UC Irvine

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

Title

Preparing Students for Uncertainty in Clinical Practice: Recommendations for Emergency Medicine Clerkships

Permalink

https://escholarship.org/uc/item/2163t4nx

Journal

Western Journal of Emergency Medicine: Integrating Emergency Care with Population Health, 23(1.1)

ISSN

1936-900X

Authors

Papanagnou, Dimitrios
Ebbott, David
Ankam, Nethra
et al.

Publication Date

2022

Copyright Information

Table 2. Career outcomes of education fellowship graduates.

	N (%)
Local leadership positions	
Continuing medical education	
Vice Chair of Education	6 (8.5)
Other	12 (16.9)
Graduate medical education	
Residency Program Director	8 (11.3)
Assistant/Associate Residency Program Director	39 (54.9)
Medical Education Fellowship Director	9 (12.7)
Assistant/Associate Medical Education Fellowship Director	2 (2.8)
Other	8 (11.3)
Undergraduate medical education	
Clerkship Director	14 (19.7)
Assistant/Associate Clerkship Director	9 (12.7)
Assistant Dean	1 (1.4)
Associate Dean	1 (1.4)
Medical school course director	11 15.5)
Other	6 (8.5)
National leadership positions in medical education	
Chair of a national committee	18 (25.4)
Member of professional society board of directors	5 (7.0)
Other	8 (11.3)
Committee service in medical education	
National	48 (67.6)
Regional	12 (16.9)
Local	57 (80.3)
Awards in medical education (mean ± SD)	
National	1.27 ± 2.03
Regional	0.27 ± 1.07
Local	2.61 ± 3.76
Medical education presentations (mean ± SD)	
National	7.63 ± 10.83
Regional	1.89 ±5.15
External grand rounds	1.38 ±4.14
Non-medical education presentations (mean ± SD)	
National	8.59 ± 28.06
Regional	2.08 ± 4.49
External grand rounds	1.49 ± 3.77
Journal editorial board member	10 (14.1)
Journal reviewer	34 (47.9)
Medical education publications (mean ± SD)	
Research, peer-reviewed	4.99 ± 6.17
Non-research, peer-reviewed	0.96 ± 2.38
Non-peer-reviewed publications	0.39 ±1.11
Digital scholarship	1.65 ± 4.31
Non-medical education publications (mean ± SD)	

47 Peer Coaching Increases Emergency Medicine Faculty Ability to Perform and Teach Awake Fiberoptic Intubation

Christopher Dimza; Colin McCloskey, MD; Christopher Dimza, BS; Matthew Stull, MD

Learning Objectives: Our study sought to evaluate the effect of peer coaching as a continuing medical education (CME) modality to improve faculty performance and teaching of awake fiberoptic intubation (AFOI).

Background: Once training is complete, physicians must continue growing their procedural skills while still developing their learners. High acuity, low opportunity procedures, such as awake fiberoptic intubation (AFOI), are challenging for both novel skill acquisition and teaching to learners.

Objective: Our study sought to evaluate the effect of peer coaching as a continuing medical education (CME) modality to improve faculty performance and teaching of AFOI.

Methods: Academic emergency medicine faculty at a single tertiary-care center participated in a prospective pre/ post-interventional assessment of a peer coaching educational intervention. Participants completed a pre-intervention online survey to identify comfort with performing and teaching AFOI. Following a 25-minute didactic session reviewing the indications and logistics of the procedure, participants practiced the procedure and attempted to teach the procedure to their colleague. An institutionally approved checklist for AFOI was used to assess participants. A two-sample T test assuming unequal variance was used to compare self-perceived efficacy before and after the peer-coaching intervention.

Results: A total of 15 faculty participated in the study. All participants showed ability to perform AFOI by successful completion of the procedural checklist's ten critical actions (15/15, 100%). There was a significant increase of self-perceived efficacy in performing (p<0.01, CI 1.34-3.06) and teaching AFOI (p<0.01, CI 1.56-3.05). All participants felt more likely to attempt AFOI after a single peer coaching session and most were more likely to teach AFOI (14/15, 93.3%). Participants identified peer-coaching as more effective at instilling confidence to perform and teach this skill compared to other CME activities they have experienced.

Conclusions: This study demonstrates peer-coaching as an attractive modality to increase faculty ability to perform and teach low-frequency, high-complexity procedures.

48 Preparing Students for Uncertainty in Clinical Practice: Recommendations for Emergency Medicine Clerkships

Dimitrios Papanagnou; David Ebbott, BS; Nethra Ankam, MD; Deborah Ziring, MD; Dimitrios Papanagnou, MD, MPH, EdD(c)

Learning Objectives: To provide pedagogical recommendations for emergency medicine clerkship design that better prepares medical students for uncertainty in clinical practice.

Background: EM is replete with situations of uncertainty in clinical practice. How can EM clerkships then better prepare students for the clinical uncertainty that lies ahead?

Objectives: We sought to: 1) describe perceived comfort with uncertainty encountered across clerkships; 2) identify curricular elements that best prepares students for these situations. We hypothesize certain training components will correlate with clinical uncertainty comfort and themes will emerge to guide clerkship design.

