How Changes in the USMLE Will Affect Medical Education: An Opportunity for Anesthesiology?

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Why modify the USMLE exam?

- Current exam is > 20 years old
  - Developed in late 1980's to replace the NBME and FLEX exams
- Two major changes
  - Format – pencil and paper to computer-based administration with case simulations (1999)
  - Clinical skills exam (2004)
- Ongoing changes in content outlines
- Review of score reporting policy in 2000

Thomson Bowles L *et al*. Acad Med 2000; 75:426-431.

What approach has been taken in reviewing the USMLE?

- In 2004 (almost 5 years ago), a comprehensive review process was developed by the FSMB, NBME, and ECFMG
- CEUP (Committee to Evaluate the USMLE) was formed
  - Broad representation of all stakeholders
    - Students, IMGs, residents, fellows, faculty, deans, practicing MDs, members of state medical boards, public
  - Surveys and focus groups

www.usmle.org or your handout

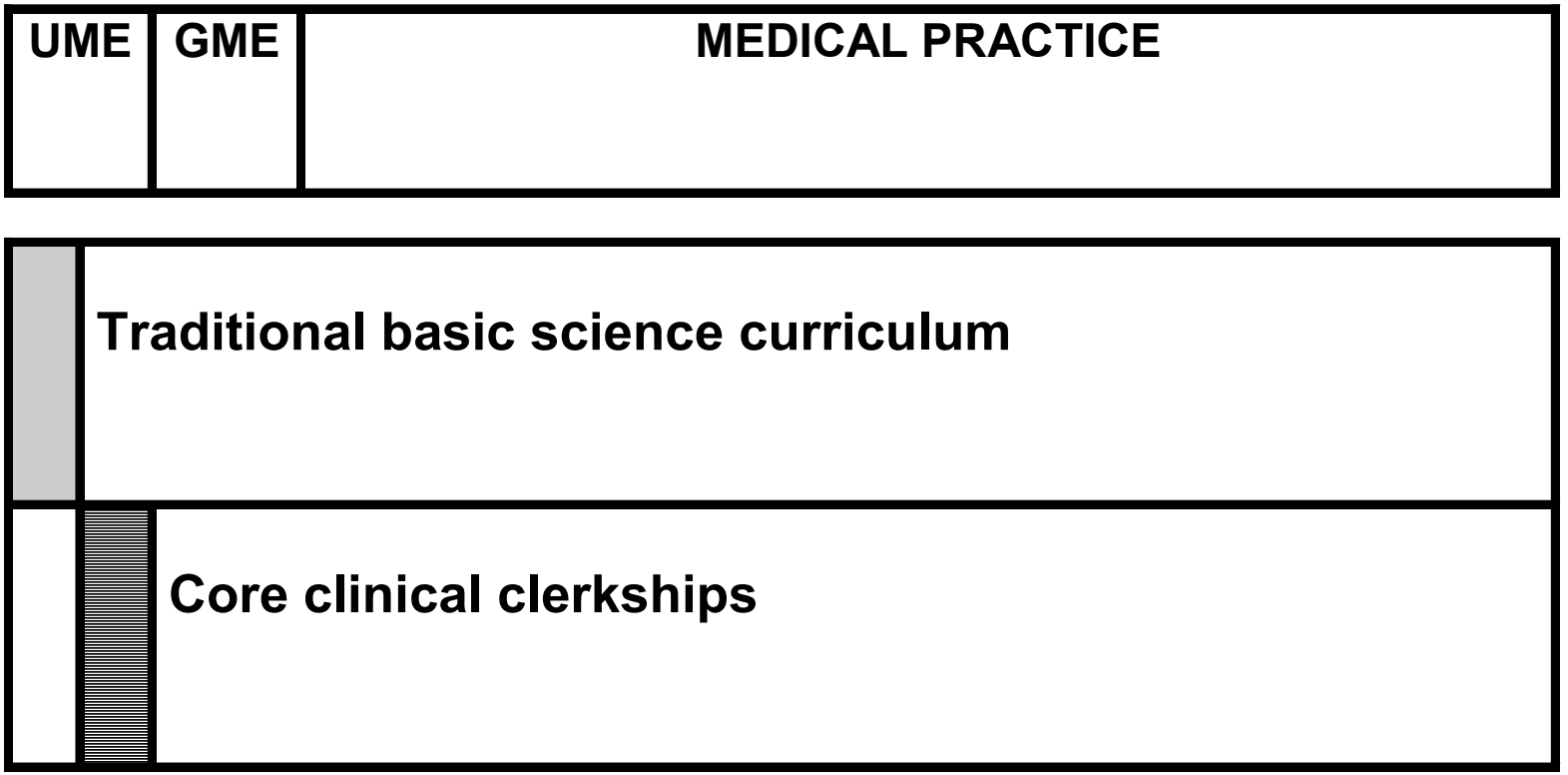
Perspectives

- Educators and Deans:
  - Separation of basic science and clinical science in Step 1 and Step 2CK is artificial
  - Step 1 interferes with curriculum design and delivery
  - Step 1 score disproportionately affects career decisions

