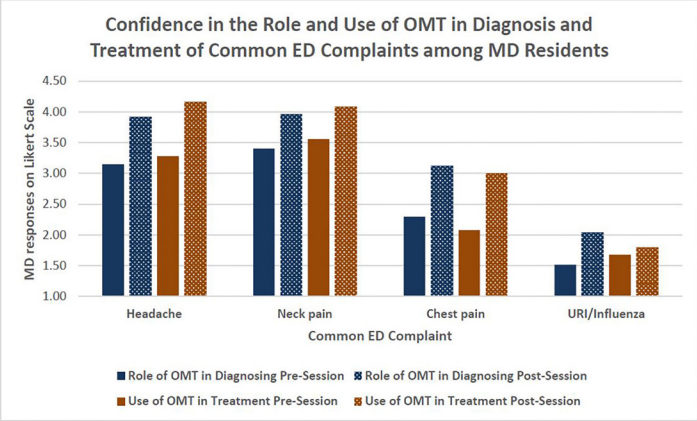

44 Teaching the Emergency Medicine Competencies During a Clinical Shift: Effective and Ineffective Strategies Used by Faculty

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Background: Throughout training, emergency medicine residents are expected to reach milestones across a range of specialty specific subcompetencies. Yet little is known about how these skills are taught in the emergency department.

Objectives: The objective of this study is to identify specific teaching strategies that faculty use in the clinical setting that facilitate resident learning of fundamental skills.

Methods: The nominal group technique, a structured method used to generate items and reach group consensus, was used to elicit responses from faculty and residents regarding effective teaching strategies. Two separate groups of faculty and resident participants were convened. Participants independently generated responses to specific questions aimed to identify effective and ineffective strategies for teaching skills in the following areas: 1) clinical decision making, 2) procedures, 3) interpersonal and professional, and 4) multitasking. Responses were shared with the group in a round robin fashion and privately voted on as being important/not important. Responses were analyzed using qualitative data analysis and descriptive statistics. Investigators developed a code sheet listing the overarching competencies that were identified during the groups, then items were coded by two investigators independently and interrater reliability was assessed.

Results: Six EM residents and 6 EM faculty participated in the groups. A total of 112 specific strategies were identified in the resident and faculty group. These strategies were collapsed into nine themes. Interrater reliability for the item analysis was high with 5 discrepancies out of 112 items (96% concurrence). The most important theme (comprising 43/112 items) was teacher engagement and enthusiasm. Compared to faculty, residents more frequently mentioned the importance of a safe learning environment, and being available, supportive, and nonjudgemental. Both residents and faculty had a difficult time listing effective strategies for teaching multi-tasking.

Conclusions: Resident and faculty perceptions of effective clinical teaching strategies were remarkably similar. Findings highlight the importance of active engagement and enthusiasm in clinical teaching.

45 The Effect of a Resident Wellness Program on Burnout and ITE Scores

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Background: Burnout is a pervasive problem in resident physicians. Burnout affects residents' sense of well-being, and those who experience burnout are more likely to provide sub-optimal patient care. There is very little research on the effect of wellness programs for residents.

Objectives: We tested the hypothesis that a wellness intervention would decrease burnout and improve medical knowledge among residents.

Methods: This was a randomized, non-blinded experimental study conducted over a five-month period. Subjects worked at an Urban Level 1 trauma center with an Emergency Medicine (EM) and combined Emergency Medicine-Internal Medicine (EM/IM) residency program. Subjects were EM and EM/IM residents (50 residents). They were block randomized into a control and intervention group accounting for training level. The intervention began on 12/1/2015 and ended on 2/23/2016. The intervention group received emails regarding exercise, burnout, relationships and nutrition and were encouraged to journal three things that made them happy each day. The control group received no intervention. We used the Maslach Burnout Inventory (MBI) and ProQUOL-5 to assess burnout and the In-Training Exam (ITE) to assess medical knowledge. All subjects were administered the MBI and PROQOL-5 twice, first in November and again in March. The distributions of baseline responses differed between the groups, and these differences were evaluated with the Wilcoxon Rank Sum test due to the potential lack of normality. Rank sum tests were used to assess the change in the survey responses between the groups and the change in ITE scores from 2015 to 2016.

Results: 39 of 50 subjects completed both surveys. The 11 who did not complete both were excluded from data analysis. 20 were in the intervention group, and 19 were in the control group. 38 residents took the ITE in 2016. The differences between control and intervention group values for the ProQOL-5 and MBI and 2015 ITE scores were not

statistically significant. When comparing the change from baseline to post-intervention, there was not a significant difference between the control and intervention group survey responses or ITE scores.

Conclusions: Our wellness intervention did not make a statistically significant difference in burnout components or medical knowledge among residents. Our study was limited by the number of participants.

