Review of SBM Respiration course

• Course occurs in the first term of Year 2

• Course Director – Harold L. Manning, MD

• Course has 55.5 curricular hours
  – 4 hours are assessment hours

• Course was last reviewed in February 2016 and presented to the MEC in March 2016.

Date of this review: April 2018
Review presented to MEC: April 2018
Action Plan from Prior Review

- Revise course objectives - DONE
- Ensure that session objectives are all written in the correct format - DONE
- Add additional practice questions - DONE
- Review time allotted to pathology sessions
<table>
<thead>
<tr>
<th>Course Objectives</th>
<th>To Program Objectives</th>
<th>% Session Time</th>
<th>To Session Objectives</th>
<th>Number of Session Objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. To correlate pathological changes in the respiratory system with the</td>
<td>MS.2</td>
<td>16%</td>
<td></td>
<td>68</td>
</tr>
<tr>
<td>accompanying physiological abnormalities.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. To correlate the pathological and physiological changes with the clinical</td>
<td>CC.3, CC.6, MS.2, MS.5</td>
<td>17%</td>
<td></td>
<td>78</td>
</tr>
<tr>
<td>manifestations of lung disease</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. To explain the pathophysiology and treatment of common respiratory</td>
<td>CC.13, MS.1, MS.2, MS.5</td>
<td>6%</td>
<td></td>
<td>25</td>
</tr>
<tr>
<td>symptoms, such as cough and shortness of breath</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. To interpret a variety of different types of pulmonary function tests</td>
<td>CC.10, MS.2, MS.5</td>
<td>8%</td>
<td></td>
<td>29</td>
</tr>
<tr>
<td>5. To describe how patterns of abnormal lung function characterize different</td>
<td>MS.2, MS.5</td>
<td>4%</td>
<td></td>
<td>25</td>
</tr>
<tr>
<td>respiratory disorders</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. To measure one’s lung function, to predict how a variety of factors will affect</td>
<td>CC.10, MS.2, MS.5</td>
<td>2%</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>the results of pulmonary function testing, and to describe some of the</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>difficulties and limitations of pulmonary function testing</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. To describe basic radiographic findings in common respiratory disorders</td>
<td>MS.1, MS.2, MS.5</td>
<td>2%</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>8. To explain how the physiological and pathological abnormalities that occur in</td>
<td>CC.3, CC.6, MS.2, MS.5</td>
<td>11%</td>
<td></td>
<td>52</td>
</tr>
<tr>
<td>patients with respiratory disease give rise to the symptoms experienced by</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>patients and the physical findings (signs) that can be observed</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. To describe the role played by genetic factors in common respiratory diseases</td>
<td>MS.1, MS.2, MS.5</td>
<td>3%</td>
<td></td>
<td>9</td>
</tr>
<tr>
<td>10. To describe the role played by environmental factors in common respiratory</td>
<td>CC.12, CC.13, CC.2, CS.4, CS.5, CS.7, MS.2, MS.5, P.5, PH.2</td>
<td>3%</td>
<td></td>
<td>16</td>
</tr>
<tr>
<td>disorders</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. To describe common developmental abnormalities of the respiratory system</td>
<td>MS.2, MS.5</td>
<td>0.8%</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>12. To explain the pharmacological and non-pharmacological treatments for a</td>
<td>CC.10, CC.13, MS.2, MS.4, MS.5, PH.2</td>
<td>5%</td>
<td></td>
<td>29</td>
</tr>
<tr>
<td>broad range of respiratory diseases and when possible correlate with the</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>underlying pathobiology</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. To describe the changes in lung function that occur during fetal development</td>
<td>MS.1, MS.2, MS.5</td>
<td>3%</td>
<td></td>
<td>14</td>
</tr>
<tr>
<td>and during the transition from uterine to extra-uterine life</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. To explain basic principles of screening and clinical epidemiology</td>
<td>CC.13, MS.1, MS.2, MS.4, MS.5, PH.2</td>
<td>3%</td>
<td></td>
<td>12</td>
</tr>
<tr>
<td>15. To describe factors that may limit the adoption and/or slow the</td>
<td>CC.2, CC.7, CS.2, CS.5, EIM.2, PH.1, PH.2, PH.3, PPLD.1</td>
<td>2%</td>
<td></td>
<td>11</td>
</tr>
<tr>
<td>implementation of new science to patient care or that limit patient compliance</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>with recommended treatments</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. To demonstrate the ability to piece together pieces of information from the</td>
<td>CC.2, CC.6, MS.2, MS.5</td>
<td>3%</td>
<td></td>
<td>16</td>
</tr>
<tr>
<td>history, physical examination, pulmonary function tests, and imaging studies to</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>arrive at a list of the most likely diagnostic possibilities</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17. To communicate with fellow students and faculty about patients with</td>
<td>CC.8, CS.1, CS.6</td>
<td>3%</td>
<td></td>
<td>14</td>
</tr>
<tr>
<td>respiratory disease</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18. To demonstrate team skills by participating in Case-Based Instruction/Learning</td>
<td>CS.1, P.7</td>
<td>2%</td>
<td></td>
<td>9</td>
</tr>
<tr>
<td>conferences</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19. To demonstrate responsibility for self-education</td>
<td>MS.4, P.7, PPLD.1</td>
<td>0%</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>20. To educate patients and families about illness</td>
<td>CC.12, CS.4, CS.7</td>
<td>2%</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>21. To describe the impact of chronic respiratory disease upon patients and their</td>
<td>PH.2</td>
<td>3%</td>
<td></td>
<td>13</td>
</tr>
<tr>
<td>families</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Course Objectives

