Review and Revision of the MD Program Curriculum

Policy and Procedures

Roles and Responsibilities

Policy Contact	Assistant Dean for Curriculum, CCC Chair
Responsible	CCC, OME
Accountable	PCC, CYC, LINCC, ECRC, Assessment Working Group
Consulted	OME, OSR, MECQI, Pre-clerkship and Clerkship Directors, Associated Faculty, Medical Students
Informed	Dean, Vice Dean for Academic Affairs, Senior Associate Dean for Undergraduate Medical Education, Course and Clerkship Faculty, Residents, and Medical Students

Scope and Purpose

The policy is designed to define a formal cycle and multi-layered approach to the review and subsequent revision of the MD program curriculum. The policy and related procedures provide a framework for the Curriculum Coordinating Committee (CCC) to conduct a comprehensive review of the entire MD curriculum, including both continuous and phase reviews of all courses and core clerkships, and to comply with the requirements and intent of LCME Element 8.3 Curricular Design, Review, Revision/Content Monitoring:

The faculty of a medical school, through the faculty committee responsible for the medical curriculum, 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 responsible committee.

Additionally, the curriculum review process defined by this policy and related procedures provides a mechanism for quality assurance in required courses and clerkships, identifies opportunities for continuous quality improvement, and informs substantive changes at the course or program level.

The scope of the policy includes review and consideration of the following LCME Elements (Addendum 1):

Pre-clerkship courses - 3.5, 3.6, 4.1, 4.5, 5.8, 6.1, 6.3, 6.5, 7.1, 7.2, 7.3, 7.4, 7.5, 7.6, 7.7, 7.8, 7.9, 8.2, 8.4, 8.5, 8.8, 9.4, 9.5, 9.6, 9.7, 9.8, and 10.9

Core Clerkships - 1.4, 3.1, 3.5, 3.6, 4.1, 4.5, 5.5, 5.6, 5.11, 6.1, 6.2, 6.4, 6.5, 7.1, 7.2, 7.3, 7.4, 7.5, 7.6, 7.7, 7.8, 7.9, 8.2, 8.4, 8.5, 8.6, 8.7, 8.8, 9.1, 9.2, 9.3, 9.4, 9.5, 9.6, 9.7, 9.8, and 10.9

Policy Statement

At a minimum, the faculty of the School of Medicine will complete a comprehensive review of the MD curriculum every 8 years. The faculty has the sole authority for approval of the curriculum and any substantive changes resulting from established curriculum review and evaluation processes.

The comprehensive review process will be comprised of several components, including:

- On-going annual reviews of student evaluations and other internal and external data (e.g., GQ, Y2Q, MMT) for every pre-clerkship course and required clerkship by the Curriculum Coordinating Committee (CCC), Pre-clerkship Curriculum Committee (PCC), Clinical years Committee (CYC), Longitudinal Integration of Curriculum Committee (LINCC), and senior administrative staff in the Office of Medical Education.
- Annual review and certification by the CCC that each graduating cohort achieved the competencies identified in the medical education program objectives.
- Review of curricular phases (including a triennial review of each pre-clerkship course and required clerkships completed at three-year intervals and involving a broad range of MD program stakeholders (Course/Clerkship Directors, faculty, and medical students).
- Evaluation of the curriculum as a whole through review of medical education program objectives and related competencies in the final year of each phase review (Years 4 and 7).
- CCC will host a faculty retreat to address any major revisions to the curriculum model, focus, philosophy, course sequencing, the breadth and depth of content, significant content changes, program delivery, and other considerations during Year 8.

Major revisions to the philosophy or model of the curriculum will only be made at the end of a complete 8-year review cycle if findings from the above phase reviews, student outcomes, or significant changes in the profession necessitate major substantive change(s) to ensure that the graduating students meet all medical education program objectives and are well prepared for residency and successful careers in medicine.

Essential changes identified through the annual review of course/clerkship data, intensive phase reviews, and assessment data can be proposed by the appropriate curriculum subcommittee and implemented following approval by the CCC.

The results from each review cycle components, its phases, and the results of the comprehensive review of the curriculum will be shared with appropriate faculty stakeholder groups (including the SOM Council) and other individuals/groups who are identified in the 'roles and responsibilities' section of this policy.

This comprehensive review cycle will provide a framework for the focused evaluation of all curricular program components including, but not limited to, the achievement of medical education program objectives, competencies, sequencing of content, the horizontal and vertical integration of content, standards of achievement, technical standards, assessment, policies and procedures, and program outcomes.

Procedures

Annual Review of Medical Education Program Objectives and Certification of Graduating Cohort (CCC)

1. The CCC will determine and certify the achievement of the medical education program objectives for each graduating class.

2. The CCC will consider all available assessment and outcomes data when making its determination.
3. If there are significant issues identified when reviewing the data, a review of specific medical education program objectives can be referred to the appropriate curriculum subcommittees and the Office of Medical Education. The curriculum subcommittees will review the data, the specific medical education program objectives, consult with the Office of Medical Education and make a recommendation for changes to the program objectives when appropriate.

