STANDARD 8
ELEMENT EVALUATION FORMS

STANDARD 8: CURRICULAR MANAGEMENT, EVALUATION, AND ENHANCEMENT

The faculty of a medical school engages in curricular revision and program evaluation activities to ensure that 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

The faculty of a medical school entrusts authority and responsibility for the medical education program to a duly constituted faculty body, commonly called a curriculum committee. This committee and its subcommittees or other structures that achieve the same functionality, oversee the curriculum as a whole and have responsibility for the overall design, management, integration, evaluation, and enhancement of a coherent and coordinated medical curriculum.

Requirement 8.1-1
The faculty of the medical school entrusts authority and responsibility for the medical education program to a duly constituted faculty body commonly called a curriculum committee.

Analysis of evidence for requirement 8.1-1

There is evidence of a duly constituted faculty body with the authority and responsibility to create and monitor the medical education program. This curricular review body was recently transitioned from the Undergraduate Medical Education Committee to the Curriculum Innovation and Oversight Committee as the medical school implemented the new RIME curriculum. Terms of reference for both committees are provided, and the authority provisions of each committee are clearly stated.

Requirement 8.1-2
This committee and its subcommittees or other structures that achieve the same functionality, oversee the curriculum as a whole and have responsibility for the

i. *overall design*
ii. *management*
iii. *integration*
iv. *evaluation*
v. *enhancement of a coherent and coordinated medical curriculum*

Analysis of evidence for requirement 8.1-2

A clear organization chart is provided. The terms of reference for the above-mentioned committees as well as their sub-committees are provided and outline how they oversee i.-v. above. Review of a selection of minutes from these committees provides evidence of oversight of i.-v. Items within the minutes which demonstrate i.-v. above are highlighted and further described in the DCI.

8.2 USE OF PROGRAM AND LEARNING OBJECTIVES

The faculty of a medical school, through the curriculum committee, ensures that the formally adopted medical education program objectives are used to guide the selection of curriculum content, and to review and revise the curriculum. The learning objectives of each required learning experience are linked to the medical education program objectives.

Requirement 8.2-1

The faculty of the medical school, through the curriculum committee, ensures that the formally adopted medical education program objectives are used to:

i. guide the selection of curriculum content
ii. review and revise the curriculum

Analysis of evidence for requirement 8.2-1

The medical school has the "Big 10" graduation objectives as well as the AFMC EPAs to both *g*uide the selection of curriculum content as well as review and revise the curriculum. These objectives were reviewed regularly in UMEC and the PCC in the Legacy curriculum. In the RIME curriculum, the same objectives apply, and these are reviewed in UMEC and the RIME Pre-Clerkship Committee. Appropriate quotes relating to changes to curriculum were documented in the DCI.

Requirement 8.2-2

The learning objectives of each required learning experience are linked to the medical education program objectives.

Analysis of evidence for requirement 8.2-2

In the Legacy curriculum, the curriculum was reviewed by UMEC and the PCC to ensure that the content was in line with the objectives.

Within RIME, all new curricular content is additionally scrutinized by the Curriculum Innovation and Oversight Committee to ensure that the objectives and content appropriately align with these principles and objectives. Ultimate approval of large curricular changes then moves to UMEC for further review, discussion and approval.

8.3 CURRICULAR DESIGN, REVIEW, REVISION/CONTENT MONITORING

The faculty of a medical school is 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 learning experience, and instructional and assessment methods appropriate for the achievement of those objectives.

The curriculum committee oversees content and content sequencing, ongoing review and updating of content, and evaluation of required learning experiences, and teacher quality.

The medical education program objectives, learning objectives, content, and instructional and assessment methods are subject to ongoing monitoring, review, and revision by the curriculum committee.

Requirement 8.3-1

The faculty of the medical school is 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 learning experience, and instructional and assessment methods appropriate for the achievement of those objectives.

Analysis of evidence for requirement 8.3-1

In the Legacy curriculum, there was a well-established oversight structure. Courses were led by groups of content experts and educators who oversaw the organization and scheduling of the educational program and established objectives and evaluations for learning events. Instructional methods were planned by the individual course committees and reviewed annually by the Pre-Clerkship Committee. Assessment methods were developed by the course leaders and were reviewed at Student Evaluation Committee, chaired by the Assistant Dean, Evaluations and Research.

