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Setting the Standard for a High-Stakes End of Third Year Assessment

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#### Purpose:

- conduct modified Angoff standard setting procedure due to planned move to "highstakes" End of Third Year Assessment (EOTYA)
- assess the result of applying cutoffs to EOTYA student performance data
- analyze judges' perceptions and confidence in setting cutoffs for three skill areas across seven Objective Structured Clinical Examinations (OSCEs)

#### **Methods:**

• 7 "internally created" OSCE case summaries were reviewed by 6 content experts:

Third year clerkship directors -Family Medicine -Internal Medicine -Ob-Gyn -Pediatrics -Psychiatry -Surgery

#### **Methods:**

## Each OSCE case summary included:

- Case Summary patient symptoms, social history, family history, past medical history
- SP Behavior Notes affect, mannerisms, required questions/statements
- Opening Scenario patient information, chief complaint, presenting symptoms, setting, vitals, test results
- Examiner's Tasks timeline to complete interview/exam, related paperwork, and feedback session
- Checklists history, physical exam, interviewing/communication, problem list, differential diagnosis

### **Methods:**

- 10-step standard setting procedure was explained and terms were defined
  - Essential vs non-essential items
  - Minimally competent 3<sup>rd</sup> year student
  - Probability
  - Cutoffs for 3 skill areas: Hx, PE, & Interviewing
- Group agreed to meet frequently during academic year rather than conduct 1-2 day standard setting workshop

#### **Results:** Final Performance Standards

|               | Standard  | Number<br>of Items |
|---------------|---|--------------------|
| History       | 73.49 %   | 84                 |
| Physical Exam | 70.43 %   | 31                 |
| Interview     | <b>3.65</b><br>(scale ranges from 1 to 5<br>with 5 being the highest) | 33                 |

#### **Results:** Student Performance Results

| Student Name | History<br>Standard = 73.49<br>(Cohort Avg = 80.1; SD = 5.7)<br>Did not successfully complete=11% |
|--------------|---|
| Student 1    | 63.38   |
| Student 2    | 65.63   |
| Student 3    | 67.91   |
| Student 4    | 68.33   |
| Student 5    | 69.49   |
| Student 6    | 69.60   |
| Student 7    | 72.06   |
| Student 8    | 72.61   |
| Student 9    | 72.80   |
| Student 10   | 73.12   |

#### **Results:** Student Performance Results

| Student Name | Physical Exam<br>Standard = 70.43<br>(Cohort Avg = 76.09; SD = 8.9)<br>Did not successfully complete=21% |
|--------------|--|
| Student 1    | 51.77  |
| Student 2    | 56.31  |
| Student 3    | 58.46  |
| Student 4    | 58.46  |
| Student 5    | 58.71  |
| Student 6    | 61.24  |
| •<br>•<br>•  | •  |
| Student 18   | 68.69  |
| Student 19   | 69.19  |

#### **Results:** Student Performance Results

| Student Name | Interview<br>Standard = 3.65<br>(Cohort Avg = 4.15; SD = .25)<br>Did not successfully complete=3% |
|--------------|---|
| Student 1    | 3.41  |
| Student 2    | 3.52  |
| Student 3    | 3.63  |

#### **Results:** Expert Rater Survey Results

My understanding of the examinees and their expected skill levels was adequate. My understanding of the standard setting procedure was adequate. My understanding of the EOTYA test and its purposes was adequate. At the completion of the standard setting process, I was confident in the final standards I set. After reviewing the final 2005 EOTYA results, my confidence in the standards set has not changed. I am confident in the final standard set by the complete procedure. Participating was not excessively burdensome. 0.5 1.5 2 0 1

2.5 3 3.5

Mean Ratings (n=5)

4.5

5

### **Discussion:**

- Increased communication among clerkship directors
- OSCEs were revised to be more inter-disciplinary & PE added to all cases
- Non-essential items were deleted
- Pilot cases rotated into EOTYA
- Norm-referenced standard setting procedure was selected

### **Limitations of Study:**

- Need at least 8 content experts
- Should have 8-10 OSCEs to further enhance stability of cutoffs
- Standard setting procedure should occur during a 1-2 day workshop
- Consensus on content of cases must be unanimous at onset of project

## **Conclusion:**

- Standard setting procedure vital to "highstakes" assessment
- Early planning is key to success
- Consensus building required
- Transparent process necessary

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