Annual Review of Student Feedback from Pre-clerkship Courses and Core Clerkships (CCC, PCC, and CYC)

1. The PCC and the CYC will review the end-of-course evaluations completed by medical students.
2. Any areas of concern will be examined by course and clerkship leadership in consultation with the respective subcommittee to determine an appropriate action plan to address any areas of concern.
3. All results from the review will be reported to the CCC and action plans will be shared with the Medical Education Continuous Quality Improvement Committee (MECQI) and approved by the CCC.
4. The appropriate subcommittee will monitor any action plans and reports of progress toward established goals and report its findings to the CCC.

Triennial Reviews of Pre-clerkship courses and Core Clerkships by appointed Curriculum Review Committees (CRC)

1. Each pre-clerkship course and core clerkship will be reviewed at least once every three years by a Curriculum Review Committee (CRC) appointed by the Chairs of the Pre-clerkship and Clinical Years Committees. This review will include but not be limited to:
    a. Appropriateness of content placement and assessment of curriculum map
    b. Appropriateness of instructional formats and methods of assessment
    c. How goals and objectives of each course are linked to the medical education program objectives
    d. Whether goals and objectives of course and core clerkships are being met
2. The CRC committee should reflect the breadth and depth of expertise and perspectives to ensure the maintenance of course/clerkship quality and to provide meaningful recommendations for improvements when needed. The CRC will also include student representation.
3. The Course and Clerkship Directors, sections leaders, and other faculty designated by those individuals will complete the appropriate review guide (Course Review Questionnaire or CoRQ and Clerkship Review Questionnaire or CleRQ) for submission and review by the CRC.
4. Course and Clerkship Directors must adhere to the process timelines delineated for the submission, review, and follow-up in the respective review guides.
5. The CCC must approve the final report from the CRC before the review cycle for the course or clerkship will be closed.
6. If significant issues are identified in a course or clerkship during the review, a focused review can be conducted in the timeframe specified and recommended by the CRC, with the approval of the CCC.

Review of Curricular Phases by CCC

The PCC, the CYC, and the LINCC will perform a review of pre-clerkship and clinical phases of the curriculum in the fourth and seventh years of the curriculum review cycle. This review will include but will not be limited to:

a. Appropriateness of content placement in the phases of the curriculum
b. Appropriateness of instructional formats and methods of assessment
c. Vertical and horizontal integration
d. Review of outcome measures and assessment of how the educational program phases are performing to help students achieve the medical education program objectives

The results of the phase reviews must be presented to and approved by the CCC prior to any changes being made in a specific curricular phase. The results of the phase reviews completed during the curriculum review cycle will be made available to the CCC for the review of the entire curriculum in year 8 of the review cycle.

Comprehensive Curriculum Review by CCC

CCC will perform a review of the entire curriculum every seventh year of this cycle. This review will include but will not be limited to:

a. Appropriateness of content placement in the phases of the curriculum
b. Appropriateness of instructional formats and methods of assessment
c. Vertical and horizontal integration
d. Review of outcome measures and assessment of how the educational program phases are performing to help students achieve the medical education program objectives

The CCC will conduct a curriculum review retreat with all its members in attendance, and other invited faculty members to contribute to the work of the group and/or provide expertise for anticipated changes identified in the phase reviews in Years 4 and 7. The CCC will also be provided with the results of the AAMC Graduation Questionnaire, Year 2 Questionnaire, Matriculating Student Questionnaire, Resident Readiness Report, USMLE examination scores, NBME examination scores, end of course and end of clerkship evaluations, grade distribution for all course and clerkships, specific programs outcomes data, and the results of the biannual medical education survey. Other data source needed to complete the comprehensive review will be provided as needed and/or requested by the CCC in preparation for the review. UME and OME staff will provide administrative support for the CCC prior to, and during the review retreat.

Annual Review of MEPOs in conjunction with Graduating Cohort Outcomes (CCC)							
On-Going Annual Review of Student Performance and Feedback for Pre-clerkship Courses and Core Clerkships (CCC, PCC, CYC)							
Curriculum Review Cycle and On-Going Activities							
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
-Annual review of course and clerkship performance -Triennial course and clerkship reviews	-Annual review of course and clerkship performance -Triennial course and clerkship reviews	-Annual review of course and clerkship performance -Triennial course and clerkship reviews	-Annual review of course and clerkship performance -Triennial course and clerkship reviews -Mid-cycle review of curricular phases	-Annual review of course and clerkship performance -Triennial course and clerkship reviews	-Annual review of course and clerkship performance -Triennial course and clerkship reviews	-Annual review of course and clerkship performance -Triennial course and clerkship reviews -End of cycle review of curricular phases	-Annual review of course and clerkship performance -Triennial course and clerkship reviews -Faculty Retreat (Review of all Curriculum Data, Design, and Delivery Considerations)

Exceptions

The School of Medicine faculty reserves the right to delay or suspend any phase or component of the curriculum review process in the event of an unplanned occurrence which disrupts delivery of the UME curriculum specifically, or the operations of the School of Medicine and the University of Maryland Medical Center, more generally. The delay or suspension of the curriculum review process must be approved by the CCC and should last no longer than 18 months.