A similar structure exists for the clerkship, which has not changed with the initiation of the RIME curriculum. Clerkship rotations are led by content and education experts responsible for the rotation planning, educational methods and development and maintenance of the rotation objectives. Assessment methods are developed and reviewed by the clerkship leaders and approved of by the Student Evaluation committee.

Course and Clerkship leaders are responsible to the Pre-Clerkship and Clerkship Committees, respectively. A detailed annual review of each course and clerkship is completed, presented, and discussed at the relevant committee. These committees are chaired by the Assistant Dean (pre-clerkship/clerkship) who provides updates to UMEC on the functioning of the courses and clerkship at each meeting, with a detailed report provided annually. These multiple levels of oversight allow for input from both content and educational leaders; final authority for management of the curriculum rested with UMEC.

In the RIME curriculum there is further support for curricular development, review and management in both the pre-clerkship and clerkship through the Curriculum Innovation and Oversight Committee; this committee is chaired by the Assistant Dean, Program Evaluation and reports to UMEC, so that the ultimate responsibility for curriculum will continue to rest with UMEC. Changes proposed within the pre-clerkship or clerkship are discussed at the relevant committee for refinement; these proposals are then presented to Curriculum Innovation and Oversight Committee for approval. Minor changes are then implemented; major changes will require UMEC approval.

In all situations, any change to the program's overall design or structure or the course load must be approved by the University.

Requirement 8.3-2

The curriculum committee oversees:

- *i. content and content sequencing*
- *ii. ongoing review and updating of content*

iii. evaluation of required learning experiences
iv. teacher quality

Analysis of evidence for requirement 8.3-2

In the Legacy curriculum, Course Committees were responsible for the consideration of the content to be included in each course, and the order in which topics were presented. Each course was required to complete a detailed evaluation of the course on an annual basis using feedback from both students and teachers and evaluation data, with the course report being presented by the course chair to the Pre-Clerkship Committee for review and approval. Course chairs would also meet directly with the Assistant Dean, Pre-clerkship to discuss the report content. Feedback was collected from students at the end of each learning event and at the end of each course; feedback was collected from all involved course teachers at the end of each course iteration. This allowed for the evaluation of all learning experiences and each course as a whole. The feedback on student perceived teacher quality was determined through the collection of the student data. The Assistant Dean, Pre-Clerkship, provided an update to UMEC at each meeting, with a more detailed report provided annually. As required, poorly performing teachers would be given feedback with the opportunity for improvement; if an improvement was not seen, those teachers would not be invited back to teach in future years. Serious teacher evaluation concerns were addressed in a timely and immediate manner.

In RIME, this process structure has changed significantly. The RIME development process included a very specific intent to provide a spiral curriculum where content is presented sequentially, with clinical presentations represented multiple times; with the depth and complexity increased with each subsequent clinical presentation exposure. The content sequencing reflects this interleaving of subject areas to promote long-term learning and simulate the varied nature of clinical presentations seen by a generalist physician. This avoids the previous constraints of the department-based sequential courses in the Legacy curriculum and is one of the pedagogical strengths of RIME.

The ongoing review and updating of content will be achieved in RIME by targeted surveys of groups of students (rather than the entire class at each time) to increase response rates and to achieve a more balanced input from student feedback. This survey feedback is enhanced by focus groups conducted by the Assistant Dean, Program Evaluation. The Assistant Dean, Program Evaluation, is responsible for reviewing all student feedback and reviewing this with the Curriculum Innovation and Oversight Committee (CIOC). This committee will advise both the RIME Pre-clerkship Committee and UMEC on issues related to curriculum content updates. This student data will also inform the RIME Pre-Clerkship Committee (RPCC) about individual learning events that may require improvement.

In the RIME pre-clerkship curriculum, there is significantly more direct control over individual teachers, as the cadre of teachers in the pre-clerkship is much smaller than in the Legacy curriculum. This allows for more directed opportunities for feedback to individual teachers and opportunities for targeted faculty development; the proportion of teachers accessing these faculty development opportunities is high, as all teachers have been hired into their roles due to their commitment to teaching and personal improvement in that realm.

