ANNUAL REVIEW FOR REQUIRED COURSES

YEAR AND COURSE: Year 2, SBM CV System

COURSE DIRECTOR(S): Jim Bell, MD

DATE OF REVIEW BY MEC SUBCOMMITTEE: Wednesday Feb 22, 5-6 PM, in Rubin 690 (in the NCCC). Attended by Jim Bell, Ben Colby, Jessie Bay, and Dave Nierenberg

Note: Text in blue reflects the results of our discussion during the review. Text in black reflect material prepared prior to the meeting.

1. OBJECTIVES AND ASSESSMENT
   A. General learning objectives on grid (from course director): Survey of important CV diseases, emphasizing: 1) pathophysiology (understanding mechanisms of CV disease); 2) clinical practice (developing Hx and PE skills for this system); 3) health-care delivery science (outcomes assessment, decision-making); and 4) narrative-based medicine (psychological issues in cardiac patients) All agreed this was an accurate summary of the course goals
   
   B. Detailed learning objectives on grid: please review the document attached: The learning tasks of the course, and how proficiency was assessed, were found to be detailed and helpful.
   
   C. Methods of assessing student proficiency: There is one final exam, plus the need to participate in conference (5 conferences total, 4 of 2 hours, and 1 of 1 hour duration). Students also needed to complete one computer-assisted instruction program in heart sounds, with a self-test program attached. Our group agreed that it would be helpful to add a sixth or seventh conference, have each conference run by the same fellow or attending, and then provide each student with written feedback about his or her performance and proficiency.
   
   C. Coverage of specific topics per LCME requirements:
      Health of populations: epidemiology of CAD is discussed, leading to student interview of patient with CAD, and counseling of that patient
      Basic and ethical principles of clinical and translational research: several lectures discuss basic science and molecular biology in CV disease, while others discuss randomized controlled trials of patients with CV disease
      Recognize and address gender and cultural biases in themselves: Lecture on HTN discusses care level of different ethnic groups; lecture on CAD discusses presentation in women
      Instruction in medical ethics and human values: one case discussed in conference deals with a patient who refuses to stop smoking, and ethical issues related to other aspects of expensive care
   
   D. Ongoing assessment of students’ problem solving, clinical reasoning, decision-making, and communication skills: this is assessed informally during the case discussion conferences. Please see note above about the need to increase time spent in
conference, achieve continuity with the same conference leader, and then be able to provide more detailed narrative feedback to students about this skills.

E. Narrative description of student performance whenever possible: not done currently in this course. See above comment (under 1E) which applies here as well.

2. COURSE PLANNING
   A. % effort of course director: 3.5% effort (or about 70 hours)
   B. How is course planned? Currently planned by course director himself, sometimes with informal discussions with other faculty members
   C. Annual meeting of core faculty? Not at present. The group agreed that it is important to assemble a multispecialty planning group to help plan the course, so that all planning is not done by a single person. Cardiology, cardiac surgery, pathology, genetics, pediatrics, and imaging are all perspectives that would be helpful in this group.
   D. What was new this year? Ongoing efforts to increase time devoted to healthcare delivery science, (e.g. door to balloon time), systems analysis, and quality improvement topics. Also used a new computer-assisted learning program from Univ of Michigan about heart sounds and murmurs.
   E. How are grad students or fellows who help with teaching trained?: cardiology fellows are counseled about how to lead conference groups prior to the course, and are provided with course syllabi. They are hand selected by Dr. Bell, but no formal instruction about teaching is given. This would be very helpful in the future, especially as more fellows will likely be used in future years.
   F. Any faculty development efforts? No

3. COURSE OUTCOMES
   A. Assessment by course director of most recent offering: Jim said that he felt his course this past year had continued to be successful and effective. For next year, he would like to work on: 1) handle ECG material better; 2) figure out best way to provide material currently provided by Dr. Katz about cardiomyopathies and arrhythmias (not well directly at Y2 students); 3) improve presentation of pathology material, with problems about redundant lectures (e.g. 3 lectures about cardiomyopathy), 12 hours being excessive time, and lack of student satisfaction with lead pathology lecturer.
   B. Student scores and comments at end of course: For course offered in Fall 2011, the overall score for the course was 4.09, ranking second out of the first 6 courses this year. Strengths included high scores in the areas of overall satisfaction; usefulness of powerpoint files; ability of course to provide a useful and relevant introduction to this field; integration of material taught in this course with other courses (e.g. OD and Pharm); effectiveness of individual lecturers; overall usefulness of conference groups; and relevance of conference material to what was presented during lectures. Comments suggested strengths included the dedication of the course director; quality of most of the lecturers; organization of the course; clinical correlations presented during the course; the conferences; and integration with other courses.
   C. Student scores/comments on the AAMC GS: not available for this course
   D. Performance on Step 1: Over past 4 years, DMS students have averaged scores of 0.33 SD above the national average in the CV system, ranking this area #4 out of 10 systems reported by the NBME
E. Performance on local exams: appears to be good and stable over past 4 years

