to become competent physicians.

### **10.5 Technical Standards**

A medical school develops and publishes technical standards for the admission, retention, and graduation of applicants or medical students in accordance with legal requirements.

### **10.6 Content of Informational Materials**

A medical school's catalog and other informational, advertising, and recruitment materials present a balanced and accurate representation of the mission and objectives of the medical education program, state the academic and other (e.g., immunization) requirements for the MD degree and all associated joint degree programs, provide the most recent academic calendar for each curricular option, and describe all required courses and clerkships offered by the medical education program.

### **10.7 Transfer Students**

A medical school ensures that any student accepted for transfer or admission with advanced standing demonstrates academic achievements, completion of relevant prior coursework, and other relevant characteristics comparable to those of the medical students in the class that he or she would join. A medical school accepts a transfer medical student into the final year of a medical education program only in rare and extraordinary personal or educational circumstances.

### **10.8 Visiting Students**

A medical school does all of the following:

- Verifies the credentials of each visiting medical student
- Ensures that each visiting medical student demonstrates qualifications comparable to those of the medical students he or she would join in educational experiences
- Maintains a complete roster of visiting medical students
- Approves each visiting medical student's assignments
- Provides a performance assessment for each visiting medical student
- Establishes health-related protocols for such visiting medical students
- Identifies the administrative office that fulfills these responsibilities

### **10.9 Student Assignment**

A medical school assumes ultimate responsibility for the selection and assignment of medical students to each location and/or parallel curriculum (i.e., track) and identifies the administrative office that fulfills this responsibility. A process exists whereby a medical student with an appropriate rationale can request an alternative assignment when circumstances allow for it.

## **STANDARD 11: MEDICAL STUDENT ACADEMIC SUPPORT, CAREER ADVISING, AND EDUCATIONAL RECORDS**

A medical school provides effective academic support and career advising to all medical students to assist them in achieving their career goals and the school's medical education program objectives. All medical students have the same rights and receive comparable services.

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### **11.1 Academic Advising**

A medical school has an effective system of academic advising in place for medical students that integrates the efforts of faculty members, course and clerkship directors, and student affairs staff with its counseling and tutorial services and ensures that medical students can obtain academic counseling from individuals who have no role in making assessment or promotion decisions about them.

### **11.2 Career Advising**

A medical school has an effective career advising system in place that integrates the efforts of faculty members, clerkship directors, and student affairs staff to assist medical students in choosing elective courses, evaluating career options, and applying to residency programs.

### **11.3 Oversight of Extramural Electives**

If a medical student at a medical school is permitted to take an elective under the auspices of another medical school, institution, or organization, a centralized system exists in the dean's office at the home school to review the proposed extramural elective prior to approval and to ensure the return of a performance assessment of the student and an evaluation of the elective by the student. Information about such issues as the following are available, as appropriate, to the student and the medical school in order to inform the student's and the school's review of the experience prior to its approval:

- Potential risks to the health and safety of patients, students, and the community
- The availability of emergency care
- The possibility of natural disasters, political instability, and exposure to disease
- The need for additional preparation prior to, support during, and follow-up after the elective
- The level and quality of supervision
- Any potential challenges to the code of medical ethics adopted by the home school

### **11.4 Provision of MSPE**

A medical school provides a Medical Student Performance Evaluation required for the residency application of a medical student only on or after October 1 of the student's final year of the medical education program.

### **11.5 Confidentiality of Student Educational Records**

At a medical school, medical student educational records are confidential and available only to those members of the faculty and administration with a need to know, unless released by the student or as otherwise governed by laws concerning confidentiality.

## **11.6 Student Access to Educational Records**

A medical school has policies and procedures in place that permit a medical student to review and to challenge his or her educational records, including the Medical Student Performance Evaluation, if he or she considers the information contained therein to be inaccurate, misleading, or inappropriate.



## **STANDARD 12: MEDICAL STUDENT HEALTH SERVICES, PERSONAL COUNSELING, AND FINANCIAL AID SERVICES**

A medical school provides effective student services to all medical students to assist them in achieving the program's goals for its students. All medical students have the same rights and receive comparable services.