Perspectives

- Basic scientists:
  - Basic science is the foundation of medicine
    - Differentiates physicians from other healthcare providers
  - Basic science is lost when integrated with clinical medicine
  - Step 1 reinforces the value of basic science
- Students:
  - Prefer to “get basic science over with”

What is the current role of the basic sciences in medical education?



The Informal Basic Science Curriculum in Medical School

- When this part of medical school is completed, basic science no longer matters
- What is currently known is what physicians need to know
- There will always be one right answer
- Teaching in the basic sciences is about transmitting information, not about developing ability to think critically, learn new scientific information, and apply it

The Informal Basic Science Curriculum in Residency

- Getting the work done is primary, understanding basic science is secondary – only the strong survive
- Ongoing research by basic scientists is irrelevant to medical practice
- What is known in my specialty at the time of my board exam is what I need to know

What should be the role of the basic sciences?

- Understanding current knowledge is necessary but not sufficient
  - Basic science knowledge is expanding at an unprecedented rate
- More important are overarching concepts and principles
- Most important is a continued interest in learning and developing skills in critical thinking and self-directed learning

Recommendations for redesign of USMLE

- Design a series of assessments to support decision at two points (“Gateways”)
  - Gateways are licensure decision points, not exam events
- Develop a model of design and scoring consistent with the general competencies concept (*e.g.*, ACGME)
- Explore ways of enhancing assessment of clinical skills
- ***Emphasize scientific foundations of medicine in all components, in a clinical context where possible***
- ***Develop assessments of ability to access, evaluate and apply medical information***

Goal: Emphasize information retrieval and data analysis

- New item formats
- Built-in database evaluation tools
- Enhanced computer-based case simulations and clinical judgment tools
- Interpretation of literature and evidence-based medicine

Goal: Build USMLE around competencies required for practice

- At entry into residency, doctors must have minimum competencies necessary for safe patient care.
- At time of licensure, doctors must have a higher level of these competencies plus some acquired during residency.
- All competencies that can be ***measured in valid, reliable, & practical manner*** should be incorporated into the USMLE.

Goal: Emphasize scientific foundations of medicine in all components

- Exam components are non-compensating.
  - Separate hurdles for scientific foundations, knowledge required for practice, and clinical skills
- To the greatest extent possible, individual test items in each component will integrate relevant basic science and clinical materials.

What new formats and content are being considered?

- Integration of basic science and clinical material
- Short answers and essays
- Competency-based case scenarios
- Virtual patients
- Information retrieval and analysis
  - Biostatistics, epidemiology, EBM
- Focus on ability to ***apply*** basic science knowledge

Scoles P. Presentation at CWRU Curriculum Retreat, Feb 2008


FRAZZ | JEF MALLETT
FRAZZ! MR. WORK ETHIC! TARDY!
I LOST TRACK OF TIME.
HAVE YOU EVER GOTTEN TO THE LAST 100 PAGES OF A GOOD BOOK AND...
SURE.
ONE I WAS READING, OR ONE I WAS WRITING?
AND YET YOU ROUTINELY BOMB YOUR ASSESSMENT TESTS.
"Standardized test" is to "engaging" as "stinkbug" is to "cuddly."
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What are the implications of USMLE changes?

- New assessment methods
  - MCQs and OSCEs won't be sufficient
- Revision of basic science curriculum to thread throughout medical school
  - Major revisions in Years 3 and 4
  - Focus on higher cognitive levels in basic science courses (analysis, synthesis and evaluation)
- Revisions in residency programs
  - More basic science, more EBM

Opportunity for anesthesiology?

- Medical schools will need teachers in Years 1 and 2 to provide context for core basic sciences – physiology, pathophysiology and pharmacology
- Medical schools need will teachers in Years 3 and 4 who can demonstrate application of basic sciences in their practice
- Medical schools will need faculty to help develop new assessments
- ***It's just a matter of time until there are fewer applicants to our residencies and we will move back to recruiting mode***
  - ***Where will your anesthesiology department be when this happens?***