• To correlate pathological changes in the respiratory system with the accompanying physiological abnormalities. (MS.2)
• To correlate the pathological and physiological changes with the clinical manifestations of lung disease (CC.3, CC.6, MS.2, MS.5)
• To explain the pathophysiology and treatment of common respiratory symptoms, such as cough and shortness of breath (CC.13, MS.1, MS.2, MS.5)
• To interpret a variety of different types of pulmonary function tests (CC.10, MS.2, MS.5)
• To describe how patterns of abnormal lung function characterize different respiratory disorders (MS.2, MS.5)
• To measure one's lung function, to predict how a variety of factors will affect the results of pulmonary function testing, and to describe some of the difficulties and limitations of pulmonary function testing (CC.10, MS.2, MS.5)
• To describe basic radiographic findings in common respiratory disorders (MS.1, MS.2, MS.5)
• To explain how the physiological and pathological abnormalities that occur in patients with respiratory disease give rise to the symptoms experienced by patients and the physical findings (signs) that can be observed (CC.3, CC.6, MS.2, MS.5)
• To describe the role played by genetic factors in common respiratory diseases (MS.1, MS.2, MS.5)
• To describe the role played by environmental factors in common respiratory disorders (CC.12, CC.13, CC.2, CS.4, CS.5, CS.7, MS.2, MS.5, P.5, PH.2)
• To describe common developmental abnormalities of the respiratory system (MS.2, MS.5)
• To explain the pharmacological and non-pharmacological treatments for a broad range of respiratory diseases and when possible correlate with the underlying pathobiology (CC.10, CC.13, MS.2, MS.4, MS.5, PH.2)
Course Objectives - Continued

• To describe the changes in lung function that occur during fetal development and during the transition from uterine to extra-uterine life (MS.1, MS.2, MS.5)
• To explain basic principles of screening and clinical epidemiology (CC.13, MS.1, MS.2, MS.4, MS.5, PH.2)
• To describe factors that may limit the adoption and/or slow the implementation of new science to patient care or that limit patient compliance with recommended treatments (CC.2, CC.7, CS.2, CS.5, EIM.2, PH.1, PH.2, PH.3, PPLD.1)
• To demonstrate the ability to piece together pieces of information from the history, physical examination, pulmonary function tests, and imaging studies to arrive at a list of the most likely diagnostic possibilities (CC.2, CC.6, MS.2, MS.5)
• To communicate with fellow students and faculty about patients with respiratory disease (CC.8, CS.1, CS.6)
• To demonstrate team skills by participating in Case-Based Instruction/Learning conferences (CS.1, P.7)
• To demonstrate responsibility for self-education (MS.4, P.7, PPLD.1)
• To educate patients and families about illness (CC.12, CS.4, CS.7)
• To describe the impact of chronic respiratory disease upon patients and their families (PH.2)
Course Objectives – Comments

