Competency Based Medical Education

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Responsibility

Accountability
CBME

A focus on curricular outcomes

An emphasis on abilities

Promotion of learner centeredness

Definition of CBME

An approach to preparing physicians for practice that is fundamentally oriented to graduate outcome abilities and organized around competencies derived from an analysis of societal and patient needs. It de-emphasizes time-based training and promises greater accountability, flexibility, and learner-centeredness.

## Paradigm Shift

<table>
<thead>
<tr>
<th>Variable</th>
<th>Structure and Process-Based</th>
<th>CBME</th>
</tr>
</thead>
<tbody>
<tr>
<td>Driving force for curriculum</td>
<td>Content</td>
<td>Outcome Knowledge application</td>
</tr>
<tr>
<td></td>
<td>Knowledge acquisition</td>
<td></td>
</tr>
<tr>
<td>Driving force for process</td>
<td>Teacher</td>
<td>Learner</td>
</tr>
<tr>
<td>Path of Learning</td>
<td>Teacher</td>
<td>Student ↔ Teacher</td>
</tr>
<tr>
<td>Responsibility of Content</td>
<td>Teacher</td>
<td>Student ↔ Teacher</td>
</tr>
</tbody>
</table>

Paradigm Shift

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<th>CBME</th>
</tr>
</thead>
<tbody>
<tr>
<td>Typical Assessment Context</td>
<td>Proxy/Removed (gestalt)</td>
<td>Authentic Direct Observations</td>
</tr>
<tr>
<td>Assessment tool</td>
<td>Single subjective measure</td>
<td>Multiple objective measures (portfolios)</td>
</tr>
<tr>
<td>Type of Evaluation</td>
<td>Norm referenced</td>
<td>Criterion-referenced</td>
</tr>
<tr>
<td>Timing of Assessment</td>
<td>Emphasis on summative</td>
<td>Emphasis on formative</td>
</tr>
</tbody>
</table>

Competency

an **observable ability** of a health professional, integrating multiple components such as **knowledge, skills, values and attitudes**.

Competencies can be **assembled** like building blocks to **facilitate progression of development**.

Since competencies are **observable**, they can be measured and assessed to ensure their acquisition.

Domains of Competence

- Systems-based Practices
- Interpersonal and Communication Skills
- Practice-based Learning and Improvement
- Professionalism
- Patient care
- Interprofessional Collaboration
- Personal and Professional Development
- Knowledge for Practice
- Scientific and Clinical Inquiry
Entrustable Professional Activities

Represent the day-to-day work of the professional

Observable and Measurable

A practical approach to teaching and assessing competencies

They define the tasks that all new residents must be able to perform under indirect supervision on Day 1 of residency
Core EPAs

1. Gather a **history** and perform a **physical/mental status exam**.
2. Develop and prioritize a **differential diagnosis** following a clinical encounter and select a working diagnosis following a patient encounter.
3. Recommend and interpret common **diagnostic and screening tests**.
4. Enter and discuss **orders** and prescriptions.
5. Provide **documentation** of a clinical encounter in written or electronic format.
6. Provide an **oral presentation/summary** of a clinical encounter.
Core EPAs

7. Form clinical questions and **retrieve evidence** to advance patient care.
8. Give or receive a **patient handover** to transition care responsibility.
9. Collaborate as a member of an **interprofessional team**.
10. Recognize a patient requiring **urgent or emergent care**, initiate evaluation and management.
11. Obtain **informed consent** for tests, procedures and/or treatment options.
12. Perform **general procedures** of a physician.
13. Identify system failures and contribute to a **culture of safety and improvement**.
### EPA 1

#### Gather a history and perform a physical exam

<table>
<thead>
<tr>
<th>Key Functions with Related Competencies</th>
<th>Behaviors Requiring Corrective Response</th>
<th>Expected Behaviors for an Entrustable Learner</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obtain a complete and accurate history in an organized fashion</td>
<td>Does not collect accurate historical data</td>
<td>Gathers excessive or incomplete data</td>
</tr>
<tr>
<td>Demonstrates patient-centered interview skills</td>
<td>Relies exclusively on secondary sources or documentation of others</td>
<td>Uses a logical progression of questioning</td>
</tr>
<tr>
<td>ICS1 ICS7 P1 P3 P5</td>
<td>Is disrespectful in interactions with patients</td>
<td>Questions are prioritized and not excessive</td>
</tr>
<tr>
<td>Demonstrates clinical reasoning in gathering focused information relevant to a patient’s care</td>
<td>Disregards patient privacy and autonomy</td>
<td>Obtains a complete and accurate history in an organized fashion</td>
</tr>
<tr>
<td>KP1</td>
<td>Fails to recognize patient’s central problem</td>
<td>Seeks secondary sources of information when appropriate (e.g., family, primary care physician, living facility, pharmacy)</td>
</tr>
<tr>
<td>Perform a clinically relevant, appropriately thorough physical exam pertinent to the setting and purpose of the patient visit</td>
<td>Does not consider patient’s privacy and comfort during exams</td>
<td>Adapts to different care settings and encounters</td>
</tr>
<tr>
<td>PC2</td>
<td>Incorrectly performs basic physical exam maneuvers</td>
<td>Communicates unidirectionally</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Does not respond to patient verbal and nonverbal cues</td>
</tr>
<tr>
<td></td>
<td></td>
<td>May generalize based on age, gender, culture, race, religion, disabilities, and/or sexual orientation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Does not consistently consider patient privacy and autonomy</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Incorporates responses appropriate to age, gender, culture, race, religion, disabilities and/or sexual orientation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Questions are not guided by the evidence and data collected</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Does not prioritize or filter information</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Questions reflect a narrow differential diagnosis</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Questions are purposefully used to clarify patient’s issues</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Is able to filter signs and symptoms into pertinent positives and negatives</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Performs basic exam maneuvers correctly</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Does not perform exam in an organized fashion</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Relies on head-to-toe examination</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Performs an accurate exam in a logical and fluid sequence</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Targets the exam areas necessary for the encounter</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Identifies and describes normal findings</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Can identify and describe normal and abnormal findings</td>
</tr>
</tbody>
</table>