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### **12.1 Financial Aid/Debt Management Counseling/Student Educational Debt**

A medical school provides its medical students with effective financial aid and debt management counseling and has mechanisms in place to minimize the impact of direct educational expenses (i.e., tuition, fees, books, supplies) on medical student indebtedness.

### **12.2 Tuition Refund Policy**

A medical school has clear, reasonable, and fair policies for the refund of a medical student's tuition, fees, and other allowable payments (e.g., payments made for health or disability insurance, parking, housing, and other similar services for which a student may no longer be eligible following withdrawal).

### **12.3 Personal Counseling/Well-Being Programs**

A medical school has in place an effective system of personal counseling for its medical students that includes programs to promote their well-being and to facilitate their adjustment to the physical and emotional demands of medical education.

### **12.4 Student Access to Health Care Services**

A medical school provides its medical students with timely access to needed diagnostic, preventive, and therapeutic health services at sites in reasonable proximity to the locations of their required educational experiences and has policies and procedures in place that permit students to be excused from these experiences to seek needed care.

### **12.5 Non-Involvement of Providers of Student Health Services in Student Assessment/Location of Student Health Records**

The health professionals who provide health services, including psychiatric/psychological counseling, to a medical student have no involvement in the academic assessment or promotion of the medical student receiving those services. A medical school ensures that medical student health records are maintained in accordance with legal requirements for security, privacy, confidentiality, and accessibility.

### **12.6 Student Health and Disability Insurance**

A medical school ensures that health insurance and disability insurance are available to each medical student and that health insurance is also available to each medical student's dependents.

### **12.7 Immunization Requirements and Monitoring**

A medical school follows accepted guidelines in determining immunization requirements for its medical students and monitors students' compliance with those requirements.

## **12.8 Student Exposure Policies/Procedures**

A medical school has policies in place that effectively address medical student exposure to infectious and environmental hazards, including the following:

- The education of medical students about methods of prevention
- The procedures for care and treatment after exposure, including a definition of financial responsibility
- The effects of infectious and environmental disease or disability on medical student learning activities

All registered medical students (including visiting students) are informed of these policies before undertaking any educational activities that would place them at risk.

## GLOSSARY OF TERMS FOR LCME ACCREDITATION STANDARDS AND ELEMENTS

**Adequate types and numbers of patients (e.g., acuity, case mix, age, gender):** Medical student access, in both ambulatory and inpatient settings, to a sufficient mix of patients with a range of severity of illness and diagnoses, ages, and both genders to meet medical educational program objectives and the learning objectives of specific courses, modules, and clerkships. (Element 5.5)

**Admission requirements:** A comprehensive listing of both objective and subjective criteria used for screening, selection, and admission of applicants to a medical education program. (Standard 10)

**Admission with advanced standing:** The acceptance by a medical school and enrollment in the medical curriculum of an applicant (e.g., a doctoral student), typically as a second or third-year medical student, when that applicant had not previously been enrolled in a medical education program. (Element 10.7)

**Any related enterprises:** Any additional medical school-sponsored activities or entities. (Element 1.2)

**Assessment:** The systematic use of a variety of methods to collect, analyze, and use information to determine whether a medical student has acquired the competencies (e.g., knowledge, skills, behaviors, and attitudes) that the profession and the public expect of a physician. (Element 1.4)

**Benefits of diversity:** In a medical education program, the facts that having medical students and faculty members from a variety of socioeconomic backgrounds, racial and ethnic groups, and other life experiences can: 1) enhance the quality and content of interactions and discussions for all students throughout the preclinical and clinical curricula; and 2) result in the preparation of a physician workforce that is more culturally aware and competent and better prepared to improve access to healthcare and address current and future health care disparities. (Standard 3)

**Central [or centralized] monitoring:** Tracking by institutional (e.g., deans) level offices and/or committees (e.g., the curriculum committee) of desired and expected learning outcomes by students and their completion of required learning experiences. (Element 8.6)

**Clinical affiliates:** Those institutions providing inpatient medical care that have formal agreements with a medical school to provide clinical experiences for the education of its medical students. (Element 1.4)

**Clinical and translational research:** The conduct of medical studies involving human subjects, the data from which are intended to facilitate the translation and application of the studies' findings to medical practice in order to enhance the prevention, diagnosis, and treatment of medical conditions. (Element 7.3)

**Clinical reasoning:** The integration, organization, and interpretation of information gathered as a part of medical problem-solving.

