

Module Review

Pulmonary Module, as of Winter 2011

Course Director: C. Bruce Alexander, M.D.

Co-director: Kevin Leon, M.D.

Course Date: February 7th – March 11th, 2011

Review Date: November 14, 2011

Present:	Laura Cotlin	Lead Reviewer
	Kevin Leon	Course Co-director
	James Jackson	UME Administration
	Mike Belue	UME Administration
	Kristina Panizzi-Woodley	UME Administration

**Absent:	Bruce Alexander	Course Director
	Lisa Schwiebert	Ad hoc Reviewer
	Patrick McCabe	Student Representative

****discussed materials with each individually**

Review Process:

The module review process consists of three parts; the self-study conducted by the course directors with the aid of UME, the review, i.e., the face-to-face meeting between representatives of the pre-clinical sub-committee of the MEC, the student representatives and the course directors (the review committee) and the final part, the report to the Pre-clinical sub-committee and thence to the MEC. The review committee received the self-study material approximately 7 weeks in advance of the meeting. Below is a summary of the face-to-face meeting, highlighting strengths and weaknesses of the course, and outlining areas for improvement. This is followed by the detailed report, which provides the rationale for the recommendations and overall evaluation.

Summary:

Overall the Pulmonary Module is very well received by the students. The success of the module is in large part due to the efforts of the course directors and dedicated faculty. The students appreciated the flow of material and felt that the introductory weeks of normal structure/function of the organ system prepared them very well for understanding the relevant diseases and clinical application. In addition, this is a five-week module, which allows for plenty of time to cover the required material without overextending the students on a daily basis.

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Strengths:

- The module directors and the comprehensive module objectives are viewed as a tremendous asset.
- Dr. Leon's review sessions held regularly throughout the module greatly aided learning and application.
- The small group sessions helped to put information in a clinical context and allowed time for detailed explanations and discussions.
- Having Dr. Johnson cover all aspects of normal physiology was extremely helpful and provided a solid base before proceeding to abnormal processes.
- The case studies and patient simulations were comprehensive and major topics of interest to the students.

Weaknesses:

- Students felt that some of the case studies and pathology labs happened too soon, before students felt like that had a good understanding of the material.
- Students thought that anatomy content on exams could be improved by showing multiple images and clearer perspective.
- The EBM assignment seemed out of place in the module.
- Many students felt that the final exam should not be 60% of the module.
- Some students felt that more information needed to be provided about pneumonia and delineating topics like lung disease, COPD and airway diseases.
- Some felt that it was not clear what textbook, resources were most appropriate.

Recommendations for Improvement:

- Attempt to move pathology labs and simulations a little later in the module, so all students have a chance to review the material and adequately prepare for the sessions.

- Try to identify a common textbook for the Pulmonary system and/or pull material from textbooks previously required in the Fundamentals 1 & 2 modules (such as the medical physiology and pathology textbooks)
- Distribute the assessment values so that the final exam is worth less than the current value at 60%.
- Perhaps provide a summary handout to compare/contrast the diseases, such as COPD, pneumonia, airway/lung conditions.
- Because this is the first module that the students are being asked to identify gross anatomical structures on a computer (compared to a practical on cadavers in Fun-1), it might be a good idea to show a few examples of images so that students will know what to expect.
- Attempt to align pulmonary content with relevant ICM activities during the module.
- Students would like a review of general concepts that were problematic on the first exam, before getting too far into the clinical component of the module.
- Update exams so that all items covered are addressed on exams.

Report of the Pulmonary Review Committee Meeting, November 2010

All six of the self-study areas were reviewed in order.

Module Objectives and Content

- The eight module objectives were clearly stated and addressed all six main SOM objectives and all ACGME Competencies.
- All eight module objectives state what students are expected to learn and seven are above the lowest level (Knowledge) in Bloom's Taxonomy. One objective explicitly addresses evidence-based medicine.
- Under the Step1 content area, the module covers all items under "Normal processes" and all items under "Abnormal processes" except idiopathic disorders, degenerative disorders, and drug-induced adverse effects. Also covered were all items under "Principles of therapeutics" and "Gender, ethnic, and behavioral considerations affecting disease treatment and prevention". In addition, in the area "General Principles", the module covered items under "Gender, ethnic and behavioral considerations", "Multisystem processes" and "Quantitative methods".
- All five SOM Themes were covered, with material developed and presented by the course-directors or module faculty.