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Underlying entrustability for all EPAs are trustworthy habits, including truthfulness, conscientiousness, and discernment.

This schematic depicts development of proficiency in the Core EPAs. It is not intended for use as an assessment instrument. Entrustment decisions should be made after EPAs have been observed in multiple settings with varying context, acuity, and complexity and with varying patient characteristics.

[https://www.aamc.org/media/20211/download](https://www.aamc.org/media/20211/download)
EPA 1: Gather a History and Perform a Physical Examination

Key Functions with Related Competencies

- Obtain a complete and accurate history in an organized fashion
  - PC2
  - Demonstrate

Behaviors Requiring Corrective Response

- Does not collect accurate historical data
- Relies exclusively on secondary sources or documentation of others

Developing Behaviors

- Gathers excessive or incomplete data
- Does not deviate from a template

Expected Behaviors for an Entrustable Learner

- Uses a logical progression of questioning
- Questions are prioritized and not excessive

- Obtains a complete and accurate history in an organized fashion
- Seeks secondary sources of information when appropriate (e.g., family, primary care physician, living facility, pharmacy)
- Adapts to different care settings and encounters
Entrustable Professional Activities (EPAs)

EPA = core physician task

EPA assessments ask an observer to estimate the amount of help a trainee needs to successfully complete the task.

“Entrustable” refers to readiness to safely and effectively perform the activity without (direct) supervision.

Performing a physical exam

Taking a patient history
EPA Assessment

*In supervising (student name) today, how much did you participate in the task for EPA1: Gather a history and perform a physical exam.*

<table>
<thead>
<tr>
<th>Rating</th>
<th>Level of Entrustment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Observation only: “I did it. The student observed.”</td>
<td>Student was not trusted to practice the EPA; was allowed to observe.</td>
</tr>
<tr>
<td>2. Direct Supervision: “We did it together.”</td>
<td>Student was trusted to practice the EPA only as a co-activity with the supervisor.</td>
</tr>
<tr>
<td>3. Direct Supervision: “I supervised and helped the student from time to time.”</td>
<td>Student was trusted to practice the EPA only under proactive/full supervision, with the supervisor stepping in as needed.</td>
</tr>
<tr>
<td>4. Indirect Supervision: “The student did it. I double checked ALL elements.”</td>
<td>Student was trusted to practice the EPA under reactive/on-demand supervision, with the supervisor directly double checking all findings.</td>
</tr>
<tr>
<td>5. Indirect Supervision: “The student did it. I double checked KEY elements.”</td>
<td>Student was trusted to practice the EPA under reactive/on-demand supervision, with the supervisor directly double checking key findings.</td>
</tr>
</tbody>
</table>
1. Observation only: "I did it. The student observed."

2. Direct Supervision: "We did it together."

3. Direct Supervision: "I supervised and helped the student from time to time."

4. Indirect Supervision: "The student did it. I double-checked ALL elements."

5. Indirect Supervision: "The student did it. I double-checked KEY elements."

Describe any strengths you noticed in performing EPA 1. Note any specific knowledge, skills, or behaviors that were particularly strong.

What does need to do on EPA 1 in the future to move to the next level of entrustment?
### EPA 2 - Early in Clerkships

#### EPA Rating

- **3**
  - Good organization of questions, included all relevant pieces of the H&P. Asked appropriate follow-up questions and PMH questions. Also kept the interview moving at an appropriate pace.

- **4**
  - Did a great job eliciting a history of both the chronic illness itself and the more acute presentation, helping sort out differences between this episode, what had occurred since the previous episode, and the reason for...

- **3**
  - Well organized presentation with relevant positives and negatives. Excellent documentation with concise summary of important points.

- **3**
  - Did a good job getting a comprehensive history and was able to provide appropriate pertinent positives and negatives for history and physical.

- **3**
  - Got all the issues patient wanted to talk about, got key pieces of history that changed course of conversation.

#### EPA Strengths

- Continue working on determining which ROS questions will be particularly important/relevant for specific presentations.

- Continue to work on asking focused ROS questions as well as a broad for H&P. Think about relevant PMH, PSH, Social hx etc.