**Comparable educational experiences:** Learning experiences that are sufficiently similar so as to ensure that medical students are achieving the same learning objectives at all educational sites at which those experiences occur. (Element 8.7)

**Coherent and coordinated curriculum:** The design of a complete medical education program, including its content and modes of presentation, to achieve its overall educational objectives. Coherence and coordination include the following characteristics: 1) the logical sequencing of curricular segments, 2) coordinated and integrated content within and across academic periods of study (i.e., horizontal and vertical integration), and 3) methods of instruction and student assessment appropriate to the achievement of the program's educational objectives. (Element 8.1)

**Competency:** Statements of defined skills or behavioral outcomes (i.e., that a physician should be able to do) in areas including, but not limited to, patient care, medical knowledge, practice-based learning and improvement, interpersonal and communication skills, professionalism and ethics, and systems-based practice for which a medical student is required to demonstrate mastery prior to completion of his or her medical education program and receipt of the MD degree. (Element 8.7)

**Core curriculum:** The required components of a medical curriculum, including all required courses/modules and clinical clerkships/rotations. (Element 7.9)

**Critical judgment/critical thinking:** The consideration, evaluation, and organization of evidence derived from appropriate sources and related rationales during the process of decision-making. The demonstration of critical thinking requires the following steps: 1) the collection of relevant evidence; 2) the evaluation of that evidence; 3) the organization of that evidence; 4) the presentation of appropriate evidence to support any conclusions; and 5) the coherent, logical, and organized presentation of any response. (Elements 7.4)

**Curriculum management:** Involves the following activities: leading, directing, coordinating, controlling, planning, evaluating, and reporting. An effective system of curriculum management exhibits the following characteristics: 1) evaluation of program effectiveness by outcomes analysis, using national norms of accomplishment as a frame of reference, 2) monitoring of content and workload in each discipline, including the identification of omissions and unplanned redundancies, and 3) review of the stated objectives of each individual curricular component and of methods of instruction and student assessment to ensure their linkage to and congruence with programmatic educational objectives. (Element 8.1)

**Direct educational expenses:** The following educational expenses of an enrolled medical student: tuition, mandatory fees, books and supplies, and a computer, if one is required by the medical school. (Element 12.1)

**Direct faculty participation in decision-making:** Faculty involvement in institutional governance wherein faculty input to decisions are made by the faculty members themselves or by representatives chosen by faculty members (e.g., versus appointed by administrators). (Element 1.3)

**Diverse sources [of financial revenues]:** Multiple sources of predictable revenues that include, but are not unduly dependent upon any one of, the following: tuition, gifts, clinical revenue, governmental support, research grants, endowment, etc. (Element 5.1)

**Effective:** Supported by evidence that the policy, practice, and/or process has produced the intended or expected result(s). (Standard 1)

**Eligibility requirements...for initial and continuing accreditation:** Receipt and maintenance of authority to grant the MD degree from the appropriate governmental agency and initial and continuing accreditation by one of the six regional accrediting bodies. (Element 1.6)

**Equivalent methods of assessment:** The use of methods of medical student assessment that are as close to identical as possible across all educational sites at which core curricular activities take place, but which may not occur in the same timeframe. (Element 8.7)

**Evaluation:** The systematic use of a variety of methods to collect, analyze, and use information to determine whether a program is fulfilling its mission(s) and achieving its goal(s). (Element 3.3)

