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

Title

Team Based Learning: Acute Ischemic Stroke

Permalink

<https://escholarship.org/uc/item/3f94f2q9>

Journal

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

ISSN

1936-900X

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Publication Date

2015

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Table 1. Themes, subthemes, and educational considerations of interprofessional perceptions regarding the crucial elements of emergency department (ED) handoffs.

Theme	Subthemes	Educational considerations
Process	Standardization Information order Available tools (documentation phrases, mnemonics, etc)	<ul style="list-style-type: none"> • Importance of standardized process • Need for orientation and ongoing monitoring and training of all providers
Time	Brevity Interruptions Waiting	<ul style="list-style-type: none"> • Recognition of the tension between time constraints and educational mission – learners may not be as efficient as attendings
Environment	Signout location (dedicated space, bedside vs. separate) ED factors (crowding, volume)	<ul style="list-style-type: none"> • Bedside handoffs may provide a different level of safety for learners to practice handoff skills than provider-only locations • Patient care needs may supercede educational aspects of handoff depending on ED factors
Culture	Provider buy-in Openness to change Shared goal expectations	<ul style="list-style-type: none"> • Aligning competing operational, patient safety, and educational interests may help increase engagement in handoff interventions • ED culture and provider expectations may impact the feasibility and acceptability of handoff interventions. Soliciting stakeholder engagement early may help increase buy-in.

acceptance of educational interventions that aim to teach and assess handoff competency.

67 Teaching Videos Enhance Students' Ability to Self-Assess their Performance as a First-Responder on Objective Structured Clinical Examinations (OSCEs)

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Background: First-years students attend an Introductory Emergency Medicine Clinical Skills Course, learning first-responder skills, followed by a single-station objective structured clinical examination (OSCE) to evaluate learning.

Objectives: To determine whether grading benchmark first-responder OSCE videos enhances students' ability to assess their own OSCE performance and whether students find these videos to be a helpful learning tool.

Methods: In fall 2012, a grading rubric was used to give each student (n=39) a "percent score" for the OSCE. The author HG, blinded to the percent score, reviewed video recordings of each OSCE, assigning a subjective "expert score" on a scale of 1 (poor) to 5 (excellent). Students reviewed their own videos, providing a "self-score" out of a 5. They then scored three videos of a first-responder managing the case with poor, average and excellent performance. Students then re-scored their own video. Finally, students were asked: "On a scale of 1 (not at all) to 5 (a lot), how much did the three benchmark videos contribute to your training as a first-responder?"

Analysis: Paired t-test was used to compare self-scores and the Maxwell-Stuart test was used to compare frequency distributions. Spearman's correlation coefficient was used to assess correlations between scores and other variables in the study. All analyses were done using STATA version 11.

Results: 39.5% of self-scores changed after video review, with 80% decreasing. There was a positive correlation between percent and expert scores ($r=0.47$, $p=0.003$), and percent and self scores post-video review ($r=0.39$, $p=0.017$). 86.8% of the students responded to the evaluation question with a 4 or a 5.

Conclusions: Benchmark videos are a helpful learning tool. Expert scores' correlation with percentage scores suggests that a 5-point grading scale is an effective way to assess OSCEs. Student self-scores after video review aligned more closely with the percentage score, suggesting that videos improved their ability to self-assess.

68 Team Based Learning: Acute Ischemic Stroke

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Background: Ischemic cerebrovascular accident (stroke) is common in the US. It is the leading cause of adult disability and third most common cause of death. A delay in treating a stroke leads to a worsened neurologic outcome. Tissue plasminogen activator (TPA) is a time-sensitive medication with complex inclusion and exclusion criteria. These issues push emergency physicians to make the diagnosis and create

a management plan rapidly. Complex cases can be anxiety provoking and difficult for a resident to make appropriate clinical decisions.

Educational Objectives: 1. Teach the National Institute of Health Stroke Scale (NIHSS) 2. Apply the NIHSS in a controlled setting 3. Determine a treatment plan based on NIHSS 4. Emphasize the inclusion and exclusion criteria for TPA 5. Reinforce the risks and benefits of using TPA 6. Review current literature on treatment for non-TPA candidates.