In the clerkship, the departmental clerkship committees are responsible for providing the rotation structure, including the duration and location of clerkship clinical experiences. This provides the best opportunity for clerks to experience the clinical presentations relevant to that clerkship by structuring the rotations to mimic the work of a practitioner in that clinical area. Students are asked to provide feedback at the end of each rotation and are invited to provide feedback directly on individual preceptors. This feedback is reviewed by the clerkship leaders and the Assistant Dean, Clerkship. The clerkship director and Assistant Dean, Clerkship, meet annually to discuss the feedback and plan for changes in the clerkship. Each clerkship director also presents an annual report to the Clerkship Committee for further review and discussion. The Assistant Dean then reports to UMEC at each meeting and in more detail annually to inform UMEC about ongoing changes in the clerkship. Poorly performing teachers identified through student feedback will meet with the Clerkship Director for feedback on performance; if further negative experiences are reported, the teacher will be removed from clerkship teaching duties. Depending on the nature of the poor performance, a review may occur with the Assistant Dean, Clerkship, the Associate Dean and/or the relevant Department chair.

As described above, the Curriculum Innovation and Oversight Committee will provide a further layer of support to the process of the ongoing review and updating of content.

Requirement 8.3-3

The medical education program objectives, learning objectives, content, and instructional and assessment methods are subject to ongoing monitoring, review, and revision by the curriculum committee.

Analysis of evidence for requirement 8.3-3

As described in the above requirements, students in the Legacy curriculum, the RIME curriculum and the clerkship are surveyed regularly for input on the curriculum and assessments in the MD program. This feedback is provided to the relevant Assistant Dean and the course/clerkship leaders. The data are reviewed and discussed to make plans for required changes through the relevant committees. These changes are reported to UMEC for approval on a regular basis. The Curriculum Innovation and Oversight Committee will support this process for curricular content; the Student Evaluation Committee will continue to support the process for evaluation maintenance and development.

8.4 EVALUATION OF 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 the 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.

Requirement 8.4-1
The 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 the medical education program objectives.

Analysis of evidence for requirement 8.4-1

Data are collected throughout the pre-clerkship and clerkship and reviewed by the Assistant and Associate Deans, as well as the UME management team. These data include results from all examinations, EPA completion rates, results from all mandatory learning experiences, feedback from residency program directors after graduation, as well as MCCQE results and observed trends. The results of all the above are used as a mechanism to potentially modify experiences or, in the setting of the MCCQE, tailor the preparation course that is offered, to ensure that trainee success is paramount in curricular modification.

The information provided in the above outcome measures informs the UME program leadership of the extent by which the medical students are achieving the medical education program objectives, and the potential need for future curricular modification.

Requirement 8.4-2
The medical school collects and uses a variety of outcome data, including national norms of accomplishment, to enhance the quality of the medical education program as a whole.

Analysis of evidence for requirement 8.4-2

A. Data that are collected and viewed by the Assistant and Associate Deans, as well as the management team includes the following: student advancement and graduation rates, student responses on the AFMC GQ, specialty choices of graduates, feedback on residency performance of graduates and MCCQE Part 1. Comparison to national norms for the AFMC GQ, as well as the MCCQE data is reviewed on a yearly basis.
B. MCCQE data has been studied in detail over the years and initiatives have been put in place to address the results, which have historically been below national averages. The SUCCESS (Supplemental UME Course for Competence in Educational Skills and Strategies) program was established and an improvement in scores, often surpassing the national levels, has been achieved.

Requirement 8.4-3
These data are collected during program enrollment and after program completion.

Analysis of evidence for requirement 8.4-3

Specific data collected after program completion include the results of MCCQE Part 1, information regarding specialty choices, as well as feedback on residency performance of graduates.

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 required learning experiences, teachers, faculty members, and other relevant aspects of the medical education program.

Requirement 8.5-1

In evaluating medical education program quality, the medical school has formal processes in place to collect and consider medical student evaluations of their:

i. required learning experiences
ii. teachers (other than faculty members)
iii. faculty members
iv. other relevant aspects of the medical education program

Analysis of evidence for requirement 8.5-1

The quality of the medical education program is evaluated for all mandatory and several optional learning experiences. Collected data regarding the learning experiences are reviewed at the UME Management Committee and the Pre-Clerkship and Clerkship Committees. Red flags are identified and actioned on, and key strengths and weaknesses are discussed with a growth mindset. Course and Clerkship leads are involved in report review and in implementing changes, when necessary.