**Fair and formal process for taking any action that may affect the status of a medical student:** The use of policies and procedures by any institutional body (e.g., student promotions committee) with responsibility for making decisions about the academic progress, continued enrollment, and/or graduation of a medical

student in a manner that ensures: 1) that the student will be assessed by individuals who have not previously formed an opinion of the student's abilities, professionalism, and/or suitability to become a physician; and 2) that the student has received timely notice of the proceedings, information about the purpose of the proceedings, and any evidence to be presented at the proceedings; his or her right to participate in and provide information or otherwise respond to participants in the proceedings; and any opportunity to appeal any adverse decision resulting from the proceedings. (Element 9.9)

**Fair and timely summative assessment:** A criterion-based determination, made as soon as possible after the conclusion of a curricular component (e.g., course/module, clinical clerkship/rotation) by individuals familiar with a medical student's performance, regarding the extent to which he or she has achieved the learning objective(s) for that component such that the student can use the information provided to improve future performance in the medical curriculum. (Element 9.8)

**Final responsibility for accepting students rests with a formally constituted admission committee:** Ensuring that the sole basis for selecting applicants for admission to the medical education program are the decisions made by the faculty committee charged with medical student selection in accordance with appropriately approved selection criteria. (Element 10.2)

**Formative feedback:** Information communicated to a medical student in a timely manner that is intended to modify the student's thinking or behavior in order to improve his or her subsequent learning and performance in the medical curriculum. (Element 9.7)

**Functionally integrated:** Coordination of the various components of the medical school and medical education program by means of policies, procedures, and practices that define and inform the relationships among them. (Element 2.6)

**Health care disparities:** Differences between groups of people, based on a variety of factors including, but not limited to, race, ethnicity, residential location, sex, age, and socioeconomic status, educational status, and disability status, that affect their access to health care, the quality of the health care they receive, and the outcomes of their medical conditions. (Element 7.6)

**Independent study:** Opportunities either for medical student-directed learning in one or more components of the core medical curriculum, based on structured learning objectives to be achieved by students with minimal faculty supervision, or for student-directed learning on elective topics of specific interest to the student. (Element 6.3)

**Integrated institutional responsibility:** Oversight by an appropriate central institutional body (commonly a curriculum committee) of the medical education program as a whole. An effective central curriculum authority exhibits the following characteristics: 1) participation by faculty, students, and administrators; 2) the availability of expertise in curricular design and methods of instruction, student assessment, and program evaluation; and 3) empowerment, through bylaws or decanal mandate, to work in the best interests of the medical education program without regard for parochial or political influences or departmental pressures. (Element 8.1)

**Learning objectives:** A statement of the specific, observable, and measurable expected outcomes (i.e., what the medical students will be able to do) of each specific component (e.g., course, module, clinical clerkship, rotation) of a medical education program that defines the content of the component and the assessment methodology and that is linked back to one or more of the medical education program objectives. (Element 6.1)

**Major location for required clinical learning experiences:** A clinical affiliate of the medical school that is the site of one or more required clinical experiences for its medical students. (Element 5.6)

**Medical education program objectives:** Broad statements, in measurable terms, of the knowledge, skills, behaviors, and attitudes (typically linked to a statement of expected competencies) that a medical student is expected to exhibit as evidence of his or her achievement of all programmatic requirements by the time of medical education program completion. (Standard 6 and Element 6.1)

**Medical education parallel curriculum (track):** A parallel program of study for a subset of the medical student body that requires participating students to complete specific programmatic learning objectives (e.g., in research, primary care, leadership) in addition to the medical educational program objectives required of all medical students. (Element 5.12)

**Medical problem-solving:** The initial generation of hypotheses that influence the subsequent gathering of information. (Elements 7.4)

**Mission-appropriate diversity:** The inclusion, in a medical education program's student body and among its faculty and staff and based on the program's mission, goals, and policies, of persons from different racial, ethnic, economic, and/or social backgrounds and with differing life experiences to enhance the educational environment for all medical students. (Element 3.3)

**Narrative assessment:** Written comments from faculty that assess student performance and achievement in meeting the objectives of a course or clerkship. (Element 9.5)

**National norms of accomplishment:** Those data sources that would permit comparison of relevant medical school-specific medical student performance data to national data for all medical schools and medical students (e.g., USMLE scores, AAMC GQ data, specialty certification rates). (Element 8.4)