• Comments about objectives: good verbs, measurable moments of learning that seem to relate to course syllabus. Might align with other courses whose objectives do not start with “To”

• The mapping of course objectives to the Geisel competencies in Ilios was reviewed by the course director and checked for accuracy [course director task]
Format of Course & Session Objectives

• Course objectives are provided on Canvas
• Course objectives are written in the correct format

• Session objectives are provided in the course materials
• Session objectives are (basically) written in the correct format
Issues of Redundancy

- Are there major issues of redundancy with other courses? No
Ethics – “Identify key concepts in health care ethics and demonstrate an ability to recognize ethical issues arising in patient care and population health and to think critically and systematically in applying an ethical analysis”

Cultural Awareness – “Demonstrate an understanding and skill in managing patient care of people of diverse cultures, social, economic standing and belief systems”

Health Equity – “Identify the root causes and approaches for addressing health disparities locally and globally”

Resilience – Demonstrate knowledge of skills and practices to prevent and address stress and maintain resilience in caring for patients and oneself

Compassion and Empathy – “Demonstrate abilities to understand each patient’s experience of illness, adapt scientifically appropriate care to conform to that patient’s needs, and communicate in terms that each patient can understand”

There also are synergies to health law, communication skills, professionalism (as LCME requires).
Does the course include health and values content?

• Dedicated session on “Ethics of respiration” including decision-making issues regarding withdrawing life sustaining measures
  – Student applause for highlighting importance of these issues

• Impact of respiratory diseases on patients & families

• Communicating with patient and families regarding respiratory diseases
Health and Values Content

Are the health and values topics noted in the course objectives?

• No course objectives focus on H&Vs content
Health and Values Content

Are the health and values topics noted in the session objectives?

• Impact of respiratory diseases on patients & families (session #12)
• Case conference - palliative management of lung disease (#24)
• Ethics session (#37)
• Communication with patient and families regarding various respiratory diseases (in all case conferences sessions)
Suggested modification to final course objective to allude to H&V content:

- “To reflect on the social, emotional and ethical challenges of chronic respiratory disease upon patients and their families (PH.2)” This maps to the institutional competency in professional identity, 4e, “Empathize with patient concerns, and be respectful of each patient's concerns, points of view, and cultural traditions."
Health and Values Recommendations

• Continue process of ensuring ethics-related exam question aligns to session’s take-home points

• For future iterations of the course, consider whether it would be valuable to make additional linkages to H&VS content e.g.
  – Mention in session the challenges to patient communications presented by existing evidence re survival benefits of lung cancer screening (#11) –
  – Consider discussing the impact of COPD on patients & families in case conferences (#14), similar as to what is done regarding cystic fibrosis patient presentation (#12)
Student comments regarding health and values content

• Exam question signified the importance of ethics in course and curriculum
• Good to have a reflection assignment
Nutrition in Medical Science N-NMS
1. Describe core nutrition science concepts, such as nutritional biochemistry and metabolism, digestion, endocrinology, and adverse effects of malnutrition on human health. N-NMS.1
2. Explain the links between nutrition science and other sciences, including those of the environment, exercise, toxicology, and pharmacology. N-NMS.2
3. Apply core nutrition science knowledge to understand and manage human health and disease through the lifespan. N-NMS.3

Nutrition in Clinical Care N-NCC
1. Perform a nutrition assessment and accurately measure anthropometrics. N-NCC.1
2. Perform a complete nutritional exam to assess for presence of malnutrition. N-NCC.2
3. Interpret, develop, and implement a nutrition plan for treatment, including nutritional additions or restrictions, culinary skill development, artificial nutrition support, and supplementation. N-NCC.3

Nutrition in Population Health N-NPH
1. Explain the impact of nutrition on individual and population health and disease. N-NPH.1
2. Assess the impact of social, environmental, behavioral, economic, cultural, and personal factors on the nutritional health of individuals, and the incidence and burden of disease in populations. N-NPH.2
3. Explain and exemplify the physician’s role for promoting nutrition in public health. N-NPH.3
**Communication Skills in Nutrition Practice** **N-NCS**

