

Assessing the Need for a Novel Curriculum on Integrating Evidence-Based Medicine into Practice for Senior Emergency Medicine Residents



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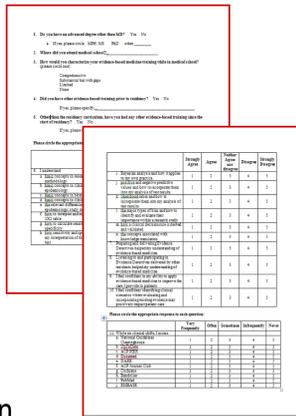
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Introduction

- Integration of evidence-based medicine (EBM) into daily practice is critical for providing appropriate Emergency Department care and is included in the core milestones for residency training.
- Successfully incorporating EBM at the bedside is challenging for emergency physicians at all levels due to:
 - inadequate exposure to EBM
 - lack of training on how to use it to improve care for individual patients
 - Insufficient time during busy clinical practice

Methods

- We surveyed 4th year Emergency Medicine (EM) residents in a large, urban, 4-year residency program to assess the need for additional practice-based EBM education to integrate it at the bedside
- We used a 59-item self-administered written questionnaire developed by the investigators after extensive literature review
- Eleven 4th year EM residents (100%) completed the needs assessment survey.
- We created a customized RedCap Database with variables based on the questionnaire design.
- Data were analyzed using Stata v12.0 (Stata Corp, College Station, TX).



Results

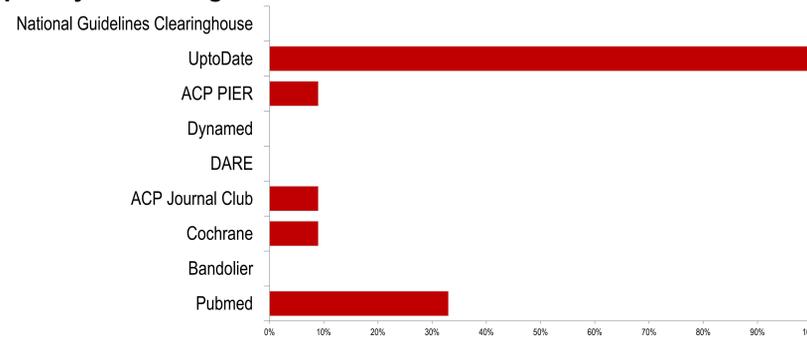
Table 1: Self-reported baseline experience with evidence-based medicine for emergency medicine 4th year residents

	n=11
Advanced degree other than MD	1 (9%)
Evidence-based medicine training while in medical school	
Comprehensive	0 (0%)
Substantial, but with gaps	2 (22%)
Limited	9 (82%)
Evidence-based training other than residency curriculum since start of residency	1 (9%)

Table 2: Self-reported current knowledge, attitudes, and practice surrounding evidence-based medicine for emergency medicine 4th year residents

	n=11
Low confidence in identifying scenarios where EBM may impact patient care	1 (9%)
Poor understanding of Bayesian analysis and how it applies to practice	
Low confidence in their ability to critically appraise scientific literature	0 (0%)
Low confidence in ability to review the appraisal work of their peers	2 (22%)
Believe increased focus on EBM skills and bringing EBM to the bedside would be a valuable part of senior EM resident education	1 (9%)

Figure 1: Online resources emergency medicine 4th year residents report frequently accessing while on clinical shifts



Conclusions

- Additional training in practice-based EBM is clearly needed.
- Senior EM residents report inadequate EBM training and low confidence in applying it for patient care.
- Enthusiasm exists for additional training on integration of EBM into practice.

Limitations

- Small n limits the confidence in point estimates (survey only included 4th year residents as this was our intended target for intervention)
- Findings from a single urban, 4-year emergency medicine residency may not be generalizable
- Results are based on self-report of EM residents, which is subject to significant bias.

Our Novel Curriculum & Future Research

Based on these results, we have developed, implemented and are evaluating the “E-Shift,” a novel bedside EBM training intervention.

- The Education “E” Shift for 4th year Emergency Medicine residents is 8 hours once each month
- The E-shift resident serve as a resource to those working clinically, using EBM to respond to at least 4 questions using the following steps:
 - formulating a searchable question
 - identifying an article using EBM search resources
 - performing a structured critical appraisal of the article,
 - preparing a “clinical bottom line” summary applying the findings to the initial question
- We developed a web interface with prompts assisting residents with each step.
- We added a peer-review process, in which each E-shift resident evaluates a response submitted by a colleague during a previous e-shift and selects one of their own responses for future peer-review.
- We publish each peer-reviewed response on our residency website.
- Every two weeks, we post a selected response on the “e-shift blog” for faculty and resident discussion.

