Teaching to and Assessing Competencies Likely to Improve Patient Care Outcomes: Getting the NBOME and Osteopathic Medical Schools on the Same Competencies Page

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Teaching to and Assessing Patient Care Competencies: Getting on the same page

Objective: Enable a deeper understanding of the commonalities and discrepancies between how osteopathic medical schools teach to patient care competencies and how the NBOME assesses patient care competencies

Outcome: Establishment of a dialogue regarding an integrated approach to teaching to and assessing patient care competencies likely to lead to improved patient care outcomes
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Session Focus: Appreciate that there are critical disparities between a learning sciences based approach to teaching to and assessing patient care competencies, and, how osteopathic medical schools currently teach to, while the NBOME assesses, the attainment of patient care competencies.
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NBOME, March 2012:

REPORT BY THE BLUE RIBBON PANEL OF THE NATIONAL BOARD OF OSTEOPATHIC MEDICAL EXAMINERS ENHANCING COMLEX-USA
NBOME’S MISSION TO PROTECT THE PUBLIC BY PROVIDING THE MEANS TO ASSESS COMPETENCIES FOR OSTEOPATHIC MEDICINE AND RELATED HEALTH CARE PROFESSIONS INCLUDING RECOMMENDATIONS AND NEXT STEPS

All seven competency domains would likely be assessed across each, of what is likely to be, a two part licensure examination process.
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Commonalities between medical schools and licensure boards

Preclinical DO and MD coursework consist of Basic Science Disciplines (Anatomy, Physiology, Microbiology, Biochemistry, etc) and Clinical Science Systems (Cardiovascular, Respiratory, Reproductive, etc)

DO and MD Part/Level 1 licensure board assessment categories directly reflect Basic and Clinical Sciences coursework, and thereby Disciplines and Systems-based curricular models

DO Level 1 also assesses a group of clinical skills (Health Promotion/Disease Prevention, H&P, Diagnostic Technologies, Management). It also assesses Osteopathic P&P and General Osteopathic capabilities
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AACOM / AOA Medical Schools position on how to teach to (and internally assess) Competencies going forward? Uncertain

While DO schools likely to follow NBOME lead (assessment drives curriculum), NBOME is not in the business of curricular design

NBOME has established the following Patient Care Competencies:
- Data Gathering,
- Differential Diagnosis,
- Procedures,
- Management,
- OPP,
- HP/DP,
- Patient Education,
- Teamwork
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Going forward, DO curricula could and perhaps should reduce adherence to traditional Discipline, System, PBL and ‘hybrid’ curricular models (i.e., interdigitation of all three traditional models) as, by their design, they do not directly support a learning sciences-based approach to the development of competencies (i.e., competence is problem and task-specific).

DO curricula should give serious consideration to Calgary’s Presentation and/or TCOM’s Problem and Task-focused, Application-oriented curricular models as both were conceptualized as a foundation for the further refinement of a competencies-oriented, problem and task-focused curricular model. Under such curricular models, three Patient Care Tasks/Competencies emerge …

Diagnosis,
Treatment,
Management
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NBOME has established the following Patient Care Competencies …

- Data Gathering,
- Differential Diagnosis,
- Procedures,
- Management,
- OPP,
- HP/DP,
- Patient Education,
- Teamwork

Under a Learning Sciences-derived rubric, three Patient Care Tasks/Competencies emerge …

- Diagnosis (data gathering, differential diagnosis)
- Treatment (procedures and OPP – NB: ‘treatment’ otherwise not defined)
- Management (HP/DP, Patient Education, Teamwork)
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NBOME: consensus around 100 – 120 common and important primary care problems, although NBOME performance report does not include performance along specific problems

Only 1 of 3 Patient Care Tasks performance assessments exhibited in NBOME reporting scheme

Getting on same page regarding tasks …

Three core Patient Care Tasks:
1. Diagnosis
2. Treatment
3. Management (the only Patient Care task explicitly listed in Level I NBOME report)
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Learning Sciences based approach to Patient Care competencies is predicated upon the following evidence and theories (i.e., models of mind and models of competence) …

1. Competence is problem and task-specific
2. Development of competence requires multiple problem and task-focused, application/practice opportunities
3. Development of competence requires problem and task-focused feedback
4. Development of competence requires problem and task-focused assessment
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Why the need for DO schools and NBOME to work together and give serious consideration to redefining Patient Care Competencies …

Mounting evidence that medical error (and in particular error involving diagnosis, treatment and management) is the third leading cause of death.

1. Cardiovascular disease
2. Cancer
3. Medical Error (Diagnostic error is the leading cause of error with Treatment error next)
4. Approximately 400,000 avoidable deaths annually
5. Perhaps 10 – 20 % of ambulatory care involves medical error
6. Error causes a huge financial burden on the medical care system
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Currently, there is little evidence that DO schools provide coursework directed at the development and assessment of diagnostic, treatment and management competencies.

By this it is meant that there is no coursework providing a separate assessment and grade for each of these three core Patient Care Competencies.

Rationale for separate assessments ...

Competence is problem and task-specific – these three patient care outcomes represent three distinct tasks.
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AACOM/AOA schools and NBOME should give serious consideration to co-developing coursework and assessment procedures designed to support a learning sciences-based, competencies-oriented, problem- and task-focused approach to teaching to and assessing diagnostic competence, treatment competence and management competence.

1. Begin with NBOME’s list of 100+ problems and each problem’s respective, core differentials
2. Select some number of problems (15 – 20) representing a total of 50 distinct disease differentials
3. Create a testing procedure designed to produce a reliable and valid assessment of performance against all 50 disease differentials and each of their three respective core tasks
4. Report Level 1 performance for each problem, differential and task
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AACOM/AOA schools would bare the blunt of developing a large number of test items for each selected problem, its selected set of differentials and the three tasks performed for each differential.

The objective of this research would be to determine the number and variety (typicality) of test items needed to provide a reliable assessment of Problem and Task-specific competencies.

Medical school test would likely be based on traditional assessment methods (single best answer, multiple items per problem, disease differential and task).

NBOME would bare the blunt of developing a computer-adaptive assessment procedure to reduce test taking time while preserving reliability.
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The result of such a collaborative would be a National Assessment of Patient Care Competencies – NAPCC.

Longitudinal studies could be conducted to assess the impact of a learning sciences-driven approach to the development of competencies with follow up to determine any improvements in patient care outcomes.

Such collaboration and research could demonstrate Osteopathic Medicine’s insight and desire to play a role in leading instruction and assessment efforts directed at improving patient care outcomes – a role for which there is little evidence that schools and licensure boards in other countries are planning to pursue.
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Questions …

Discussions …

Impediments …

Benefits …
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