

**Scientific Foundations Committee  
Meeting**

December 2, 2011  
7:30 – 9:00 am, B-646 Mayo

**In attendance:** S Allen, L Anderson, M Becker, A Belzowski, B Clarke, E Coleman, A Edvenson, G Filice, S Katz, R Kempainen, K Lee, S Levine, A Minenko, C Niewoehner, J Norrander, D Powell, M Sanders, P Southern, K Watson, M Woods (attended CEC)

**Absent:** A Blaes, G Giesler, A Johns, T Mackenzie, M Sanders, L Schimmenti, D Wangensteen, T Weinhaus, K Wickman

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**Action Items: for December 2<sup>nd</sup> meeting** (details of discussion follow)

1. Regarding the LCME mandate for Narrative Summary Students' Performance: Policy and Procedures

Through discussion it was determined the narrative non-cognitive statements would be required only in courses with small groups of 10 or fewer students that meet 5 or more times with the same instructor. Narrative feedback will be implemented for Spring semester for FCT and ECM, as the two venues currently in place, consistent with the Policy and the parameters.

2. TC/DU Governance and Curriculum Oversight

The Governance and Curriculum Oversight document was developed by the Education Steering Committee and reviewed by EC and the course committees (SFC, CEC, and CUMED). Additional revisions were made, and the Governance and Oversight plan was endorsed by the Education Council. This document spells out the mechanisms by which oversight and curriculum design will occur. Members were asked to become familiar with its content.

Faculty and students must understand the process for making changes to different aspects of the Medical School's curriculum. Dr. Watson and Dr. Woods will produce some test cases showing how this process works before the LCME visit.

3. Mid-Course and Clerkship Evaluation and Feedback

In regard to the LCME Standard ED-31, requiring Years 1-4: Mid Course and Clerkship Feedback: All courses have mechanisms for mid-course evaluation of students. However, it is not clear that all courses alert students who are not performing well and direct them toward assistance in a timely way to help them improve by the end of the course. Course directors were asked to think about steps to do this. Dr. Watson will ask Dr. Marilyn Becker to provide an outline concerning whom to contact (Dr. Becker or faculty advisors)

**Meeting Minutes --December 2, 2011**

**November 4, 2011 Scientific Foundations Committee Minutes were reviewed and approved.**

Through discussion at the November meeting it was determined that meaningful narrative, non-cognitive student evaluation could be provided in courses with small groups of 10 or fewer students that meet 5 or more times with the same instructor. Dr. Woods suggested implementing narrative feedback for FCT and ECM courses for Spring semester are the two courses meeting these parameters.

Dr. Katz asked Dr. Sharon Allen, as an ECM Course Director, if the SCF decision to implement providing narrative summaries for the Spring 2012 semester was acceptable. Dr. Allen agreed that similar processes are already in place for ECM and can be adapted to meet the ED Standard. Dr. Katz added that the structure of the FCT cases also fit well with the required narrative summary of individual student performance. It was agreed "non-cognitive narrative" statements will be implemented in both courses for Spring, 2011-12.

## **Annual Course Report (ACR)**

### **Human Disease I**

Dr. Robert Kempainen reported on HD-1. This is the 2<sup>nd</sup> year of the course and his 2<sup>nd</sup> year as Course Director. Changes made for the 2011 Fall semester include:

1. Substantial revision of written examination
2. New formative quizzes for the cardiology small group
3. New respiratory group case – complex case in groups of 6 answering a series of questions (in a step-wise fashion)
4. 2<sup>nd</sup> ID small group added

Students' grades are determined by scores on the written final, pathology lab practical and performance in the Respiratory Group Case. CourseEval results indicate that overall students understand the objectives of the course. The ratings increased from 3.2 approval rate for 2010 to 4.1 approval for 2011

#### Strengths:

1. Respiratory clinical case received strong positive feedback from students as a powerful learning tool.
2. Feedback from small group for ID was strongly positive
3. Generally the small groups across all aspects of HD-1 are working well.
4. More cohesiveness and integration across all disciplines being taught in the course.
5. Dr. Powell reported Pathology is moving ahead to make labs more interactive and to match small group members with the same lab instructor as often as possible. This is a priority for improvement for AY2012-13. Other changes include more effective use of residents, and having students spend more time in the lab reviewing slides and gross specimens. Independent study exercises are available for students to work on their own to examine cases.
6. Added self assessment opportunities
7. Designed some labs and experiences with the same faculty matched up with the same student groups to make the course more cohesive.