**Need to know:** The requirement that information in a medical student's educational record be provided only to those members of the medical school's faculty or administration who have a legitimate reason to access that information in order to fulfill the responsibilities of their faculty or administrative position. (Element 11.5)

**Outcome-based terms:** Descriptions of observable and measurable desired and expected outcomes of learning experiences in a medical curriculum (e.g., knowledge, skills, attitudes, and behavior). (Element 6.1)

**Primacy of the medical education program's authority over academic affairs and the education/assessment of medical students:** The affirmation and acknowledgement that all decisions regarding the creation and implementation of educational policy and the teaching and assessment of medical students are, first and foremost, the prerogative of the medical education program. (Element 1.4)

**Principal academic officer at each campus is administratively responsible to the dean:** The administrator identified by the dean or the dean's designee (e.g., associate or assistant dean, site director) as having primary responsibility for implementation and evaluation of the components of the medical education program that occur at that campus. (Element 2.5)

**Program objectives:** See definition for Medical education program objectives above.

**Publishes:** Communicates in hard-copy and/or on-line in a manner that is easily available to and accessible by the public. (Standard 10)

**Regional accrediting body:** The six bodies recognized by the US Department of Education that accredit institutions of higher education located in their regions of the US: 1) Higher Education Commission; 2) Middle States Commission on Higher Education; 3) New England Association of Schools and Colleges Commission on Institutions of Higher Education; 4) Northwest Commission on Colleges and Universities; 5)

Southern Association of Colleges and Schools Commission on Colleges; and 6) Western Association of Schools and Colleges Senior Colleges and University Commission. (Element 1.6)

**Regional campus:** A regional campus is an instructional site that is distinct from the central/administrative campus of the medical school and at which some students spend one or more complete curricular years. (Element 2.5)

**Regularly scheduled and timely feedback:** Information communicated periodically and sufficiently often (based on institutional policy, procedure, or practice) to a faculty member to ensure that the faculty member is aware of the extent to which he or she is (or is not) meeting institutional expectations regarding future promotion and/or tenure. (Element 4.4)

**Scientific method:** A method of procedure consisting in systematic observation, measurement, and experiment, and the formulation, testing, and modification of hypotheses. Typically the method consists of the following steps: 1) identifying and defining a problem; 2) accumulating relevant data; 3) formulating a tentative hypothesis; 4) conducting experiments to test the hypothesis; 5) interpreting the results objectively; and 6) repeating the steps until an acceptable solution is found. (Element 7.3)

**Self-directed learning:** Includes all of the following components as a unified sequence: 1) the medical student's self-assessment of his/her learning needs; 2) the medical student's independent identification, analysis, and synthesis of relevant information; and 3) the medical student's appraisal of the credibility of information sources. (Element 6.3)

**Senior administrative staff:** People in academic leadership roles, to include but not limited to, associate/assistant deans, directors, academic department chairs, and people who oversee the operation of affiliated clinical facilities and other educational sites. Many, if not most, of these people also have faculty appointments, and for tracking purposes should only be counted in one category when completing tables such as those listed in the DCI under Element 3.3. (Standard 2 and Elements 2.1, 2.4, and 3.3)

**Service-learning:** Educational experiences that involve all of the following components: 1) medical students' service to the community in activities that respond to community-identified concerns; 2) student preparation; and 3) student reflection on the relationships among their participation in the activity, their medical school curriculum, and their roles as citizens and medical professionals. (Element 6.6)

**Single standard for the promotion and graduation of medical students across all locations:** The academic and non-academic criteria and levels of performance defined by a medical education program and published in programmatic policies that must be met by all medical students on all medical school campuses at the conclusion of each academic year for promotion to the next academic year and at the conclusion of the medical education program for receipt of the MD degree and graduation. (Element 9.9)

**Standards of achievement:** Criteria by which to measure a medical student's attainment of relevant learning objectives and that contribute to a summative grade. (Element 9.6)

