

UC Irvine

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

Title

EM-Bound Medical Student Exam Performance on the EM-Advanced Clinical Examination (EM-ACE) and Versions 1 and 2 of the National EM M4 Exams

Permalink

<https://escholarship.org/uc/item/32p1518s>

Journal

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

ISSN

1936-900X

Authors

House, J.
Morrisey, T.
Hiller, K.

Publication Date

2015

Copyright Information

Copyright 2015 by the author(s). This work is made available under the terms of a Creative Commons Attribution License, available at <https://creativecommons.org/licenses/by/4.0/>

negative mean change in test scores). However, this loss of knowledge retention was less among case-based learners vs. the traditional learners (1%, 7%, respectively, $p=0.18$).

Future directions include effect of the learners' curriculum satisfaction on knowledge retention.

19 Efficacy of iPad iTunes U Electronic Curriculum in Emergency Medicine Education

Wray A, Toohy S, Chakravarthy B, Wiechmann W, Anderson C / University of California, Irvine, Orange, CA

Background: Recent theories suggest that adult learners respond better to self-directed learning over formalized learning processes. Additionally, Accreditation Council for Graduate Medical Education and the Residency Review Committee now allow 20% of required educational time to be done as "distance learning." The UC Irvine emergency medicine (EM) Residency Program implemented a distance-learning curriculum; it is iPad based and includes four modules per month.

Objectives: The primary outcome was improvement of In-Training exam scores. Our statistical goal was to compare the In-Training Exam Scores of those who consistently complete the iPad curriculum (defined by completion of >75% of modules) to those who did not. We hypothesized that those residents that more consistently completed the monthly modules would have increased In-Training Exam scores compared to those residents that do not.

Methods: The study was a prospective cohort study aimed to measure efficacy of the iPad curriculum. We analyzed the module, test and survey data from the 18 UCI EM Residents during 2013-2014.

Results: The statistical analysis involved a 2-sample t-test comparing those that completed 75% or more of the modules to those that completed less than 75% of the modules. The residents that completed 75% or more scored 2.2 points higher on the EM In-Training exam, however the difference was not significant ($p=0.48$).

Conclusion: Although we did see a slight improvement in residents who completed greater than 75% of the iPad modules the results were not statistically significant. Unfortunately, due to residency size we had a small sample size. The study was also limited by multiple confounding variables, including home studying methods, other changes to the UCI EM Curriculum, and resident lecture attendance. Overall the UCI EM Residents had positive comments about the iPad curriculum, and we will use the results of this study to help further shape the 2014-2015 iPad curriculum to be educationally beneficial and to expand this study with additional data points.

20 EM-Bound Medical Student Exam Performance on the EM-Advanced Clinical Examination (EM-ACE) and Versions 1 and 2 of the National EM M4 Exams

House J, Morrissey T, Hiller K / University of Michigan School of Medicine, Ann Arbor, MI; University of Florida, Jacksonville, Jacksonville, FL; University of Arizona, Tucson, AZ

Background: In April 2013, the National Board of Medical Examiners (NBME) offered an Advanced Clinical Examination (ACE) in emergency medicine (EM). In addition to this, the Clerkship Directors in Emergency Medicine (CDEM), have provided two (Versions 1 and 2), online high-quality, internally validated exams. While national usage statistics, including performance averages, are available for all 3 exams, it is unknown how career-bound EM students (i.e. those who match into EM) perform on the exams as compared to the entire national cohort. Interpretation of exam scores of EM-bound students may need to be adjusted if performance on national exams differs between EM- and non-EM-bound students. This study compares performance of students who matched into an EM residency in 2014 to students who did not on the EM-ACE and Version 1 (V1) and Version 2 (V2) of the National M4 EM exams.

Methods: In this retrospective multi-institutional cohort study, the EM-ACE and either V1 or V2 of the EM M4 exam was given to students taking a 4th year EM rotation at 3 institutions from April 2013 to February 2014. Exam performance, including the scaled EM-ACE score, percent correct on the EM M4 exams, and whether the student matched in EM in the 2014 National Resident Matching Program Match were collected. Students' t-tests were performed on the exam averages of students who matched in EM as compared with those who did not.

Results: 132 students from 3 institutions took the EM-ACE and one of the EM M4 exams. 35 students matched in EM in the 2014 Match. The mean score for EM-bound students on the EM-ACE, V1 and V2 of the EM M4 exams were 70.5, 84.9, and 83.3, respectively. Mean scores for non-EM-bound students were 68.0, 83.5, and 74.5. There was a difference in mean scores for V2 of the EM M4 exam only.

Discussion: In conclusion, there was no significant difference between performances comparing those who matched into an EM residency to those that did not on the EM-ACE or V1 of the EM M4, but there was in V2 scores for EM-bound and non-EM-bound students.