#### Concerns:

1. The examination needs further revisions to achieve a balance in testing on the material being taught. The exam was too long. Approximately 20% of the questions on final exam are designed to integrate the content of the course,
2. Formative quiz practice questions may not be indicative of questions on the exam and may not have reflected the difficulty of the exam. Or because students weren't graded on formative quizzes, they didn't feel there was value in performing well.
3. Student evaluation of non-graded self-assessment did improve from 2.0 to 3.3, but more work is needed in this area.
4. New course coordinator each year has caused delays with materials, Moodle postings and other issues, and in 2012-13 there will also be a new coordinator
5. Re the ID thread: Students need to understand how it fits with the big picture for 2<sup>nd</sup> yr. More attention to bringing in microbiology in as part of the big picture at the end of 1<sup>st</sup> yr would give students a better start in HD-1 in 2<sup>nd</sup> yr. Emphasizing this from the beginning of Spring Semester of Yr-1 will help students understand that they are not done with microbiology and that the curriculum is cumulative.
6. Feedback from students indicates need for improvement of the web site functions to fit the complexity of the course. Dr. Kempainen asked if OME can recommend "best practices" for web development. It was reported that "Black Bag" will replace Moodle and a demonstration will be provided at the January, 2012 SFC/CEC Meeting.

#### Changes for 2012-1013

1. In addition to improving the final exam, changes will include graded summative quizzes as a mid-term measure for how students are progressing. Students often use quizzes to determine what level of detail faculty is teaching to and to help them in preparing for the final exam.

2. In the future 70% of summative quiz grades, performance on the Respiratory Group Case, the Pathology lab practical and the final exam may be an improved method for determining the HD-1 grades.

Suggestions from SFC members included:

- Adding at least 1 summative quiz at mid-semester to lessen the high stakes nature of exam
- changes to the format of exam questions, number of questions, length/complexity of cases
- Use a separate evaluative written assignment to provide assessments. Respiratory Group Cases may be a place for an evaluative written assignment
- Short essays as another method for learning
- ECM in Year 1 includes teaching X-ray skills early, should be repeated before HD-1 begins

SFC members recognized that a great deal of work was accomplished by Dr. Kempainen and HD-2 faculty to implement the changes and enhancements in HD-2 for Fall 2011. He was asked “how difficult is it to teach the first course of four Human Disease courses”, Dr. Kempainen noted that it’s the beginning for students to develop a different kind of thinking than in Yr-1. Faculty need to be aware of the differences in skills that are needed, which include:

- more reflective assignments
- innovative ideas and approaches
- skills in listening to each other
- receiving constant feedback
- self assessing
- thoughts about how to approach ideas (not just the right answer)

Student feedback indicates that they want to learn how to think and how to approach problems; small groups are the most effective opportunity to work closely with a tutor. That setting provides a tutor to

- walk you through a case
- determine where, what and how much students have learned
- what and where are students ready for next
- what will be next
- how is that going to improve learning
- how will the new information be used to learn the next level of knowledge

### **Information:**

#### **TC/DU Governance and Curriculum Oversight**

The Governance and Curriculum Oversight document was developed by the Education Steering Committee and reviewed by EC and the course committees (SFC, CEC, CUMED). After additional revisions were made it was endorsed by the Education Council.

A major change is that the EC functions as our curriculum committee. The Curriculum Committee (membership included all course and clerkship directors, i.e. SFC & CEC) no longer exists. This gives more specific voice to SFC, CEC and CUMED (course committees); which are now aligned (see Committee flowchart). The By Laws require Faculty Assembly approval for a name change at the level of the EC and Dr. Wes Miller will make that request at their Spring meeting in May, 2012. The EC continues to have major policy and educational decision functions.

The EC planning committee sets the agenda for EC and now has more input from faculty and has an MS-4 to address the students’ perspective. The governance diagram indicates that the EC may receive input only from the ESC (flow between committees is not indicated as bidirectional). SFC members requested clarification of how communications might flow from course committees to ESC outside of the EC process. These questions were raised at the EC meetings, and the Ed Council decided not to change the flow chart diagram.

SFC members requested more clarification for the role of the Education Steering Committee (ESC) in relation to the Education Council; whether it functions as an executive committee or a screening committee. The ESC

is a standing committee of the EC, appointed by the Dean to address bi-campus considerations. The issues are complex and often need more data and time for consideration; the ESC has provided analysis and recommendations to the EC. These may or may not be accepted and/or may be sent back for additional fact finding. At times, recommendations may be referred to the course committees for added input and vetting. Dr. Watson reported that the Dean's charge to the ESC will require updating and further definition will be provided for course directors and students.

Questions were raised about the composition of EC membership as defined in the By Laws and how it relates to membership of the ESC. Additional questions posed by SFC members related to confusion about the direct linkage to the ESC for course directors. The ESC does include members of the SFC.