- Let’s start reviewing pediatric vital signs and growth charts (including HC) for each patient so you can learn what’s normal.

- Continue to gain comfort in examining pediatric patients on own.

- We will continue doing histories and physicals in the future.
## EPA 10/11 Midway through Clerkships

### EPA Rating

<table>
<thead>
<tr>
<th>Rating</th>
<th>EPA Strengths</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Reasoned approach to level of escalation, correctly identified level of care needed</td>
</tr>
<tr>
<td>4</td>
<td>Gaining good comfort level with recognizing when kids have potential to be 'sick' based on presentation/cc/age/exam/vitals</td>
</tr>
<tr>
<td>5</td>
<td>Immediately recognized that this patient needed to be admitted and required further work up</td>
</tr>
<tr>
<td>4</td>
<td>Took initiative to have the conversation when she realized we would most likely be doing the procedure (I&amp;D for abscess). Accurately described the procedure to the patient, including patient comfort measures (anesthetic)</td>
</tr>
<tr>
<td>3</td>
<td>Took initiative to discuss vaccination with patient historically resistant to receiving vaccines. Prioritized the 1-2 most important vaccines and focused on those</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Rating</th>
<th>EPA Opportunities</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Broadening the differential/next steps if initial steps did not clarify management</td>
</tr>
<tr>
<td></td>
<td>Continuing to think about next steps of what we do if the patient was 'sick'</td>
</tr>
<tr>
<td></td>
<td>Knowledge of typical and atypical criteria for Kawasaki</td>
</tr>
<tr>
<td></td>
<td>Next we will expand to more formal consent procedures ie with documentation</td>
</tr>
<tr>
<td></td>
<td>Move on to more formal consent processes</td>
</tr>
</tbody>
</table>

EPA Rating

2
1. Presentations were generally complete with respect to subjective and objective sections, especially for common conditions.

4
The very first day [4] gave an oral presentation, she spoke with confidence and was willing to give it a shot. She took feedback really well and incorporated it into her presentation immediately.

3
- Understand process/purpose of post cp appointment
- Appropriately focused ROS

2
Better focused on surgical issues, more timely

EPA Opportunities

Continue to work on formalizing the approach to presentations, especially with respect to the assessment and plan. This especially includes leading with an assessment, then formalizing a plan and dx by problem.

With practice the flow of going through presentations will come. But she did a fantastic job for that being her first 2 weeks on the wards.

Further developed plan

Better development of plan, leave out extraneous details

EPA Strengths
Not appropriate feedback

- _____ is polite
- Read more
- Attended sessions and was engaged
- Read, Read, Read!
- Keep practicing
- Notes have improved
- Asked questions
- Presented using SOAP
- NA
- Doing Good
- Shows up on time
Core EPAs

An assessment for learning that provides ongoing, specific and actionable feedback to support a learners growth

- Focus is on direct observation
- Multiple assessments/assessors
- Emphasis is on formative feedback
• All assessments are subject to bias

• Competencies are abilities of individuals and are particularly subject to bias:
  • Professionalism
  • Interpersonal Communication
  • Interprofessional Collaboration
Bias in Learner Assessment

Biases arise from assessors

- Categorizations
- Interpretations
- Assumptions

Biases in medical assessment disproportionately and negatively affect learners who are:

- Women
- UIM: Black, Latino, Native American and Hmong (Minnesota)
- With disability
- Lesbian, Gay, Transgender or Queer
- International Medical Graduates
- Low income
Bias in Learner Assessment

Differences in Narrative Language in Evaluations of Medical Students by Gender and Under-represented Minority Status


Differences in words used to describe racial and gender groups in Medical Student Performance Evaluations

David A Ross, Dowin Boatright, Marcella Nunez-Smith, Ayana Jordan, Adam Chekroud, Edward Z Moore.
Bias in Assessment

Personal Attributes

Active
Enthusiastic
Poised
Polite
Lovely
Pleasant
Wonderful
Bias in Assessment

- EPAs may be a solution to bias mitigation
- Allows a common understanding of expectations
- A tool designed for frequent observations
- Requires direct observation of specific behaviors such as taking a history and physical or creating a differential
Note: Conscious and unconscious biases can influence the judgments we make about others. When selecting your ratings, please focus on observations of the student's behaviors that contributed to your ratings, and limit or eliminate comments pertaining to the student's appearance, inferred intentions, or summary judgments of their character.
Eliminating Bias

- Think about the words you are using and why you are choosing those words.
- Do the words label a behavior or a personality trait. Rephrase what you are saying to describe a specific behavior related to the EPA.
- Take a moment and consider if your feedback would be the same if the student were a different gender? Or a different race? Or did not have a disability that impacts their mobility?
Assessment and Coaching Experts (ACE)

• 15 faculty in the Twin Cities and Duluth
• Every student will be paired with an ACE for required clinical coaching
  • Encourage Students to reflect on their growth and opportunities for developing
  • At least 3 meetings per year
  • Identify and mitigate bias when possible

• Readily available to help with Faculty Development on giving feedback and providing fair and equitable assessments.
Responsibility

Accountability
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References


References

