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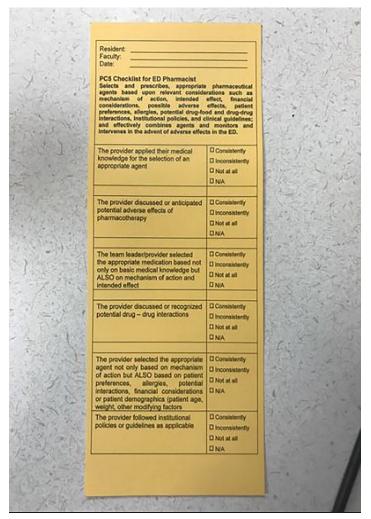
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activations. We implemented a novel approach by enlisting our pharmacists to directly observe the residents and provide a milestone assessment for 2 of the milestones directly related to pharmacology (PC5 and PC11). With the help of our ED pharmacy staff, we created an observation tool based on those 2 specific milestones . During the codes and resuscitations, the pharmacist would observe and evaluate the resident specifically for that competency and fill out a brief checklist created directly from the milestones. They would also add specific observations and feedback if applicable.

Impact/Effectiveness: We are still in the beginning phases of assessing effectiveness of this innovation. However, During the first 4 weeks of this implementation, we have received approximately 15 pharmacist evaluations. There are very specific observations and feedback documented, including some specific areas where residents are not meeting milestones expected for their level of training. We believe that this intervention will improve the quantity and quality of feedback for the milestones evaluating pharmacology knowledge and application.

3 Preparing Emergency Medicine Residents to Disclose Medical Error Using Standardized Patients

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Background: Emergency Medicine (EM) is a unique clinical learning environment. The ACGME Clinical Learning Environment Review Pathways to Excellence calls for "hands-on training" of disclosure of medical error (DME) during residency. Training and practicing key elements of DME using standardized patients may enhance preparedness among EM residents in performing this crucial skill in a clinical setting.

Educational Objectives: The goal of this training is to improve resident preparedness in DME in the clinical setting. Upon course completion, the resident will be able to: define a medical error, discuss ethical and professional standards of DME, recognize common barriers to DME, describe key elements in effective DME to patients and families, and apply key elements during a standardized patient (SP) encounter.

Curricular Design: A 4-hour course, including didactic and experiential learning methods, was created collaboratively by core EM faculty, regional subject matter expert in conflict resolution, and simulation nurse educator. Educational media included: lecture (30 minutes); video exemplars of DME communication with discussion (15 minutes); small group case study discussion (15 minutes); and SP encounters (five formative sessions and an evaluated case: 3 hours). A survey seeking changes in preparedness in DME was administered pre-and post-training. A critical action checklist was administered to assess individual performance of key elements of DME during the evaluated SP case.

Impact/Effectiveness: Of 15 PGY 1&2 EM residents, 66% reported prior DME training; of which only 13% reported the use of simulation. After the course, residents reported increased preparedness in performing several key elements in DME [Table 1] and demonstrated the ability to apply these key elements during a SP encounter [Table 2]. Residents valued the training, rating the didactic, SP sessions, and overall educational experience very high (mean scores 4.2, 4.5, and 4.4 respectively; Likert scale, 1= not at all useful, 5= very useful). Experiential learning using SP is effective in improving resident knowledge of and preparedness in performing medical error disclosure. This educational module can be adapted to other clinical learning environments through creation of specialty-specific scenarios.

Table 1. Self-efficiancy in Error Disclosure Among 15 Emergency Medicine Residents.