Feedback is collected both after specific learning experiences, as well as yearly.

Yearly feedback addresses whether students felt that their exposure to certain topics (Indigenous health, anatomy, disease prevention/health promotion, end of life care, inter-professionalism, and physician wellness and self-care) was inadequate, appropriate, or excessive. Yearly feedback also addresses whether students have experienced various forms of mistreatment based on any of the following categories: race or ethnicity, gender, gender identity, religion, physical appearance, other, and where the mistreatment was from (i.e. students, residents, staff, patients or standardized patients, others). Comments about the strengths and weaknesses of the program are explored through early surveys. Readiness for clerkship is explored after the second year, and several dimensions of readiness are explored at that point. At the end of the final year, students are surveyed again, and in addition to several previous questions, students are asked how well they think the training program has prepared them for each of the Big 10 graduation educational objectives.

Feedback for non-faculty members (residents, allied health care professionals etc.) is collected and distributed in a similar manner as faculty feedback. Resident feedback is distributed to Program leadership (i.e. program directors) for review prior to distribution.

Teacher feedback for small group teaching is provided to small group teachers immediately, with narrative data withheld unless requested by teachers.

Clerkship teacher feedback is provided after a delay with the goal of protecting anonymity. Teachers are provided with their feedback, and copies are distributed to those in leadership roles, such as departmental leads. Comments that are egregious in nature are addressed immediately, protecting the anonymity of the trainees, but addressing serious concerns.

The RIME curriculum has introduced an innovative *intermittent sampling* method of feedback collection whereby a subset of students will be surveyed after each learning experience. The objective is to decrease survey fatigue but continue to allow for ongoing feedback collection.

In the ISA survey over 97% of trainees agreed with the statement: *the medical school provided me with opportunities to evaluate my required learning experiences (e.g., courses, clerkship rotations, longitudinal integrated clerkships).* Over 98% agreed with the statement*: the medical school provided me with opportunities to evaluate my teachers.*

Given that the RIME curriculum was implemented in 2023, the first class to learn through RIME (Class of 2026) was invited to participate in a voluntary ISA-style pre-accreditation survey designed to provide data for program evaluation purposes. Survey results and a report from the Calgary Medical Students Association (Class of 2026) are included as *Supplemental Appendix 8.5-1 B.*

8.6 MONITORING OF REQUIRED PATIENT ENCOUNTERS AND PROCEDURES

A medical school has in place a system with central oversight that monitors, remedies any gaps, and ensures completion of the required patient encounters, clinical conditions, skills and procedures to be performed by all medical students.

Requirement 8.6-1
The medical school has in place a system with central oversight that monitors the required patient encounters, clinical conditions, skills, and procedures to be performed by all medical students.

Analysis of evidence for requirement 8.6-1

The system with central oversight is a mandatory online logbook reporting of clinical presentations and procedures/tasks for each clerkship rotation. If a real patient was not encountered, alternatives to learning include simulation or case discussion during the clerkship rotation. Each clerkship rotation also has protected academic time to learn about clinical presentations through self-study or preceptor-facilitated sessions. Several clerkships also host simulations to further expose students to clinical presentations, skills, and procedures.

Requirement 8.6-2
The medical school has in place a system with central oversight that remedies any gaps in the required patient encounters, clinical conditions, skills, and procedures to be performed by all medical students.

Analysis of evidence for requirement 8.6-2

As above, each clerkship rotation has mandatory online logbook reporting of clinical presentations and procedures/tasks. If there is an exposure gap, the student must discuss those clinical presentations as substitute exposure. In addition, during the clerkship year there is a longitudinal course called "Comprehensive Clinical Skills Curriculum for Clerkship" as a "safety net" to ensure that all students have been exposed to clinical conditions, skills, and procedures considered critical for undifferentiated physicians graduating from the MD program. This longitudinal course is reviewed and revised yearly based on several requirements including accreditation requirements, student and faculty feedback, performance on formative and summative evaluations, clerkship online logbook reporting, and changing requirements for the medical school.

Requirement 8.6-3
The medical school has in place a system with central oversight that ensures completion of the required patient encounters, clinical conditions, skills, and procedures to be performed by all medical students.

