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Pharmacist Observation of Residents' Management During Resuscitations: A Novel Direct Observation Assessment of Resident Milestones

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Educational Soundbites Oral Presentations

1 Development of an Educational Track to Supplement Emergency Medicine Resident Curriculum

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Background: Emergency medicine (EM) residents are often tasked with educating students during EM clerkships. Although the ACGME expects residents to develop skills and habits to participate in the education of students and other residents, many programs lack a formal residents-as-teachers curriculum. Similarly, academic topics are often underrepresented in standard residency education. Developing a co-curricular education track (ET) to supplement resident education would be valuable to residents, especially those interested in pursuing academic careers.

Educational Objectives:

1. Enhance bedside teaching skills of EM residents
2. Introduce theoretical background of effective feedback, curriculum design and evaluation
3. Recognize current trends and controversies in medical education
4. Characterize career opportunities in academic medicine
5. Support research endeavors in medical education

Curricular Design: Utilizing the constructivist approach and communities of practice theory, we designed a curriculum that included faculty-led discussion, peer interaction, and learner-centered selective activities. Quarterly meetings were held to discuss a variety of topics in medical education. Each meeting had an educational theme that was explored using case studies and peer-reviewed journal articles to link discussion to the existing literature.

Successful completion of the ET required participants to earn 40 credits by participating in selected activities, engagement with EM-related social media and attending ET meetings. Flexibility within the requirements allowed a resident to select activities that most relate to their specific interest within academic medicine (Figure 1). Credits could be earned over a three-year period. The ET is open to all interested residents, regardless of their intent on completing the requirements by graduation.

Impact/Effectiveness: In the inaugural year 6/36 residents participated. After the first 6 months of the program, each resident had an average of 18 credits. Participants will complete a survey after completion of each year to identify successes and opportunities for improvement for future direction. This will serve to evaluate if objectives are being met, as well as tailor the ET to cover gaps regarding academic topics in the resident curriculum.

	Education/Teaching	Social Media	Meetings
Mandatory	MS Lecture (2) MS Simulation (4)	Education blog x 2 (4) Twitter post x 8 (4)	ET meeting x 2 (2)
Elective	MS lecture (2) MS simulation (4) MS orientation (4) Skills lab (4) Procedure day (4) 4-hour EBM teaching shift (6) Ultrasound shift/lecture (4) RAT panel (1)	Education blog (2) Twitter post (0.5)	ET meeting (2) EMIG meeting (2)

Figure 1. Educational Activities. 40 credits required over three-year period.

MS, medical student; ET, education track; EBM, evidence-based medicine; (n), number of credits provided; RAT, residents as teachers; EMIG, emergency medicine interest group.

2 Pharmacist Observation of Residents' Management During Resuscitations: A Novel Direct Observation Assessment of Resident Milestones

Barringer K/Regions Hospital/HealthPartners IME, St. Paul, MN

Background: In 2013, the Accreditation Council for Graduate Medical Education (ACGME) implemented the Next Accreditation System, which introduced subcompetencies and the milestones. Emergency Medicine (EM) Residency programs must evaluate each resident's progression by obtaining data for 227 milestones falling under 23 subcompetency areas. By the end of residency, each resident is expected to reach proficiency for each of these sub competencies. Obtaining accurate and reliable milestone data for each resident can be challenging for residency programs. There are many different methods programs use. Direct observation is typically listed as a suggested evaluation method for the majority of the milestones. However, it can be challenging to obtain direct observational data given the total number of milestones needed to be evaluated for each resident during the course of their residency.

Educational Objectives: Our objective was to increase direct observation of 2 specific milestones (PC5 and PC11) by enlisting our clinical pharmacy staff to directly observe residents during their management of critically ill patients in the Emergency Department and improve the quantity and quality of data and feedback related to these specific milestones.

Curricular Design: Regions Hospital is a Level 1 Trauma Center with pharmacists present in the Emergency Department 24 hour per day. They directly observe and assist with the care of most of the critically ill patients in the Emergency Department, including trauma activations, resuscitations, stroke codes, sepsis codes, and cath lab

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.

Resident: _____
 Faculty: _____
 Date: _____

PC5 Checklist for ED Pharmacist
 Selects and prescribes, appropriate pharmaceutical agents based upon relevant considerations such as mechanism of action, intended effect, financial considerations, possible adverse effects, patient preferences, allergies, potential drug-food and drug-drug interactions, institutional policies, and clinical guidelines; and effectively combines agents and monitors and intervenes in the advent of adverse effects in the ED.

The provider applied their medical knowledge for the selection of an appropriate agent	<input type="checkbox"/> Consistently <input type="checkbox"/> Inconsistently <input type="checkbox"/> Not at all <input type="checkbox"/> N/A
The provider discussed or anticipated potential adverse effects of pharmacotherapy	<input type="checkbox"/> Consistently <input type="checkbox"/> Inconsistently <input type="checkbox"/> Not at all <input type="checkbox"/> N/A
The team leader/provider selected the appropriate medication based not only on basic medical knowledge but ALSO on mechanism of action and intended effect	<input type="checkbox"/> Consistently <input type="checkbox"/> Inconsistently <input type="checkbox"/> Not at all <input type="checkbox"/> N/A
The provider discussed or recognized potential drug – drug interactions	<input type="checkbox"/> Consistently <input type="checkbox"/> Inconsistently <input type="checkbox"/> Not at all <input type="checkbox"/> N/A
The provider selected the appropriate agent not only based on mechanism of action but ALSO based on patient preferences, allergies, potential interactions, financial considerations or patient demographics (patient age, weight, other modifying factors)	<input type="checkbox"/> Consistently <input type="checkbox"/> Inconsistently <input type="checkbox"/> Not at all <input type="checkbox"/> N/A
The provider followed institutional policies or guidelines as applicable	<input type="checkbox"/> Consistently <input type="checkbox"/> Inconsistently <input type="checkbox"/> Not at all <input type="checkbox"/> N/A

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

Rudinsky S, Spalding C /Naval Medical Center San Diego, San Diego, CA

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.