1. Demonstrate empathy for individuals’ concerns, and be respectful of others’ perspectives and personal, cultural, and religious dietary restrictions and beliefs, and communicate nutrition advice respectfully and without judgment. **N-NCS.1**

2. Promote positive behavioral change through nutrition-specific motivational interviewing and cognitive behavioral therapy. **N-NCS.2**

3. Translate nutrition science concepts into useful information to educate patients, families, peers, and others. **N-NCS.3**

**Personal, Professional, and Leadership Development in Nutrition Practice** **N-PPLDNP**

1. Engage in lifelong learning to improve one’s performance in the application of nutrition science. **N-PPLDNP.1**

2. Apply nutrition science and culinary competency to enhance resiliency and physician self-care. **N-PPLDNP.2**

3. Advocate for environments that promote healthy nutritional lifestyles in the community, while removing any existing barriers. **N-PPLDNP.3**

**Evaluation and Improvement in Nutrition Practice** **N-EINP**

1. Identify and utilize healthcare and community resources to provide nutrition care and improve patient outcomes and patient satisfaction. **N-EINP.1**

2. Identify credible, evidence-based sources of nutrition information and apply knowledge gained from the literature to clinical care, teaching, research, and population health. **N-EINP.2**

**Collaboration and Teamwork in Nutrition Practice** **N-CTNP**

1. Recognize and capitalize on different roles and strengths of team members, including the clinical dietitian, to develop and address shared goals, and foster a working relationship with all team members built on mutual respect and trust. **N-CTNP.1**

2. Demonstrate the ability to share and allocate responsibilities among team members. **N-CTNP.2**
What Nutrition content is presented in the course?
• Obesity and respiratory complications

Are Nutrition topics noted in the course and session objectives?
• None
Nutrition Content

Student comments:
• N/A
Recommendations for Nutrition Integration

Recommendations for Nutrition Education:

1. Utilize available resources (Nutrition in Medical Education Program Rima.Al-Nimr@Dartmouth.edu ) for development and dissemination of course nutrition content as needed.

2. Existing and potential new areas of nutrition integration:
   a. Session # 7: neonatal lung disease and increased nutrition needs
   b. Session # 12 Cystic Fibrosis, nutritional status and association with lung function; increased nutrition needs
      a. Course director: Integration with CF-related caloric needs addressed in session
   c. Session # 14; COPD and increased nutrition needs
   d. Session # 31 Head and Neck Cancer and special nutrition considerations; tube feeding, etc.
      a. Course director: Already mentioned in session as minor part of presentation
   e. Session # 34: obesity
Recommendations for Mapping Nutrition Content

• Any existing or newly added nutrition content mentioned in either course or session objectives should be mapped back to Geisel Nutrition in Medical Education Program Objectives

• To map new session/course objectives:
  a. Course Title or ID (eg. Gastrointestinal System, SBM 209),
  b. “New Session Name”
  c. Nutrition mapping (Please see included objectives N-NPH.1, N-MS.3, etc.)

• For mapping questions, please contact Brian P. Reid
  brian.p.reid@dartmouth.edu
Course Learning Opportunities

• Lecture 20 hrs. (38.8%)
• Conference 9 hrs. (17.5%)
• Interactive Large Group 6.5 hrs. (12.6%)
• Problem-Based Learning 6 hrs. (11.7%)
• Lab 4 hrs. (7.8%)
• Patient Contact 3 hrs. (5.8%)
• Observation of a Physiologic Process 2 hrs. (3.8%)
• Independent Study Module 1 hr. (2%)
• Total Contact Hours = 51.5 hours
  – 4 additional assessment hours
Course Learning Opportunities

• Comments about pedagogy...
  – Remove “To...”
  – Add in H&V content including CO revision
  – Feel out if nutrition linkages need additional highlighting in CO’s
  – Consider highlighting H&V material
Summary regarding Pedagogy

• Good mix of approaches, without excessive reliance on lecturing or other passive forms of learning
Assessment

• Successfully pass the final exam.
• Score at least 14 points for the conferences
  – Attendance and Participation worth 2 points for each session.
• Successfully complete the Respiratory Ethics assignment.
Assessment for Course Objectives

• Comments...see suggested revision to final course objective to highlight inclusion of and allow mapping of health and values content
Summary regarding Assessment

- Grade heavily weighted on final exam

- Feel out for future course iteration whether interim low stakes quizzes (USMLE-Rx or other) would be helpful

- To MEC in general: The course review team discussed that our process is blinded to adequacy of assessment of course objectives here and in other courses. Could standard course review materials include that information?
Measures of Quality – Graduation Questionnaire

How well did your study of the following sciences basic to medicine prepare you for clinical clerkships and electives?