"How prepared do you feel to perform each variable during the disclosure of a medical error?"	Score* mean (SD)		Residents Improved n (%)	P value
	Pre	Post		
Know what to include	2.5 (0.6)	4.4 (0.7)	15/15 (100)	p < 0.001
Introduce the topic with a patient	2.9 (1)	4.3 (0.5)	13/15 (87)	p < 0.001
Deal with a patient's emotional response	3.1 (1)	3.9 (0.6)	10/15 (67)	p = 0.005
Express Empathy	3.9 (0.6)	4.2 (0.6)	8/15 (53)	p = 0.05
Respond to a patient's questions	3.1 (0.7)	3.9 (0.6)	10/15 (67)	p = 0.003
Address patient concerns about consequences of error	2.5 (0.9)	3.9 (0.7)	11/14 (79)	p < 0.001
Deal with legal questions	1.7 (0.7)	2.7 (0.9)	10/15 (67)	p < 0.001
Recognize your own emotions	3.6 (0.9)	4.1 (0.8)	7/14 (50)	p = 0.006
Keep your emotions in check	3.5 (0.8)	4.2 (0.7)	9/15 (60)	p < 0.001

*Score ranges from 1 (lowest; not at all prepared) to 5 (highest; very well prepared), expressed in mean (SD), p value using paired t-test
Survey adapted from Bonnema R et al. J Grad Med Educ. Sep 2009;1(1):114

Table 2. Critical Action Checklist for Key Elements in Medical Error Disclosure.

Critical Action	Score		Score mean (SD)
	1 = very poor	5 = excellent	
Conducts explicit disclosure of error to patient	Does not explicitly explain that an error took place and the patient had suffered as a result	Describes the nature and source of the error and consequences of the error to the patient and/or family members	3.6 (0.6)
Responds forthrightly to patients questions about the event	Avoids direct responses to a family members question	Responds truthfully to the patient and/or family member's questions	4.0 (0.4)
Apologizes upfront and early in conversation	Does not apologize up front	Apologizes to the patient and family member at the beginning of the disclosure conversation	4.4 (0.5)
Exhibits general communication skill with the patient	Remains aloof and distant to family member's emotional distress	Displays verbal and nonverbal empathy and support of the patient and family member	3.9 (0.5)
Conducts blame-free disclosure, acknowledges personal role	Blames a team member in front of the family member	Avoids blaming of other team members, resists patient and/or family members attempts to affix blame	4.1 (0.6)
Offers plans to prevent future errors	Does not address specific plans for preventing future errors	Explains to patient and/or family member what will be done to prevent such errors from occurring in the future	3.8 (0.7)
Plans follow up with patient	Does not offer to follow up with the family member	Offers to follow up with the patient and family member for other potential questions they may have	3.9 (0.6)

Adapted from Biberston K et al. Error Communication: Discover barriers, share best practices and lead change with simulation. IMSH 2016.

1 Does a Positive Delta from Step 1 to Step 2 Correlate with Board Passage?

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Background: USMLE Step 1 has been reported to have correlation with successfully passing the boards. A low passing or below average Step 1 score is often a deterrent to residency directors. However, we also see residency applicants that have performed below average on their USMLE Step 1 but have shown significant improvement in their USMLE Step 2 scores. There are recent studies that suggest that Step 2 may be a better predictor than Step 1. Our study aims to evaluate if a positive delta, that is if the improvement from USMLE Step 1 scores to Step 2 scores, independently correlates to successful passage of the boards in Emergency Medicine (EM) on first attempt.

Objectives: To evaluate if step 1 scores, step 2 scores or a significant improvement (the delta) from Step 1 to Step 2 scores independently correlates with successful passage of the boards.

Methods: We performed a retrospective cohort study utilizing data from residents graduating between 1999 and 2015 at a three-year Emergency Medicine training program at an urban, community, university affiliated hospital. USMLE Step 1, Step 2 CK scores of graduates, and first-attempt ABEM qualifying exam passage were compiled and blinded for confidentiality. Percentile of USMLE scores was extrapolated from the national average and standard deviation for each exam year. The change in percentile between Step 1 and Step 2 was calculated and is termed the delta.

Residents who did not complete the residency, who did not take both USMLE Step 1 and 2, who had a history of failing USMLE Step 1 on first attempt and graduates with partial information on file were excluded. Correlation between each variable and the relative risk (95% CI) for success are reported (alpha <0.05).

Results: From 1999 to 2015, there were 122 graduates from the Emergency Medicine residency program. 30 were excluded because they met exclusion criterion.