Methods of Instruction and Assessment

- All but one module objective were covered by Lecture. In addition, four are covered by Small Group and four by Lab. All but two objectives are covered by at least two activity types.
- For the 2011 module, student contact hours were as follows:
 - 65.2% of time was spent in Lecture (down from 70.7% in 2010).
 - 13.5% of time was spent in lab.
 - 11.2% of time was spent in small group.
 - 10.1% of time was spent in review sessions.
- The number of contact hours per week, including ICM, exceeded 20 hours in three of the five weeks in 2011.
- Assessment of student performance during the module was as follows:
 - Knowledge Performance 75%
 (15% midterm exam)
 (60% final exam)

- Small Group/Attendance 25%
(20% small group and lab)
(5% lecture attendance)

- Regarding NBME format, overall 32% are in the desired direction, with 40% of questions on the midterm and 26% of questions on the final being formatted appropriately. The reliability coefficient was .88 for both exams in 2010-11, which is very close to the category for high reliability (.90).

- Regarding assessment on Step 1 content area:
 - For “Normal processes”, all 9 items were covered in module instruction, six were addressed on exams.
 - For “Abnormal processes, module covered 19 of 22 items and 15 were addressed.
 - For “Principles of therapeutics”, module covered and addressed both items on exams.
 - For “Gender, ethnic, and behavioral considerations affecting disease treatment and prevention”, the module covered all four codes, but test items did not address any of the codes.

- Students were evaluated in mandatory small group sessions using the Professional Form, with grading as follows:
 - 43.5% of students received a rating of “Acceptable”
 - 56.5% received a rating of “Commendation”

- Three of the 16 preceptors rated all their students as Acceptable.
- Six of the 16 preceptors rated all their students as Commendable

Student Outcomes

- 78% of the students attended at least 80% of the lectures (required amount to the full 5% credit).

- The mean module raw score was 89.0 for 2011 and 90.0 for 2010. The 2010-11 mean is the highest of MS1 organ modules.
 - Knowledge component mean is 87.6 in 2011 (compared to 88.1 in 2010).
 - Small Group/Attendance mean is 93.7 in 2011, compared to 96.0 in 2010).

- Two students failed the module based on the knowledge component in 2010-11 compared to one in 2009-10.
- The Step 1 results are not yet available for students taking the exam in 2009-2010, but for previous years, the UAM results for the Respiratory System are as follows:
 - in 2007-2008, the mean was 0.33 SD below national mean and best UAB performance on any of the either organ system scores.
 - in 2008-2009, the mean was 0.15 below the national mean and was the second best UAB performance on any of the eight organ system scores.

Student Evaluation of Module

- The overall quality of the module is rated as Outstanding or Good by 95% of students in 2010-11 and 91% in 2009-10. These are the highest ratings of all modules in 2010-11 and second highest in 2009-10.
- The overall quality of faculty is rated as Excellent or Satisfactory by 100% of students in 2010-11 and 99% in 2009-10.
- The percentage of students rating “Understanding concepts” as the most emphasized learning outcome was 51% in both years
- The percentage rating “Ability to apply facts/concepts to clinical issues” as the most emphasized learning outcome increased from 49% in 2009-10 to 54% in 2010-11.
- The percentage rating “Recall of facts/definitions” as most emphasized decreased from 24% in 2009-10 to 11% in 2010-11.
- All areas scored favorably (above 3.0 and percentages agreeing/strongly agreeing above 50%) with the exception of one ARS item, “The ARS made me more likely to prepare for class”.
- The NGT evaluations were consistent with the overall student evaluations as described above in section discussing strengths and weaknesses.

Evaluation of Lecturers and Preceptors

Lecture ratings were based on a scale where:

2 = Occasionally fails to meet expectations

3 = Meets expectations

4 = Exceeds expectations

5 = Far exceeds expectations.

- The overall mean is 3.6 in both years (very similar to other MS1 modules).
- In 2010-2011, one lecturer falls below an overall mean rating of 3.0, and two lecturers have > 50% of raters giving at least one rating less than 3.

Preceptor ratings were based on a scale where:

7-9 = Excellent

4-6 = Satisfactory

- In both years, no scores were less than 7.5 (higher than means for other MS1 modules).
- The Overall Teaching Effectiveness means for Pulmonary are 8.1 and 7.8 for 2010-11 and 2009-10, respectively (compared to 6.9 for the other MS1 organ-based modules combined).

Impact of Changes from Last Year

Over the past few years, the module has made improvements by adding the following activities:

- Addition of six anatomy lab sessions.
- Addition of two hours of respiratory histology.
- Addition of simulations to case studies

All activities have been favorable changes and have enriched the module by increasing hands-on learning opportunities.

Respectfully submitted,
Laura Cotlin, Ph.D.
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Lead Reviewer