How the process of capturing an EPA observation fits with the intentions of CBME

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Disclosures

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Background
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Kane’s Validity Evidence Inferences

1. Scoring (Observation → Documentation)
2. Generalization (Score → Test performance)
3. Extrapolation (Test performance → Real-world)
4. Implication (Performance → Interpretation)
Kane’s Validity Evidence Inferences

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2. Generalization (Score → Test performance)
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4. Implication (Performance → Interpretation)
Purpose

To generate a description of the real-world use of EPA observations, encompassing resident and preceptor perspectives.
Methods: Setting

University of Alberta - Internal Medicine residency program

Implemented EPAs since 2016

Residents mandated to fill in 1-2 per week

Resident & Faculty orientation
6. Assessing, diagnosing, and initiating management for patients with common acute medical presentations in acute care settings

<table>
<thead>
<tr>
<th>Does not have a basic approach to this case type</th>
<th>Has a basic approach to diagnosis but needs extensive help with initial management</th>
<th>Can diagnose / manage this case with some change to initial management plan</th>
<th>Can diagnose / manage this case with no significant change to initial management plan (If you select this you can skip Q7 Milestones)</th>
</tr>
</thead>
</table>

7. Milestones: Please choose which domains the resident should focus on, and which domains the resident has clearly achieved. Leave blank any domain you did not observe.

<table>
<thead>
<tr>
<th>Recognize urgent problems that may need the involvement of more experienced colleagues and seek their assistance immediately</th>
<th>In Progress / Area on which to Focus</th>
<th>Achieved</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perform complete and appropriate assessments of patients with common acute medical presentations</td>
<td>In Progress / Area on which to Focus</td>
<td>Achieved</td>
</tr>
<tr>
<td>Generate differential diagnoses along with appropriate diagnostic strategies</td>
<td>In Progress / Area on which to Focus</td>
<td>Achieved</td>
</tr>
<tr>
<td>Develop and implement initial management plans</td>
<td>In Progress / Area on which to Focus</td>
<td>Achieved</td>
</tr>
<tr>
<td>Seek assistance as needed when unanticipated findings or changing clinical circumstances are encountered</td>
<td>In Progress / Area on which to Focus</td>
<td>Achieved</td>
</tr>
<tr>
<td>Communicate the diagnosis, prognosis and/or plan of care in a clear, compassionate, respectful and accurate manner</td>
<td>In Progress / Area on which to Focus</td>
<td>Achieved</td>
</tr>
<tr>
<td>Document clinical encounters to adequately convey clinical reasoning and the rationale for decisions</td>
<td>In Progress / Area on which to Focus</td>
<td>Achieved</td>
</tr>
<tr>
<td>Identify patients requiring handover to other physicians or health care professionals</td>
<td>In Progress / Area on which to Focus</td>
<td>Achieved</td>
</tr>
</tbody>
</table>
Methods: Data collection

Local ethics approval obtained

Interview guide developed, iteratively modified

Submitted EPA participants (1\textsuperscript{st}/2\textsuperscript{nd}-year residents and preceptors) contacted for study participation

Semi-structured phone interviews March – June 2018
  ◦ Transcribed and de-identified
Methods: Data Analysis

Qualitative Description: Low-level inference, close to data

Three researchers

Individual open coding: 9 transcripts

Collective consensus on code book

Focused coding rest of transcripts

Agreed upon themes
Results: **Motivations and Goals**

**Residents goals**
- (1) Checkbox requirement
- (2) Feedback acquisition

**Preceptor goals**
- (1) Resident requirement
- (2) Give feedback
- (3) Document “on-track”

“So, obviously I was looking to complete the EPA (laughs), I think. That was, like, the primary objective. ... The second thing, I think, was really looking for feedback.” -FD1.98.R

“Part of it was to convey to [her] that I have confidence in her ability” -FD1.29.P
## Results: Factors affecting assessment

### Preceptor Frame of Reference
- To self
- To average resident
- To competent practitioner

"I thought it was very close to, if not the same, to what I would have done ... which is why I gave it the evaluation that I did."

-CD1.82.P
Results: Factors affecting assessment

“Representative” scoring
  ◦ Case selection

  ◦ Cumulative performance

“this was not a simple case. ... it’s not fair to say that he didn’t achieve anything when he did really well for his level on this case”
-FD1.80.P

“It’s more a sense of your overall quality of work, rather than that individual EPA...”
-FD1.37.R
Results: Impact of Milestones

“...the milestones is a little bit more concrete, as opposed to abstract thoughts ... of what we think a trainee should be accomplishing” - CD1.40.P

MEMORY-AID: FEEDBACK SPECIFICITY

“So then I wonder ... are they giving the highest score to avoid doing that, or did I truly do a good job?” - FD1.22.R

OVERWHELMING: SCORE INFLATION
Results: Feedback and Impact on Learning

INCREASED TIMELINESS OF FEEDBACK

“...it prompts immediate feedback after an encounter” - CD1.40.P

INCREASED FREQUENCY OF FEEDBACK

“...doing these EPA forms does force preceptors to give at least some feedback” - CD1.99.R
Discussion

VALIDITY - SCORING

Threats from unintended variability
  ◦ Frames of reference
  ◦ Specific vs. cumulative performance

Systemic bias toward entrustment
  ◦ Milestones list

VALIDITY - IMPLICATION

Threat to Implications: goals
  ◦ Summative perceptions
    (cf. Bok et al. 2013)

Positive Implications: feedback
  ◦ Increased quantity
  ◦ Improved content
    (specificity, timeliness, direct observation)

Limitations: Internal Medicine specialty only, single institution, local entrustment scale
Questions?

**VALIDITY - SCORING**

Threats from unintended **variability**
- Frames of reference
- Specific vs. cumulative performance

Systemic **bias** toward entrustment
- Milestones list

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References


Daniels VJ, Stach J, Sandu G. Transitioning to Competency-Based Medical Education: Impact of Educational Interventions on Resident Understanding. Canadian Medical Education Journal. 2019 Sep 5.