Table 1. Comparison of baseline responses and ITE scores between control and intervention groups.

Variable	Control Group Median (IQR)	Intervention Group Median (IQR)	P-value
Compassion Satisfaction Score	35.0 (31.0, 38.0)	36.0 (33.0, 42.5)	0.132
Burnout Scale	28.0 (25.0, 33.0)	24.5 (21.0, 30.0)	0.105
Secondary Traumatic Stress	22.5 (19.0, 26.0)	20.0 (18.5, 22.0)	0.197
Emotional Exhaustion	33.0 (26.0, 39.0)	27.0 (19.5, 36.0)	0.152
Depersonalization	24.0 (17.0, 27.0)	19.0 (15.0, 24.5)	0.210
Personal Accomplishment	32.0 (25.0, 36.0)	34.0 (29.0, 36.5)	0.342
2015 ITE Score	69.0 (67.0, 80.0)	75.0 (72.0, 79.0)	0.416

The values in the control and intervention group columns show the median and interquartile range of the assessment summary variable or ITE score.

Table 2. Comparison of changes from baseline to post-intervention between control and intervention groups.

Variable	Control Group Median (IQR)	Intervention Group Median (IQR)	P-value
Compassion Satisfaction Score	1.0 (-2.0, 4.0)	0.0 (-2.0, 3.0)	0.695
Burnout Scale	-1.0 (-4.0, 1.0)	-1.0 (-3.5, 2.0)	0.557
Secondary Traumatic Stress	-2.0 (-5.0, 3.0)	0.0 (-2.5, 2.5)	0.284
Emotional Exhaustion	0.0 (-6.0, 2.0)	-1.0 (-4.0, 3.0)	0.769
Depersonalization	-1.0 (-2.0, 1.0)	-1.0 (-4.5, 4.5)	0.634
Personal Accomplishment	2.0 (-2.0, 4.0)	1.0 (0.0, 3.5)	0.855
ITE Score	3.0 (1.0, 8.5)	1.5 (-1.0, 10.0)	0.523

Changes were calculated by subtracting the baseline ProOOL or MBI summary variable from the corresponding post-intervention value and similarly, subtracting the 2015 ITE score from the 2016 ITE score. A positive value in the above table signifies that the score increased.

46 The Point-of-Care Evidence-Based Medicine Online Resource: Two Year Follow-Up

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Background: Evidence-based medicine (EBM) is a professional core competency, the purpose of which is to inform decisions about the care of individual patients. Most residencies fail to provide formal EBM instruction due to inadequately trained personnel and incomplete awareness of EBM resources, relying instead on teaching modalities that are asynchronous relative to the bedside. The result is often inconsistent application of EBM towards cases which incited the original clinical question. We previously described a novel online resource which simultaneously mitigates lack of local expertise by delivering knowledge through information literacy and process experience, and promotes point-of-care (POC) EBM for direct, real-time patient benefit. This two-year follow-up analyzes the archived clinical questions and results of literature searches facilitated by the guidance of our POC EBM tool.

Objectives:

1. To understand the types of clinical questions most commonly asked by bedside EM providers.
2. To evaluate the influence of an online, POC EBM tool on rates of searching pre-appraised resources relative to unfiltered resources hierarchically lower on the EBM pyramid.
3. To determine where target literature is most often found, and what types of study designs ultimately inform clinical practice.

Methods: This is a retrospective analysis of our POC EBM registry. Questions are posed by EM providers during patient care activities. Searches are carried out in real-time by senior EM residents working an "educational shift", who also enter questions, search strategies and results into the POC EBM registry for archival. Descriptive statistics were used to characterize the types of clinical questions asked, which resources were used in the course of the literature search, which resources yielded the target article, and which types of articles ultimately informed clinical practice.

Results: There were 304 records entered into the POC-EBM resource registry over the two-year period since its inception. The most common clinical questions related to the to cardiovascular (19.60%) and infectious disease (14.62%) subspecialties, and the therapy (52.96%) and diagnosis (23.68%) EBM action domains. Searches most commonly involved unfiltered sources of single studies (e.g. Pubmed/Medline) (79.54%) and "other" sources (e.g. Google) (57.43%). Searches least commonly involved pre-appraised resources for syntheses (e.g. DARE) (10.23%) or single studies (e.g. ACP Journal Club) (4.29%). Target articles were most commonly identified using Pubmed/Medline (36.18%), and the most common study type which answered the clinical question was a review article (23.84%).

Conclusions: The most common bedside EM questions relate to the therapy action domains, and the cardiovascular system. While our POC-EBM tool was developed with the goal of guiding users through the process experience of a hierarchical literature search, most questions were investigated using unfiltered, non-appraised resources and answered using review articles.