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Permalink
https://escholarship.org/uc/item/3rh3t1fc

Journal
Western Journal of Emergency Medicine: Integrating Emergency Care with Population Health, 19(4.1)

ISSN
1936-900X

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Publication Date
2018

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Using a Clinical Dashboard to Empower Resident Education: Does Incorporating Objective Feedback Into Semi-Annual Evaluations Improve Insight and Impact Clinical Behaviors Among Residents?

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**Background:** Since the implementation of the Next Accreditation System in 2014, residency programs have struggled to provide meaningful milestone-based data for their residents that demonstrates measurable outcomes. Many programs have adopted end-of-shift or end-of-rotation evaluation forms, but encounter barriers such as poor faculty compliance or performance inflation. Some programs have recently adopted clinical dashboards to display certain metrics, such as door-to-provider time, but often there is no explanation of how the data was derived or how the resident should incorporate the information into a milestone-based assessment of their performance. To the best of our knowledge, this is the first study investigating a novel approach to address this educational need using an EM Resident Clinical Dashboard to integrate performance metrics and milestone assessments directly into semi-annual review sessions for residents.

**Educational Objectives:** Following the Kirkpatrick model, we will determine if the use of our Dashboard to provide feedback during semi-annual review sessions 1) improves resident and faculty satisfaction with the semi-annual review and feedback process; 2) improves the accuracy of residents’ self-assessment of their clinical performance; and 3) significantly impacts the clinical behaviors of individual residents.

**Curricular Design:** We propose a single blinded randomized controlled pilot study to determine the effectiveness of our educational intervention. Participants will be 62 EM residents from a single institution. All residents will be provided their own Dashboard (FIGURE 1) via email with viewing instructions. However, the intervention group will additionally receive targeted feedback from faculty during their semi-annual review sessions using Key Performance Indicators from the Dashboard based on a synthesis of ACGME milestones, reportable quality metrics, and data registries such as the ACEP Clinical Emergency Data Registry (TABLE 1).

**Impact/Effectiveness:** We believe that use of our Dashboard during semi-annual review sessions can empower resident education by providing objective clinical data to inform milestone assessments as well as prepare our residents for practice in an increasingly data-driven world.
21 Using an ‘Oral Board’ Exam to Assess for EPA 10 in the Emergency Medicine Rotation

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Background: The Association of American Medical College encourages medical schools to use 13 Entrustable Professional Activities (EPAs) as a framework for assessing student preparedness for residency. The Emergency Medicine (EM) clerkship provides an appropriate clinical setting to observe, practice and therefore assess EPA 10: “recognize a patient requiring urgent or emergent care and initiate evaluation and management.” This important skill is one in which many medical students have shown difficulty with. Medical schools use various techniques to evaluate for EPA 10, some using simulation, while others using an objective structured clinical exam. Oral exams have been studied in other specialties, but haven’t been studied in EM or in evaluating for EPA 10.

Educational Objectives:
• Develop an assessment method that can evaluate students in EPA 10.
• Design case scenarios that can be used to evaluate student performance.
• Identify critical actions and create an assessment tool for evaluation of student performance.

Curricular Design: The ‘oral board’ exam is used by the American Board of Emergency Medicine to certify practitioners as competent in all aspects of EM care. We decided to use this style of exam to assess for EPA 10 during our EM rotation. We created 3 case scenarios, which were given by faculty and/or selected senior residents at the end of the rotation. The cases are: 1) Trauma with pneumothorax and intraperitoneal bleeding, 2) Chest pain secondary to a pulmonary embolism, and 3) Altered mental status with UTI/sepsis. All cases require the student to evaluate the ABC’s, initiate appropriate treatment, obtain adequate help, and communicate with other providers.

Impact/Effectiveness: To assess whether the oral exams evaluate different or redundant variables to that of the medical students’ clinical scores or their NBME shelf exam scores, we calculated a Spearman Rank Order Correlation. Comparing the oral exam to the shelf exam produced a p-value of 0.558, so the correlation was not statistically significant. Furthermore, comparing the oral exam to the clinical scores produced a p-value of 0.457, also not statistically significant. Therefore, there was no statistically significant correlation between the oral and shelf exams, or the oral and clinical scores. This confirms that the oral exam evaluates different, non-redundant variables than the clinical and NBME shelf scores.