Methods: This is an observational cross-sectional study of 289 students in an urban medical school surveyed following core clerkships (including EM). Items included Self-Efficacy (SE), Intolerance to Uncertainty (IUS), rating of perceived adaptive traits related to clinical uncertainty, and ratings of training components for preparation.

Spearman's correlation coefficient, Chi-Square, and ANOVA were used to assess GSE, IUS, clinical, and

curricular items. Open responses were analyzed by authors to generate themes using Braun and Clarke's 6-Step Framework.

Results: Table 1 highlights curricular elements that had a statistically-significant relationship with students' perception of their preparation, communication, relationships, and well-being related to clinical uncertainty. Qualitatively, students appreciated emotional vulnerability from teachers, storytelling, communication strategies, role-modeling, debriefing, and simulations (Table 2). SE positively and IUS inversely correlated with adaptive trait items ($p < 0.05$).

Table 1. Correlations between uncertainty elements and educational programs.

Clerkship Uncertainty Element	Educational Programs with Correlations to Uncertainty Element Ratings
Preparation	• Clinical Team Debriefs (p=0.04) • Interprofessional Clinical Role Playing (p=0.02) • Case-Based Learning (p=0.03)
Patient Communication	• Talking about my experiences with others (p=0.03) • Clinical Story Slams (p=0.03) • Required Scholarly Activity (p=0.03)
Patient Relationship Building	• Clinical Team Debriefs (p=0.01) • Small-Group Communication Skills Practice (p=0.02)
Well-Being	• Small-Group Communication Skills Practice (p=0.02) • Team-Based Problem-Solving Lectures (p=0.02) • Writing Reflections and Narratives (p=0.04)

Table 2. Themes and examples for improving clinical uncertainty education (open responses)

Theme	Example Comments	# of Comments
Experience	• Being in the clinic and facing problems directly is the only way.	43
Reflections	• It's okay [for attendings] to have emotions and talk about those emotions, it's okay to have a bad day, it's okay to acknowledge when you are stressed. • I think it is super helpful to work in a team where people say out loud that there are uncertainties and address how that makes them feel.	34
Simulations	• Simulations! Loved having throughout my education. • Standardized patient encounters, choose your own adventure style modules.	17
Small-Group Learning	• More clinical skills small group sessions about uncertain scenarios.	17
Debriefing	• My greatest benefit came with debriefing an actual event with the resident who stood alongside me.	16
Demonstrating Communication	• Seeing good examples of physicians explaining things to patients when they don't know exactly in a concrete way. • Seeing good examples of physicians explaining things to patients when they don't know exactly in a concrete way and what they DO know and what they are going to do to work to figure it out.	11
Role Modeling	• Seniors who demonstrate how you can tolerate it successfully, show it is not a failure, reveal how to create relationships with patients while being uncertain.	14
Storytelling	• More stories from more professionals. • I'm a big fan of the faculty sharing their stories with us.	10
Wellness Activities	• Students experience incredible distress when there is not a clear-cut-and-dry answer and they likewise approach medicine from a strictly resume-padding approach (whatever gets them to honor and match into some surgical specialty, etc.). • Less emphasis on exams, as they rot our brains and turn us into robots with canned empathy.	9

126 students submitted free responses. Several responses covered multiple themes.

Conclusion: Strategically immersing specific educational formats into an EM clerkship may help cultivate skills needed to adapt to uncertainty in clinical practice. Clinical debriefs, interprofessional role plays, simulations, communication skills sessions, discussions of emotional vulnerability, storytelling, and peer-to-peer conversations may have the most impact. Further study is required to evaluate these recommendations.

49 Raising Bias Awareness in Students

Jennifer Carey, MD; Cassandra Mackey, MD; Meme Tran, MD

Learning Objectives: Biases by health care providers can lead to patient morbidity and mortality. The learning objective is to identify if students are prone to biases. This will serve as a guide to for curriculum development and implicit bias training.

Introduction: Biases in health care providers have harmful or negative consequences on patient care and safety. Educating medical students to identify and override biases may improve overall patient outcomes.

Objective: To assess student perception of ED case scenarios containing biases.

Methods: Design: Two case scenarios with a resident presenting mock patients to an attending were pre-recorded; each case containing biases (see key points below). Participants: Fourth year medical students enrolled in an EM clerkship, 22 total participants. Students viewed cases and answered questions regarding diagnosis, management and treatment delays. Intervention: After answers were submitted there was a discussion on implicit bias. Students then reviewed the cases and answered questions again. Descriptive data comparing students' responses are shown.

Case 1. Aortic dissection in black male with chest pain. EMS suspected agitation from cocaine intoxication and drug seeking behavior. Anti-psychotics and benzodiazepines given in lieu of proper history and exam.

Case 2. Acute myocardial infarction in wealthy white male. EKG completed and resident at bedside within five minutes of arrival to a busy ED.

Results: A majority of students (91%) responded that substance abuse was the most likely diagnosis in Case 1 (Table 1). Post-intervention, this decreased to 50%. Delay in diagnosis responses are shown in Table 2. 23% of students felt there was no delay in care in Case 1, while 50% of students felt that there was a delay in Case 2. Comparison of pre- and post-intervention in Case 1 shows an increase to 68% of students reporting a delay in care.

Discussion: We observed that students were prone to bias, as seen by initial failure to recognize the diagnosis or delay in