Analysis of evidence for requirement 8.6-3

Students who have not completed their online logbook for a given clerkship rotation are contacted by the UME program coordinator for that clerkship rotation to alert them of the deficiency. This notice includes a reminder that the student will not be able to complete the clerkship final examination until the logbook is complete. The Clerkship Director or Assistant Dean may need to contact the student with a subsequent reminder or inquiry, as needed.

The online logbook has the students indicate whether clinical presentations were "discussed", "observed", "simulated", or "participated". Each clinical presentation has a pre-specified level of completion. For example, abdominal pain in emergency medicine clerkship cannot be "discussed" or "observed", it needs to be "simulated" and "participated".

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 required learning experience to ensure that all medical students achieve the same learning objectives.

Requirement 8.7-1
The medical school ensures that the medical curriculum includes comparable educational experiences across all locations within a given required learning experience to ensure that all medical students achieve the same learning objectives.

Analysis of evidence for requirement 8.7-1

In pre-clerkship, there is only one campus, therefore all learning experiences and objectives are the same.

In clerkship, students attend clinical rotations in more than one location. The school uses multiple ways to ensure educational experiences are comparable across all locations:
- Clear learning objectives for all rotations, regardless of location
- Assigning a clerkship director to each mandatory clerkship rotation, who monitors and ensures that educational experiences across all locations are comparable
- Regularly disseminating clerkship objectives to clinical supervisors
- Re-sending a link to the program's "Big 10 graduation objectives" to all preceptors at the time of ITER completion
- Re-sending a link to the relevant course/clerkship objectives to all preceptors at the time of ITER completion
- Asking preceptors to express their awareness of the "Big 10 graduation objectives" and relevant course/clerkship objectives on ITERs
- Monitoring comparability across sites by the Manager of Academic Technologies, the Assistant Dean-Clerkship, Assistant Dean-Program Evaluation and the UME Associate Dean.

Requirement 8.7-2
The medical school ensures that the medical curriculum includes equivalent methods of assessment across all locations within a given required learning experience to ensure that all medical students achieve the same learning objectives.

Analysis of evidence for requirement 8.7-2

The program has only one campus, and most student assessments are completed centrally on this campus. Multiple choice questions and OSCE exams are administered at Foothills Medical Centre.

Assessments that are completed at more than one location are:
- ITERs as part of mandatory clinical rotations
- EPAs that are completed in workplace environment
- Projects that are completed as part of clinical rotations

There is an Assistant Dean of Evaluations and Research, and with the support from the Student Evaluation Committee, this person ensures there are equivalent assessment methods across all locations.

All the ITER and EPA forms used for each location in clerkship are the same, regardless of where the clerkship rotation is physically completed.

8.8 MONITORING TIME SPENT IN EDUCATIONAL AND CLINICAL ACTIVITIES

The curriculum committee and the program's administration and leadership implement 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 required clinical learning experiences.

Requirement 8.8-1

The curriculum committee and the program's administration and leadership implement 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 required clinical learning experiences.

Analysis of evidence for requirement 8.8-1

The Pre-Clerkship Student Handbook and Clerkship Work Hours Policy (Appendices 8.1-1 A1 and A2) are circulated to students and include information regarding the time spent in educational and clinical activities.

The Pre-Clerkship Student Handbook further provides links to the Student Timetable which provides an overview of the times that students are expected to participate in clinical and educational activities. There is also a curriculum map which shows how all the courses fit together in the entire medical school curriculum.

The Clerkship Work Hours Policy clearly outlines the work hours expected of clerks. This document was approved by the Undergraduate Medical Education Committee on February 1, 2019.

ISA survey results indicate that, when asked the question *"I am informed of the amount of time that the medical education program expects me to spend in required activities"* the answer was 81.4%, 76.3% and 89.3% of the Class of 2023, 2024, and 2025 respectively responded positively regarding having such information. When asked if they were: "*disappointed by the number of times I was required by a supervisor/teacher to spend more time in required activities than expected by the medical education program" it was noted that 31.9%, 33.3% and 20.1%* of the Class of 2023, 2024, and 2025 expressed disappointment.

Although there are clear policies in place, it is perceived by the medical students that pre-clerkship and clerkship scheduled time was not always respected; educational and clinical activities may go overtime. Examples include rotations like surgery, scheduling after-hour content review and information sessions, and running overtime for lectures or bedside teaching.