**Technical standards for admission, retention, and graduation of medical students:** A statement by a medical school of the: 1) essential academic and non-academic abilities, attributes, and characteristics in the areas of intellectual-conceptual, integrative, and quantitative abilities; 2) observational skills; 3) physical abilities; 4) motor functioning; 5) emotional stability; 6) behavioral and social skills; and 7) ethics and professionalism that a medical school applicant or enrolled medical student must possess or be able to acquire, with or without reasonable accommodation, in order to be admitted to, be retained in, and graduate from that school's medical educational program. (Element 10.5)

**Transfer:** The permanent withdrawal by a medical student from one medical school followed by his or her enrollment (typically in the second or third year of the medical curriculum) in another medical school. (Element 5.10)

**Visiting students:** Students enrolled at one medical school who participate in clinical (typically elective) learning experiences for a grade sponsored by another medical school without transferring their enrollment from one school to the other. (Element 5.10)



**MAPPING OF THE 2014-15 STANDARDS AND 2018-19 STANDARDS AND ELEMENTS SORTED BY THE 2014-15 STANDARDS**

2014-15 STANDARD	2018-19 ELEMENT
IS-1	1.1
IS-2	deleted
IS-3	1.6
IS-4	1.5
IS-5	1.2
IS-6	deleted
IS-7	2.1
IS-8	2.3
IS-9	2.3
IS-10	2.2
IS-11	2.4
IS-12	6.7
IS-13	3.2
IS-14	3.2
IS-14-A	6.6
IS-16	3.3 and 7.6

2014-15 STANDARD	2018-19 ELEMENT
ED-1	8.2
ED-1-A	6.1
ED-2	6.2 and 8.6
ED-3	6.1
ED-4	6.8
ED-5	reflected in Standard 7
ED-5-A	6.3
ED-6	7.4
ED-7	deleted
ED-8	8.7
ED-9	5.12
ED-10	7.1 and 7.2
ED-11	7.1
ED-12	7.3
ED-13	7.2
ED-14	7.2
ED-15	7.2
ED-16	6.4

2014-15 STANDARD	2018-19 ELEMENT
ED-17	requested in data collection instrument
ED-17-A	7.3
ED-18	6.5
ED-19	7.8
ED-19-A	7.9
ED-20	7.5
ED-21	7.6
ED-22	7.6
ED-23	7.7
ED-24	9.1
ED-25	9.2
ED-25-A	9.3
ED-26	9.4
ED-27	9.4
ED-28	9.4
ED-29	9.6
ED-30	4.5 and 9.8
ED-31	9.7
ED-32	9.5
ED-33	8.1
ED-34	8.3 and Standard 6
ED-35	8.3
ED-36	5.2
ED-37	8.3
ED-38	8.8
ED-39	2.5
ED-40	2.5
ED-41	2.6
ED-42	9.9
ED-43	10.9
ED-44	reflected in Standards 11 and 12
ED-46	8.4
ED-47	8.5

2014-15 STANDARD	2018-19 ELEMENT
MS-1	10.1
MS-2	10.1
MS-3	10.3
MS-4	10.2
MS-5	10.4
MS-6	10.4
MS-7	10.2
MS-8	3.3
MS-9	10.5
MS-10	10.6
MS-11	10.3
MS-12	5.10
MS-13	10.7
MS-14	10.7
MS-15	10.7
MS-16	10.8
MS-17	10.8
MS-18	11.1
MS-19	11.2
MS-20	11.3
MS-21	deleted
MS-22	11.4
MS-23	12.1
MS-24	12.1
MS-25	12.2
MS-26	12.3
MS-27	12.4
MS-27-A	12.5
MS-28	12.6
MS-29	12.7
MS-30	12.8
MS-31	3.4
MS-31-A	3.5
MS-32	3.6
MS-33	10.3
MS-34	9.9
MS-35	11.5
MS-36	11.6
MS-37	5.11

2014-15 STANDARD	2018-19 ELEMENT
FA-2	4.1
FA-3	deleted
FA-4	4.5
FA-5	4.2
FA-6	10.3 and 11.2
FA-7	4.3
FA-8	1.2
FA-9	4.3
FA-10	4.4
FA-11	4.5
FA-12	4.6
FA-13	1.3
FA-14	1.3