4. PEDAGOGY

A. What formats are used? Two computer programs are used, one dealing with chest pain, the second with different auscultation findings

B. % Lecture, lab, conference, PBL, other?
   
   a. Lecture                33.5 h (52%)
   b. Lab (pathology)        8 h (12%)
   c. Measure clinical/physiologic processes with data:    0 h (0 %)
   d. Conference:            9 h (14%)
   e. PBL:                   9 h (14 %)
   f. Patient presentation/panel discussion:             1 h (2 %)
   g. Physical sign/dx session with patients:           0 h (0 %)
   h. Exam:                  4 h (6%)
   i. Total scheduled hours:          64.5 h

C. Y2 themes covered during lectures (more in conference and PBL):
   
   a. Pediatrics: 5 h
   b. Pathology: 4 h
   c. Imaging: 1 h
   d. Improvement (HCDS): 1 h
   e. Neoplasia: 0 h
   f. Nutrition: 1 h (lecture on CV disease, obesity, and relation to diet)
   g. Genetics: 2 h (Moeschler/Marfans, and Katz/Cardiomyopathies)

D. Opportunities for active learning (student assess own learning needs, find-analyze-synthesize new information, assess credibility of information sources, share new info with peers): this happens most often when students prepare on their own for the weekly small group conferences

E. Develop skills of critical judgment based on evidence, skill of medical problem solving: These skills are practiced mostly in the conference and PBL groups

F. Labs where biologic data are observed, measured, analyzed? No

G. Is detailed written feedback to students given? No

5. PLANS FOR SPECIFIC CHANGES/IMPROVEMENTS FOR NEXT YEAR: Based on our review of all issues above, this course continues to be overall excellent in quality, as measured by both student scores and comments, and performance of students on objective exams such as NBME Step 1. However, we did discuss several ways that the course can be improved for next year. Student suggestions for improvement included more time devoted to learning about ECGs; more time devoted to heart sounds and murmurs; better quality of images (pathology) on the final exam; and improved course organization during the course itself (lectures did not seem to progress in an orderly sequence).

Jim is committed to making progress by Fall 2012 in each of these areas below, although progress does not mean that all of these issues will be completely resolved.

   a. Develop a course planning committee, multidisciplinary, with representation from key stakeholders (e.g. cardiology, cardiac surgery, pathology, pharmacology, pediatrics, imaging, etc)
b. Create written narrative formative feedback, most likely from having more conference groups (with continuity of faculty member), and hopefully able to assess their skills at medical problem solving and critical judgment (this already occurs in the PBL groups as well). This feedback may be more helpful to students, and less threatening, if not part of the final grade (e.g. formative, not summative).

c. Decrease hours of lecture slightly, increase more active learning activities; LCME goal appears to be <40% time devoted to lectures

d. Develop at least one hour of curriculum for students to observe, measure, and think about actual clinical or scientific data (e.g. range of METS achievable (range, mean, SD, etc) on treadmill test for male vs female students)

e. Develop Physical Dx clinic for patients with cardiac murmurs, possibly at the VAMC as well so students can be introduced to that center

f. Create new library of digitized images for use on the final exam (path)

g. Approach learning about ECGs in a new way, possibly a different combination of reading the text, using an interactive computer program, and fewer hours of lecture

h. Decide how to reduce time slightly devoted to pathology material, and discuss change of main lecturer

i. Decide how best to cover two hours of lecture currently covered by Dr. Katz, in order to make it more accessible to Y2 medical students

THIS REPORT WILL BE SUBMITTED TO THE MEC FOR APPROVAL.

Approved by the MEC in March 2012.