Curricular Design: We created a team based learning exercise to help residents diagnose and treat strokes. The exercise started with a test to identify knowledge gaps. Residents were then led through 6 stroke cases in groups. They were supplied with the patient’s history and computed tomography followed by a video of an actor/resident displaying deficits based upon a stroke syndrome. The residents tallied the patients NIHSS based on the video. The groups submitted their NIHSS and any discrepancies in scoring were discussed. The groups submitted a treatment plan for the patient’s case. At the conclusion, key teaching points about diagnosis, management, and treatment were reviewed with faculty.

Impact: The resident groups initially had significant variability in their scoring on the NIHSS for the patient, but by the end of the session the accuracy greatly improved. The repetition of the cases increased familiarity with the NIHSS as well as the inclusion and exclusion criteria. Session feedback showed the residents enjoyed applying the NIHSS in a nontraditional teaching format and are more confident on stroke treatment decisions.

69 The Correlation Between USMLE and COMLEX Exam Scores for Applicants to a Dually Approved Emergency Medicine Residency: An Eight Year Experience

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Introduction: With the announced single graduate medical education system, emergency medicine (EM) residencies may see an increase in applicants who submit unfamiliar standardized exam scores. To date, there is limited information positively correlating United States Medical Licensing Examination (USLME) and Comprehensive Osteopathic Medical Licensing Examination (COMLEX) scores for EM applicants.

Objective: To determine the correlation between USMLE and COMLEX scores for applicants to an EM residency.

Methods: After institutional review board (IRB) approval, we retrospectively gathered all exam scores for applicants to our 4 year, 56 member, dually approved EM residency from 2006-13. Included were applicants who submitted scores for both exams. Demographic analysis was descriptive. Scatterplots were used to visualize pairwise relationships. Multiple linear regression models, stratified by test step were created with COMLEX score as the outcome and USMLE score as the predictor value. Participant age and sex were included in each model.

Results: The identified 556 applicants are show in Figure 1. Pair 1 is applicants with both COMLEX Step-1 and USMLE Step-1 scores (n=486). Pair 2 are those with both COMLEX Step-2 and USMLE Step-2 scores (n=356). For Pair 1 66% were male with an average age of 28. For Pair 2, 64% were male; the average age was 28. Mean, standard deviation, and median for Pair 1 on the COMLEX was 551, 69 and 548. For the USMLE it was 216, 16, 217. Results for Pair 2 on COMLEX were 566, 80, 562. USMLE results for Pair 2 were 228, 18, 229. As shown in Figure 2, a strong correlation was observed for Pair 1 ($r=0.78, p<0.001$). A linear regression model controlling for sex and age, a one point increase in USMLE Step-1 is associated with a 3.55 point increase in the COMLEX Step-1 score ($\Delta\hat{Y}=3.55; 95\% \text{ CI:}[3.30-3.80], p<0.001$). A similar strong correlation was observed for Pair 2 ($r=0.72, p<0.001$).

Conclusions: In our cohort a strong positive correlation between USMLE and COMLEX was found. This relationship may aid EM residency evaluation of applicants who submit test scores with which they are not familiar.

e 1. Participant test data

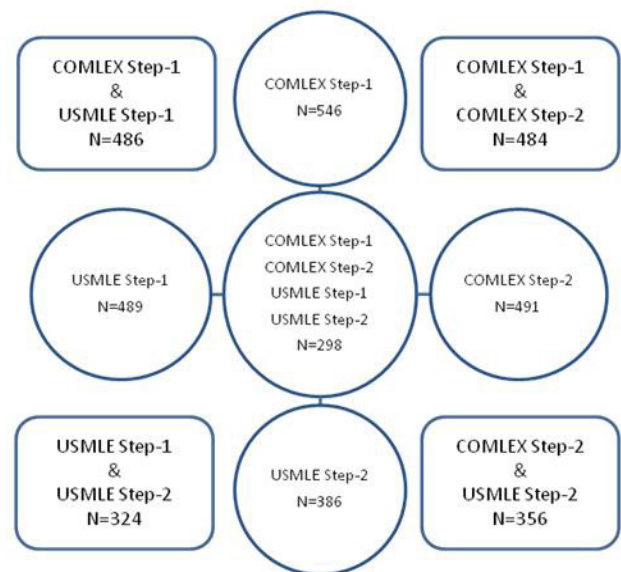


Figure 1. Participant test data.

USMLE, United States Medical Licensing Examination; COMLEX, Comprehensive Osteopathic Medical Licensing Examination