UC Irvine

Western Journal of Emergency Medicine: Integrating Emergency Care with Population Health

Title

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

Permalink

https://escholarship.org/uc/item/2rw196zn

Journal

Western Journal of Emergency Medicine: Integrating Emergency Care with Population Health, 16(4.1)

ISSN

1936-900X

Authors

Joshi, N.
Grock, A.
Morley, E.
et al.

Publication Date

2015

Copyright Information

Best of the Best Presentations

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

Moadel T, Evans L / Yale University School of Medicine, ANew Haven, CT

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
EPAs evaluated:
1, 3, 6, 10

Week 2
EPAs evaluated:
2, 4, 7, 12

Week 3
EPAs evaluated:
1, 2, 10, 12

Week 4
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

Joshi N, Grock A, Morley E, Swaminathan A, Ankel F, Branzetti J, Taira T, Yarris L, Lin M / Stanford University, Stanford, CA; SUNY Downstate Medical Center, Brooklyn, NY; Stony Brook University, Brooklyn, NY; New York University, New York, NY; University of Minnesota, St. Paul, MN; University of Washington, Seattle, WA; University of Southern California, Los Angeles, CA; Oregon Health and Science University, Portland, OR; University of California San Francisco, San Francisco, CA

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)

created the ALiEM Approved Instructional Resources (AIR) series to address these difficulties.

Objectives: ALiEM AIR series provides EM residency programs curated SM options for III. The series fulfills Accreditation Council for Graduate Medical Education requirements for III (must monitor and evaluate resident participation, provide faculty oversight, and monitor program effectiveness), by 1) Recruitment of editorial board to evaluate online resource quality; 2) Development of scoring instrument to rate each resource, applying principles of instrument design; and 3) Piloting of series to determine feasibility and user satisfaction.

Curricular Design: Each module begins with a set of articles that are scored by the Executive Board using an internally derived scoring system (Figure 1). Articles are limited to those published within last 12 months. Resident participation is tracked using Google Forms. Residency programs can securely obtain this information through ALiEM.

Impact: This innovation was designed to address the growing need for faculty oversight and quality control for residents who access SM resources for III. As of November 2014, 4 modules are available with 30 participating US residency programs (Figure 2). The most recent module 1-week Google Analytics data had 348 page-views from 167 cities. Studies are in progress to collect validity evidence to further guide scoring instrument use.

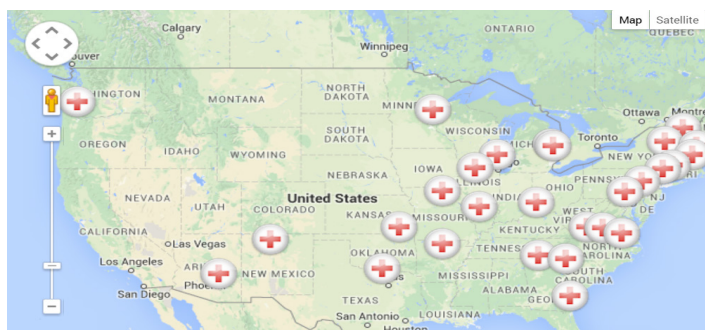| Tier 1: BEEM Rater Scale	Score	Tier 2: Content accuracy	Score	Tier 3: Educational Utility	Score	Tier 4: EBM	Score	Tier 5: Referenced	Score
Assuming that the results of this article are valid, how much does this article impact on EM clinical practice?		Do you have any concerns about the accuracy of the data presented or conclusions of this article?		Are there useful educational pearls in this article for residents?		Does this article reflect evidence based medicine (EBM) and thus lack bias?		Are the authors and literature clearly cited?	
Useless information	1	Yes, many concerns from many inaccuracies	1	Low value: No valuable pearls	1	Not EBM based, only expert opinion	1	No	1
Not really interesting, not really new, changes nothing	2		2		2		2		2
Interesting and new, but doesn't change practice	3	Yes, a major concern about few inaccuracies	3	Yes, but there are only a few (1-2) valuable or multiple (>=3) less-valuable educational pearls	3	Minimally EBM based	3		3
Interesting and new, has the potential to change practice	4		4		4		4	Yes, authors and general references are listed (but no in-line references)	4
New and important: this would probably change practice for some EPs	5	Minimal concerns over minor inaccuracies	5	Yes, there are several (>=3) valuable educational pearls, or a few (1-2) KEY educational pearls that every resident should know before graduating	5	Mostly EBM based	5		5
New and Important: this would change practice for most EPs	6		6		6		6		6
This is a "must know" for EPs	7	No concerns over inaccuracies	7	Yes, there are multiple KEY educational pearls that residents should know before graduating	7	Yes exclusively EBM based (unbiased)	7	Yes, authors and in-line references are provided	7
Your Score									

Figure 1.

Figure 2.

86 The Patient Experience and High-Fidelity Simulation

Werner S, Noeller T / MetroHealth Medical Center, Cleveland, OH

Introduction: The emergency department (ED) version of the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) is coming. In our patient satisfaction surveys, patients treated by residents gave lower patient satisfaction scores. To convey the importance of the patient experience, we developed a patient experience simulation.

Objectives: This experience provided residents with the patient perspective of an ED visit in order to fully appreciate the drivers of patient satisfaction.

Design: A full-immersion, in-situ simulation was used. The sim was conducted for over two 4 hour periods in the ED, with Â½ of the class in each sim. ED staff was briefed just prior to the sim.

Interns were paired, with one as patient, the other as family member. Patients were provided with background info (motor vehicle collision) (MVC) and chief complaint (knee/neck pain). Patients were immobilized and transported via ambulance to the trauma bay. Family members were separated for registration. Patients were assessed by a doctor of medicine (MD), registered nurse (RN) and medic, and sent to radiology. After simulated films, patients were taken to a hall space and reunited with family.

Patients were given cues to heighten awareness of typical patient needs (You have 10/10 right knee pain, you need meds, you have to void, etc.) An RN and two MDs continued to role-play caregivers, providing test results, etc. Discharge instructions were provided. Each intern completed a Press-Ganey survey. A debrief was held, using survey results and discussion points of the positive and negative aspects, and emotional response to the experience.

Impact: Participants overwhelmingly felt this was a powerful sim that heightened awareness of the patient experience. The expressed motivation to address the full array of patient needs including pain relief, privacy, comfort, communication, etc. Residents indicated they would be far more cognizant of these needs based on their own patient experience.

87 Use of Skip Logic Embedded Within the Electronic Medical Record for Milestone-Based Resident Evaluation

Marshall J, Chung A, Welniak T, Saloum D, Gupta K, Weiner C / Maimonides Medical Center, Brooklyn, NY