This Governance and Curriculum Oversight documents spell out the mechanisms by which oversight and changes in curriculum design will occur. Members were asked to become familiar with them. The need for clarity was evident when the Mock Site Visitors asked faculty and students to describe the process to make changes in the curriculum. They didn't know how and/or the options were too varied. The Mock Site Team determined there were too many confusing pathways

Above all students and faculty need to understand how to make changes in the Medical School's curriculum. Dr. Watson confirmed that a goal in the next months will be for the Education staff to provide test cases illustrating how the process works.

## **Discussion:**

### **Mid Course and Clerkship Evaluation and Feedback**

With regard to the LCME Standard ED-31, requiring Years 1-4: Mid Course and Clerkship Feedback, SFC members focused on how students readily access their assessment history and current standing in a course. Details of current practices were shared and along with suggestions for additions and changes in Years 1 and 2 courses.

Information in the recently completed LCME Database indicates most courses have between 2-4 assessments each, using a range of tools including quizzes, reflective assignments, small group projects, etc. To be able to provide intervention to student early in a course, it is important to determine how skills are assessed, whether students have the opportunity for self-assessment and what form of mid-course feedback is given by faculty, especially to students who are not performing well. These assessments should reflect all the relevant Domains of Competence, including professionalism.

Year 1 courses are using mid-term exams for assessment of knowledge.

Suggestions for assessing professionalism were discussed and include:

- determining in small groups and labs if communication occurs in a professional manner (if inappropriate 1:1 meetings are important)
- setting standards and modeling professional interactions in small groups and labs by both tutors and students (often those out of sync learn professional behaviors from their peers)
- determining if Year 1 and Year 2 students are attending all required activities
- determining if students meet expectations for being prepared for learning in the small groups Dr. Niewoehner noted during the 2010-11 academic year, faculty expectations for use of ILT during HD3 were not communicated clearly. Students were uncertain about their responsibilities for prep for small groups/ labs. Students indicated the following in regard to their preparation: issues of priority (what to learn first and what to focus on) and requirements of other courses

Examples of assessments used by specific courses are reported in Appendix A.

Student SFC members asked for a definition of what is viewed as professionalism in comparison with work place issues. In response Dr. Watson noted that students need to define their own professionalism within the context of the profession itself. It's a self policing process. In the Handbook, there is a Student

Professionalism Code written and reviewed annually by students. The content is routinely revised and updated with new material.

Dr. Watson reported that the Milestone I is a peer assessment of professionalism done during the first semester of Yr-1. Areas addressed are disrespectful behavior, sarcasm, arrogance, non-participation, and showing up late. A discussion is taking place about whether to extend Milestone I into Spring of Year 1, noting it may be useful for students to see their evaluations again in Spring. This would only take place if there is a productive way to use the data. Faculty Advisors feel the experience and data are valuable. Their feedback indicates students who were identified by their peers as outliers took peer feedback about negative behaviors very seriously and made efforts to function differently in Gross Anatomy Lab. It's a start toward placing professionalism upfront as an important competency. Whether it's more beneficial to be matched with their 1<sup>st</sup> set of peers or with a new set, was discussed and requires more debate. Committee members agree hearing the "same or different" information from a different group would have an impact. Course directors noted that professional behavior has an impact on residency selection for graduates.

Course directors suggested assessments include writing assignments. Often standardized multiple-choice exams fail to recognize the reality of practice. Essay or short answer exams are seldom used as assessment tools, because of the added workload in grading. Discussion identified pros/cons of work involved but emphasized that writing allows faculty to see how students are integrating the volume of material across disciplines. The following are examples for how emphasis on writing skills can aid in assessing student progress:

- ability to communicate patient health issues
- ability to write critical health information in reports
- opportunity to judge how students are thinking, quality of what they are thinking
- look at students' fact base
- broader array of factors than a multiple choice question can assess
- provides feedback for specific steps students can take to improve performance
- a method for determining need for mid-course correction
- course evaluation

Ideas for reducing work required for writing assignments were shared; i.e. possible to have other reviewers; other medical schools use peer to peer readers. This has been done in law schools for a long time. Parameters include a criterion based process, use mechanisms to recruit graduates who have a strong performance in the past and develop a budget to pay for quality reviewers. Identifying what is wrong and correcting it, is the most time consuming aspect of written assignments.

Dr. Niewoehner asked course directors to think about what steps they will take to identify students who are not doing well by mid course and how they will alert them in time to improve their performance by the end of the course. If faculty have concerns about a student's professional behavior, they are to contact the faculty advisors. Dr. Watson recommended for February 3<sup>rd</sup> meeting, that the SFC discuss guidelines for referrals (if needed) to students' advisors, because they can see the entire student performance across 4-years.

Dr. Watson asked if it would be helpful to the group to have an outline for when to connect with Dr. Marilyn Becker and when to connect with faculty advisors.

\*Attachment: Appendix A

*Next Meeting: SFC January 6, 2012*