Best of the Best Presentations

84 A Simulation-Based Curriculum for Evaluating the Entrustable Professional Activities (EPAs) During the Emergency Medicine Clerkship

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Introduction: Program directors (PDs) have expressed concern that some medical school graduates are not prepared for residency. This is a problem for emergency medicine (EM) because our residents treat critically ill patients and should all have a baseline level of competency. To address this issue, the American Association of Medical Colleges (AAMC) developed the Entrustable Professional Activities (EPAs), a list of tasks and responsibilities that medical students are expected to perform unsupervised upon graduation. It is likely that EPA evaluations will soon become embedded within existing medical school curricula and clerkships. 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.

Objectives: To develop a simulation-based framework for evaluating the EPAs during the EM clerkship.

Design: While all EPAs are relevant to EM, a majority can be evaluated through simulation, and 2 can be evaluated only by simulation (Figure 1). Our curriculum involves 1 weekly simulation session per 4 week clerkship where the student will independently perform 1 scenario. A maximum of 4 EPAs are evaluated per scenario. Each EPA is evaluated at least twice (before and after the half-way point) (Figure 2a). EPA performance is graded using a standardized scoring vignette

EPA 1: Gather a history and perform a physical examination
EPA 2: Prioritize a differential diagnosis following a clinical encounter
EPA 3: Recommend and interpret common diagnostic and screening tests
EPA 4: Enter and discuss orders and prescriptions
EPA 5: Document a clinical encounter in the patient record
EPA 6: Provide an oral presentation of a clinical encounter
EPA 7: Form clinical questions and retrieve evidence to advance patient care
EPA 8: Give or receive a patient handover to transition care responsibility
EPA 9: Collaborate as a member of an interprofessional team
***EPA 10: Recognize a patient requiring urgent or emergent care and initiate evaluation and management**
EPA 11: Obtain informed consent for tests and/or procedures
***EPA 12: Perform general procedures of a physician**
EPA 13: Identify system failures and contribute to a culture of safety and improvement

Legend:
Bold = EPAs that can be evaluated using simulation
* = EPAs that can *only* be evaluated using simulation

Figure 1. *EPA*, entrustable professional activities

which remains static for each EPA, and is based upon bulleted lists provided by the AAMC in their document, Core EPAs for entering residency (Figure 2b). Students receive feedback on performance and are tracked longitudinally.

Impact: A simulation-based curriculum during the EM clerkship may evaluate EPAs without compromising patient safety. Identification of and remediation of weak areas should improve competence and thus the proficiency of incoming interns.

A. Sample EPA Schedule for a 4-week Clerkship

Week 1	Week 2
EPAs evaluated: 1, 3, 6, 10	EPAs evaluated: 2, 4, 7, 12
Week 3	**Week 4**
EPAs evaluated: 1, 2, 10, 12	EPAs evaluated: 3, 4, 6, 10

B. Example of scoring vignette for EPA 10[1]:

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 limitations
- Inconsistently orders and interprets test results delaying reassessment and further testing or interventions

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 divisions
- 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

[1]Adapted from: Association of American Medical Colleges (AAMC). Core Entrustable Professional Activities for Entering Residency. 2014; https://members.aamc.org/eweb/upload/Core%20EPA%20Curriculum%20Dev%20Guide.pdf.

Figure 2. *EPA*, entrustable professional activities

85 ALiEM AIR Series: Curating, Evaluating, and Monitoring Individualized Interactive Instruction Using Social Media Resources

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Background: In 2008, the emergency medicine (EM) Resident Review Committee endorsed a change in educational requirements to allow for asynchronous learning, or Individualized Interactive Instruction (III). This change coincided with increasing use of social media (SM) resources in medical education. Despite widespread SM use by learners, residency programs struggled to incorporate SM into III due to difficulties providing oversight, monitoring participation, and assessing quality of these resources. Academic Life in Emergency Medicine (ALiEM)