



Pathway to Entrustability Through Simulation



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OBJECTIVE

- To evaluate the EPAs using a simulation-based curriculum.
- To provide formative feedback to students.
- To track student progress towards entrustment.

BACKGROUND

Not all medical school graduates are adequately prepared for residency. To address this issue, in 2014 the AAMC released a list of Entrustable Professional Activities (EPAs), a list of tasks and responsibilities that medical students are expected to perform unsupervised upon graduation. Since the purpose of the EPAs is to evaluate whether medical students can perform these tasks independently, we can deduce that not all students are competent in all tasks. Since we do not know which tasks students can or cannot perform independently, one of the safest ways to evaluate them is through medical simulation. Of the 13 EPAs, 11 can be evaluated using simulation, and three of the EPAs can only be evaluated using simulation. Our medical school is one of the 10 in the nation that will be piloting the incorporation of the EPAs within the curriculum over 5 years. We propose a framework for evaluating the EPAs using simulation throughout the third year of medical school, allowing opportunities for formative feedback and tracking of student progress.



Trainees participating in a simulation session at the Yale Center for Medical Simulation

METHODS CON'T

Students will sign a confidentiality form stating that they will not share information about the cases to other medical students. EPA performance is graded using a standardized scoring vignette that remains static for each EPA, and is based upon criteria provided by the AAMC in their document, "Core EPAs for Entering Residency" (Fig. 2). Performance will be graded by a core group of faculty members trained in use of the scoring vignette. Students receive timely feedback on their performance. Formative EPA evaluations are tracked longitudinally. Simulation-based performance measures on individual EPAs will be added to a database of non-simulation based evaluations for that EPA. Student performance will be tracked in their EPA portfolio, which will be reviewed by an EPA coach. EPA coach will discuss the student's performance with them and provide a discussion on how to improve.

Figure 1: EPA Assessment Schema

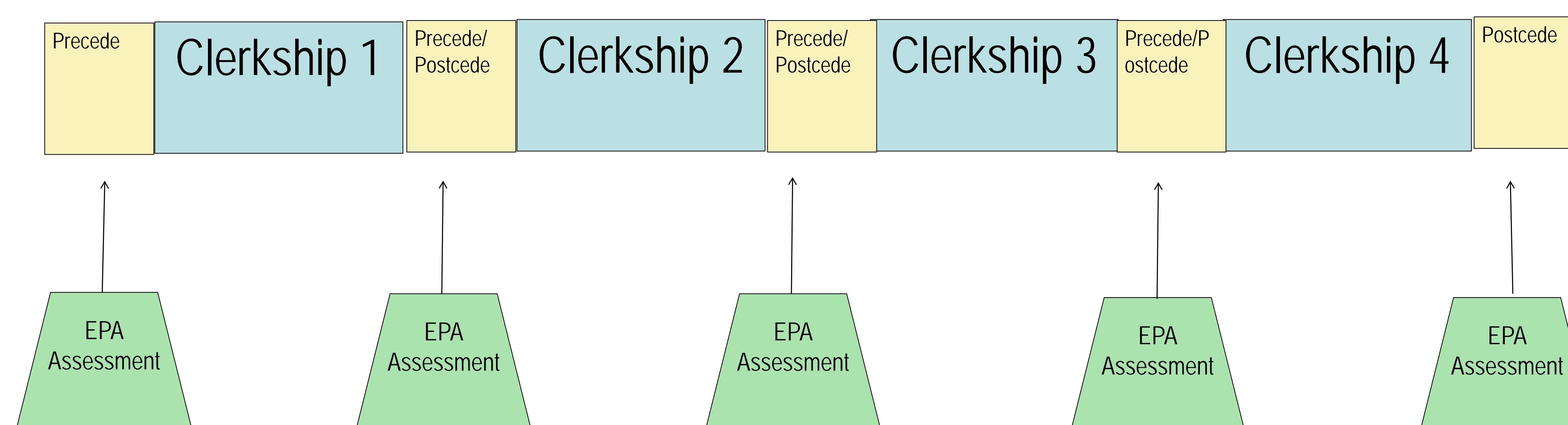


Figure 2. Example Scoring Vignette for EPA 10

Pre-Entrustable Learner:

- Does not recognize age-appropriateness of, trends in, and variations in patient's vital signs
- May dismiss concerns of patient deterioration by team members
- Is easily distracted by multiple problems and has difficulty prioritizing for efficient patient care
- Demonstrates limited ability to gather, filter, prioritize and connect pieces of information to form a patient-specific differential diagnosis, initiate interventions, and drive testing decisions
- Requires supervisors and/or other members of the team to initiate correct interventions and testing in an urgent or emergent setting
- Delays seeking help due to pride, anxiety, fear, and/or inadequate awareness of personal

Entrustable Learner:

- Recognizes age appropriateness of, trends in, and variations of patient's vital signs
- Actively listens to and elicits feedback from team members regarding concerns about patient deterioration to determine next steps
- Adheres to institutional procedures and protocols regarding escalation of patient care
- Gathers, filters, prioritizes, and connects pieces of information to form a patient-specific differential diagnosis, initiate interventions, and drive testing decisions
- Initiates interventions and tests with frequent reassessment to determine level of help needed and to anticipate next steps
- Understands and recognizes personal limitations, emotions, and personal biases and seeks help when needed
- Interprets common test results to anticipate and respond to early clinical deterioration

METHODS

Our curriculum involves 5 EPA evaluations per student, encompassing all 100 students, over the course of their third year of medical school. The medical student 48 week curriculum is naturally broken up into four 12 week blocks. The first and last week of each block are known as the precede and postcede weeks, respectively. These weeks lend themselves well to EPA assessments. During the first block, all medical students will undergo 1 simulation scenario during the precede week or during their Emergency Medicine clerkship (maximum of 25/100 students) (Fig. 1). The second evaluation will take place during the postcede week of the first block or during the precede week of the second block. The third evaluation will take place during the postcede week of the second block or the precede week of the third block. The fourth evaluation will take place during the postcede week of the third block or the precede week of the fourth block and the fifth evaluation will take place during the postcede week of the fourth block. Each simulation case will take 20 minutes and will incorporate 4 EPAs. Over the course of the year, students will be evaluated on these 4 EPAs 5 times.

CONCLUSIONS

A simulation-based EPA assessment curriculum can be implemented within the third-year medical student curriculum in order to track student progress towards entrustment longitudinally and to generate opportunities for providing formative feedback to students on clinical performance within the simulated environment, in an attempt to foster students' progress towards entrustability.

REFERENCES

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