<table>
<thead>
<tr>
<th>Pathophysiology of disease</th>
<th>Ratings*</th>
<th>Poor</th>
<th>Fair</th>
<th>Good</th>
<th>Excellent</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Medical Schools</td>
<td>2017</td>
<td>1.2</td>
<td>5.3</td>
<td>34.3</td>
<td>59.2</td>
<td>15,117</td>
</tr>
<tr>
<td>Dartmouth-Geisel</td>
<td>2017</td>
<td>0.0</td>
<td>0.0</td>
<td>20.6</td>
<td>79.4</td>
<td>63</td>
</tr>
<tr>
<td>Dartmouth-Geisel</td>
<td>2016</td>
<td>0.0</td>
<td>1.5</td>
<td>32.4</td>
<td>66.2</td>
<td>68</td>
</tr>
<tr>
<td>Dartmouth-Geisel</td>
<td>2015</td>
<td>0.0</td>
<td>4.1</td>
<td>38.4</td>
<td>57.5</td>
<td>73</td>
</tr>
<tr>
<td>Dartmouth-Geisel</td>
<td>2014</td>
<td>2.4</td>
<td>3.6</td>
<td>40.5</td>
<td>53.6</td>
<td>84</td>
</tr>
<tr>
<td>Dartmouth-Geisel</td>
<td>2013</td>
<td>2.2</td>
<td>8.9</td>
<td>50.0</td>
<td>38.9</td>
<td>90</td>
</tr>
</tbody>
</table>

Data from AAMC Graduation Questionnaire
# Measures of Quality – Step I

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Behavioral sciences</td>
<td>-0.1</td>
<td>-0.43</td>
<td>0.22</td>
<td>-0.103</td>
</tr>
<tr>
<td>Behavioral Health and Nervous system</td>
<td>-0.10</td>
<td>-0.18</td>
<td>0.28</td>
<td>0.00</td>
</tr>
<tr>
<td>Cardiovascular system</td>
<td>0.16</td>
<td>-0.1</td>
<td>-0.04</td>
<td>0.006</td>
</tr>
<tr>
<td>Endocrine system</td>
<td>0.24</td>
<td>0.09</td>
<td>0.17</td>
<td>0.167</td>
</tr>
<tr>
<td>Gastrointestinal system</td>
<td>0.2</td>
<td>0.06</td>
<td>0.03</td>
<td>0.097</td>
</tr>
<tr>
<td>Hematopoietic/lymph systems</td>
<td>0.10</td>
<td>-0.15</td>
<td>-0.08</td>
<td>-0.043</td>
</tr>
<tr>
<td>Immune system</td>
<td>-0.07</td>
<td>-0.02</td>
<td>0.0</td>
<td>-0.03</td>
</tr>
<tr>
<td>Musculoskeletal, skin, CT systems</td>
<td>0.22</td>
<td>0.15</td>
<td>0.19</td>
<td>0.187</td>
</tr>
<tr>
<td>Nutrition</td>
<td>-0.08</td>
<td>-0.15</td>
<td>0.05</td>
<td>-0.06</td>
</tr>
<tr>
<td>Renal/urinary system</td>
<td>0.02</td>
<td>-0.27</td>
<td>0.01</td>
<td>-0.08</td>
</tr>
<tr>
<td>Reproductive system</td>
<td>-0.03</td>
<td>-0.04</td>
<td>0.25</td>
<td>0.06</td>
</tr>
<tr>
<td>Respiratory system</td>
<td>0.27</td>
<td>-0.22</td>
<td>0.03</td>
<td>0.027</td>
</tr>
</tbody>
</table>

*values reported for core disciplines are SD above the US/Can mean for Geisel mean scores*
# Measures of Quality – Course Evaluation