2014-15 STANDARD	2018-19 ELEMENT
ER-1	5.12
ER-2	5.1
ER-3	5.3
ER-4	5.4
ER-5	5.7
ER-6	5.5
ER-7	5.6 and 5.11
ER-8	3.1
ER-9	1.4 and 5.12
ER-10	1.4
ER-11	5.8
ER-12	5.8
ER-13	5.9
ER-14	5.9

## MAPPING OF THE 2014-15 STANDARDS AND 2018-19 STANDARDS AND ELEMENTS SORTED BY THE 2018-19 ELEMENTS

2018-19 ELEMENT	2014-15 STANDARD
1.1	IS-1
1.2	IS-5 and FA-8
1.3	FA-13 and FA-14
1.4	ER-9 and ER-10
1.5	IS-4
1.6	IS-3

2018-19 ELEMENT	2014-15 STANDARD
2.1	IS-7
2.2	IS-10
2.3	IS-8 and IS-9
2.4	IS-11
2.5	ED-39 and ED-40
2.6	ED-41

2018-19 ELEMENT	2014-15 STANDARD
3.1	ER-8
3.2	IS-13 and IS-14
3.3	IS-16 and MS-8
3.4	MS-31
3.5	MS-31-A
3.6	MS-32

2018-19 ELEMENT	2014-15 STANDARD
4.1	FA-2
4.2	FA-5
4.3	FA-7 and FA-9
4.4	FA-10
4.5	ED-30, FA-4, FA-11
4.6	FA-12

2018-19 ELEMENT	2014-15 STANDARD
5.1	ER-2
5.2	ED-36
5.3	ER-3
5.4	ER-4
5.5	ER-6
5.6	ER-7
5.7	ER-5
5.8	ER-11 and ER-12
5.9	ER-13 and ER-14
5.10	MS-12
5.11	MS-37 and ER-7
5.12	ED-9, ER-1, ER-9

2018-19 ELEMENT	2014-15 STANDARD
6.1	ED-1-A and ED-3
6.2	ED-2
6.3	ED-5-A
6.4	ED-16
6.5	ED-18
6.6	IS-14-A
6.7	IS-12
6.8	ED-4

2018-19 ELEMENT	2014-15 STANDARD
7.1	ED-10 and ED-11
7.2	ED-10, ED-13, ED-14, ED-15
7.3	ED-12 and ED-17-A
7.4	ED-6
7.5	ED-20
7.6	IS-16, ED-21, ED-22
7.7	ED-23
7.8	ED-19
7.9	ED-19-A

2018-19 ELEMENT		2014-15 STANDARD
8.1		ED-33
8.2		ED-1
8.3		ED-34, ED-35, ED-37
8.4		ED-46
8.5		ED-47
8.6		ED-2
8.7		ED-8
8.8		ED-38

2018-19 ELEMENT		2014-15 STANDARD
9.1		ED-24
9.2		ED-25
9.3		ED-25-A
9.4		ED-26, ED-27, ED-28
9.5		ED-32
9.6		ED-29
9.7		ED-31
9.8		ED-30
9.9		ED-42 and MS-34

2018-19 ELEMENT		2014-15 STANDARD
10.1		MS-1 and MS-2
10.2		MS-4 and MS-7
10.3		MS-3, MS-11, MS-33, FA-6
10.4		MS-5, MS-6
10.5		MS-9
10.6		MS-10
10.7		MS-13, MS-14, MS-15
10.8		MS-16, MS-17
10.9		ED-43

2018-19 ELEMENT		2014-15 STANDARD
11.1		MS-18
11.2		MS-19 and FA-6
11.3		MS-20
11.4		MS-22
11.5		MS-35
11.6		MS-36

2018-19 ELEMENT		2014-15 STANDARD
12.1		MS-23 and MS-24
12.2		MS-25
12.3		MS-26
12.4		MS-27
12.5		MS-27-A
12.6		MS-28
12.7		MS-29
12.8		MS-30