Sanctions

There will be no noted sanctions within the School of Medicine for not adhering to the procedures in this policy. Failure to adhere to the policy and/or procedures could result in a finding of Non-Compliance by the LCME when it conducts the next scheduled survey visit and review for Full Accreditation of the SOM.

Definitions

Coherent and coordinated medical 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 student's level of learning and to the achievement of the program's educational objectives. (Element 8.1)

Curricular 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 available, 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)

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. (Elements 6.1, 8.2, 8.3, and 9.1)

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 achievement of all programmatic requirements by the time of medical education program completion. (Standards 6, 8, and 9; Elements 6.1, 8.2, 8.3, 8.4, 8.7, and 9.4)

Pre-clerkship phase: The curriculum year(s) before the start of required core clinical clerkships.

Clerkship phase: The curriculum years which include the required core clinical clerkships and advanced clinical practice.

Forms

Course Review Questionnaire (CoRQ)

Clerkship Review Questionnaire (CleRQ)

Pre-clerkship End of Course Evaluation

End-of-clerkship Evaluation

Related Policies/Procedures

Academic Calendar and Credit Hour Determination

Calculating & Recognizing Student Achievement

Curricular Resources

Examinations

Grading System

Monitoring Student Time

Professionalism

Graduation Requirements

Technical Standards

History

Revised: January 16, 2024

Approved: 2022

Addendum 1

LCME Elements Included in Review of the MD Curriculum

Curriculum Phase: Pre-clerkship (P)	
C	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
C	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.
P, C	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. 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.
P, C	3.6 Student Mistreatment A medical school develops effective written policies that define mistreatment, has effective mechanisms in place for a prompt response to any complaints, and supports educational activities aimed at preventing mistreatment. Mechanisms for reporting mistreatment are understood by medical students, including visiting medical students, and ensure that any violations can be registered and investigated without fear of retaliation.

Curriculum Phase: Pre-clerkship (P) and/or Clerkship (C)	LCME Element
P, C	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.
P, C	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.
C	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 that have adequate numbers and types of patients (e.g., acuity, case mix, age, gender).
C	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.
P, C	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.
C	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.
P	6.3 Self-Directed and Life-Long Learning The faculty of a medical school ensure that the medical curriculum includes self-directed learning experiences that 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; appraisal of the credibility of information sources; and feedback on these skills from faculty and/or staff.
C	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.

Curriculum Phase: Pre-clerkship (P) and/or Clerkship (C)	LCME Element
P, C	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 expand their understanding of medical specialties, and to pursue their individual academic interests.
P, C	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 medical science knowledge and concepts and the methods fundamental to applying them to the health of individuals and populations.
P, C	7.2 Organ Systems/Life Cycle/Prevention/Symptoms/Signs/Differential Diagnosis, Treatment Planning 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, and end-of-life care.
P, C	7.3 Scientific Method/Clinical/Translational Research The faculty of a medical school ensure that the medical curriculum includes instruction in the scientific method 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.
P, C	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.
P, C	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.
P, C	7.6 Structural Competence, Cultural Competence and Health Inequities The faculty of a medical school ensure that the medical curriculum provides opportunities for medical students to learn to recognize and appropriately address biases in themselves, in others, and in the health care delivery process. The medical curriculum includes content regarding the following: ▪ The diverse manner in which people perceive health and illness and respond to various symptoms, diseases, and treatments ▪ The basic principles of culturally and structurally competent health care ▪ The importance of health care disparities and health inequities ▪ The impact of disparities in health care on all populations and approaches to reduce health care inequities The knowledge, skills, and core professional attributes needed to provide effective care in a multidimensional and diverse society

Curriculum Phase: Pre-clerkship (P) and/or Clerkship (C)	LCME Element
P, C	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 require medical students to behave ethically in caring for patients and in relating to patients' families and others involved in patient care.
P, C	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.
P, C	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.
P, C	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, and to review and revise the curriculum. 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.
P, C	8.4 Evaluation of Educational Program Outcomes 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 the quality of the medical education program as a whole. These data are collected during program enrollment and after program completion.
P, C	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.
C	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.
C	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.

Curriculum Phase: Pre-clerkship (P) and/or Clerkship (C)	LCME Element
P, C	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 throughout the curriculum.
C	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.
C	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 the student's level of training, and that the activities supervised are within the scope of practice of the supervising health professional.
P, C	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.
P, C	9.5 Narrative Assessment A medical school ensures that a narrative description of a medical student's performance, including 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.
P, C	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.

Curriculum Phase: Pre-clerkship (P) and/or Clerkship (C)	LCME Element
P, C	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 medical students can measure their progress in learning.
P, C	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.
P, C	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.