<table>
<thead>
<tr>
<th>Overall Quality - Year 2 courses</th>
<th>AY 15-16</th>
<th>AY 16-17</th>
<th>AY 17-18</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cardiology</td>
<td>3.69 (98%)</td>
<td>3.90 (98%)</td>
<td>3.83 (94.4%)</td>
</tr>
<tr>
<td>CT &amp; Bone</td>
<td>3.23 (94.6%)</td>
<td>3.46 (92.5%)</td>
<td></td>
</tr>
<tr>
<td>Dermatology</td>
<td>3.89 (93.1%)</td>
<td>3.84 (92.6%)</td>
<td></td>
</tr>
<tr>
<td>Endocrine</td>
<td>3.88 (92.3%)</td>
<td>3.67 (97.9%)</td>
<td>3.35 (93.4%)</td>
</tr>
<tr>
<td>FEK</td>
<td>3.85 (91.2%)</td>
<td>3.97 (98.9%)</td>
<td>3.68 (93.2%)</td>
</tr>
<tr>
<td>GI</td>
<td>4.31 (95.6%)</td>
<td>4.45 (92.6%)</td>
<td></td>
</tr>
<tr>
<td>Hematology</td>
<td>4.26 (96%)</td>
<td>4.44 (92.6%)</td>
<td>3.94 (91.1%)</td>
</tr>
<tr>
<td>Infectious diseases</td>
<td>4.02 (89.9%)</td>
<td>4.24 (84%)</td>
<td></td>
</tr>
<tr>
<td>Introduction to Pharmacology</td>
<td>3.74 (92.5%)</td>
<td>4.03 (98.9%)</td>
<td>3.22 (95.6%)</td>
</tr>
<tr>
<td>Introduction to SBM Themes</td>
<td>3.35 (21.7%)</td>
<td>3.43 (61.7%)</td>
<td>3.57 (25.8%)</td>
</tr>
<tr>
<td>Nervous system</td>
<td>3.06 (96%)</td>
<td>3.40 (91.8%)</td>
<td>2.96 (92.1%)</td>
</tr>
<tr>
<td>On Doctoring</td>
<td>3.60 (100%)</td>
<td>4.02 (100%)</td>
<td></td>
</tr>
<tr>
<td>Psychiatry</td>
<td>4.16 (95.7%)</td>
<td>3.63 (96.3%)</td>
<td>3.66 (92.1%)</td>
</tr>
<tr>
<td>Reproduction</td>
<td>3.05 (87.8%)</td>
<td>2.96 (85.1%)</td>
<td></td>
</tr>
<tr>
<td>Respiration</td>
<td>4.08 (92.5%)</td>
<td>4.27 (97.9%)</td>
<td>4.16 (95.6%)</td>
</tr>
</tbody>
</table>

*scale [1=poor; 2=fair; 3=good; 4=very good; 5=excellent]*
# Measures of Quality – Course Evaluation

*student participation rate on course evaluation

**new evaluation question in 17-18

<table>
<thead>
<tr>
<th></th>
<th>SBM.201 AY 15-16 (92.5%)*</th>
<th>SBM.201 AY 16-17 (97.9%)*</th>
<th>SBM.201 AY 17-18 (95.6%)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pace and workload**</td>
<td>N/A</td>
<td>N/A</td>
<td>4.03</td>
</tr>
<tr>
<td>Primary course materials/text**</td>
<td>N/A</td>
<td>N/A</td>
<td>3.89</td>
</tr>
<tr>
<td>Organization of the course</td>
<td>4.00</td>
<td>4.18</td>
<td>3.99</td>
</tr>
<tr>
<td>Congruence of assessment questions to material emphasized in course</td>
<td>3.55</td>
<td>3.88</td>
<td>3.74</td>
</tr>
<tr>
<td>Overall satisfaction of course</td>
<td>4.08</td>
<td>4.27</td>
<td>4.16</td>
</tr>
</tbody>
</table>

scale [1=poor; 2=fair; 3=good; 4=very good; 5=excellent]
Measures of Quality – Student Comments

Strengths:

• *Small groups succeeded*
• *Handouts (notes) were widely used and appreciated*
• *Well-written exam with emphasis on clinical concepts*
Suggestions for Improvement:

- *Practice questions!* – HM points out there are PQ’s, and we discussed that desire for more remains, perhaps aided by new availability of USMLE-Rx
- *Handouts for all lectures, even those taught by guest lecturers*
- *Small group discussions were straightforward; the exam was more complex. Suggestion to bridge these*
Summary regarding Measures of Quality

• Very highly rated course
• Consider standard student request for more review material, particularly study questions
• Consider whether “bridge” needed between small groups and related content on final exam
Recommendations

• Keep up the great job!
• Consider revision to course objectives to highlight inclusion of and allow tracking of health and values content
• Consider interim assessments before final exam in future iteration of the course
• Consider if need “bridge” between small groups and final exam
Action Plan

• Course objectives modified as suggested by the course review team (see last 2 slides)
  – Eliminated “to” from each objective
  – Expanded some course objectives to include examples of disorders
  – Modified final course objective to include H&V content

• Will add nutrition-related session objectives, where appropriate/possible

• Course director will continue the process of increasing the number of practice questions
Revised Course Objectives

- Correlate pathological changes in the respiratory system with the accompanying physiological abnormalities. (MS.2)
- Correlate the pathological and physiological changes with the clinical manifestations of lung disease (CC.3, CC.6, MS.2, MS.5)
- Explain the pathophysiology and treatment of common respiratory symptoms, such as cough and shortness of breath (CC.13, MS.1, MS.2, MS.5)
- Interpret a variety of different types of pulmonary function tests (CC.10, MS.2, MS.5)
- Describe how patterns of abnormal lung function characterize different respiratory disorders (MS.2, MS.5)
- Measure one's lung function, to predict how a variety of factors will affect the results of pulmonary function testing, and to describe some of the difficulties and limitations of pulmonary function testing (CC.10, MS.2, MS.5)
- Describe basic radiographic findings in common respiratory disorders, such as emphysema, interstitial lung disease, pneumonia, lung cancer, and pleural effusion (MS.1, MS.2, MS.5)
- Explain how the physiological and pathological abnormalities that occur in patients with respiratory disease give rise to the symptoms experienced by patients and the physical findings (signs) that can be observed (CC.3, CC.6, MS.2, MS.5)
- Describe the role played by genetic factors in common respiratory diseases, such as asthma, emphysema, cystic fibrosis, and lung cancer (MS.1, MS.2, MS.5)
- Describe the role played by environmental factors in common respiratory disorders, such as asthma, COPD, interstitial lung disease, and lung cancer (CC.12, CC.13, CC.2, CS.4, CS.5, CS.7, MS.2, MS.5, P.5, PH.2)
- Describe common developmental abnormalities of the respiratory system (MS.2, MS.5)
- Explain the pharmacological and non-pharmacological treatments for a broad range of respiratory diseases and when possible correlate with the underlying pathobiology (CC.10, CC.13, MS.2, MS.4, MS.5, PH.2)
Course Objectives - Continued

- Describe the changes in lung function that occur during fetal development and during the transition from uterine to extra-uterine life (MS.1, MS.2, MS.5)
- Explain basic principles of screening and clinical epidemiology (CC.13, MS.1, MS.2, MS.4, MS.5, PH.2)
- Describe factors that may limit the adoption and/or slow the implementation of new science to patient care or that limit patient compliance with recommended treatments (CC.2, CC.7, CS.2, CS.5, EIM.2, PH.1, PH.2, PH.3, PPLD.1)
- Demonstrate the ability to piece together pieces of information from the history, physical examination, pulmonary function tests, and imaging studies to arrive at a list of the most likely diagnostic possibilities (CC.2, CC.6, MS.2, MS.5)
- Communicate with fellow students and faculty about patients with respiratory disease (CC.8, CS.1, CS.6)
- Demonstrate team skills by participating in Case-Based Instruction/Learning conferences (CS.1, P.7)
- Demonstrate responsibility for self-education (MS.4, P.7, PPLD.1)
- Educate patients and families about illness (CC.12, CS.4, CS.7)
- Reflect on the social, emotional and ethical challenges that chronic respiratory disease places upon patients and their families (PH.2)