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Disaster Preparedness Training in Emergency Medicine Residents Using a Tabletop Exercise

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Image 1.

# 11 Development of a Medical Education Scholarship Track Within A Residency Career Enrichment Program

Caretta-Weyer H / Stanford University

Introduction: Many residents identify an interest in medical education during residency. Several programs have developed concentrations or tracks to address these interests. However, medical education is becoming increasingly challenging secondary to the growing complexity of practice and the expanding roles within this domain ranging from clinical teacher, to educational administrator, to clinician educator, or even education researcher.

Learning Objective: We sought to design and implement an education scholarship track within our residency career enrichment program spanning all four years of training to address the full range of roles and allow our residents the opportunity to develop a scholarly niche within medical education.

Curricular Design: Following Kern's model for curriculum

development, we performed a literature review and utilized published models for education scholarship fellowships as a guide. We performed a targeted needs assessment of our residents regarding their interests within medical education. As part of the needs assessment, residents wanted to ensure that there was room for individualization within the curriculum such that they could tailor the track to their interests. The needs assessments provided the following topics for inclusion in the medical education scholarship track: resident as teacher, education theory, presentation skills, small group facilitation, team-based and problem-based learning, curriculum development, assessment, competency-based medical education, program evaluation, education research methods, survey development, study design, manuscript writing, grant writing, and peer review. Goals and objectives were developed for each course.

Impact: Eight residents have joined the education scholarship track since its inception. Each resident has chosen a different route based upon his or her interests. Several have focused on clinical teaching while others have focused on areas within the clinician educator niche such as curriculum development and assessment. Two residents have pursued education research projects, one focusing on qualitative methods to investigate psychological safety in feedback and the other focusing on resident communication with patients. Both will be submitted for publication upon completion.

#### 12 Disaster Preparedness Training in Emergency Medicine Residents Using a Tabletop Exercise

Sena A, Forde F, Masters M / Rutgers New Jersey Medical School; University of Cincinnati College of Medicine

**Learning Objective:** To expose emergency medicine residents to principles of disaster preparedness and allow them to practice the principles in a simulated setting.

**Abstract:** Emergency medicine (EM) physicians serve at the frontline during disasters within our communities, events increasingly on the rise. The 2016 Model of Clinical Practice of Emergency Medicine identifies the importance of the EM physician's ability to practice mass casualty/disaster management including the principles of preparedness, triage, mitigation, response and recovery. We describe an affordable and feasible way to implement such training for EM residents. This tabletop drill was developed with the objectives to expose residents to concepts in mass casualty incidents such as START triage, incident command system, and surge capacity. The drill took place during two hours of resident didactic time. A brief lecture introduced the incident command system and triage concepts. This was followed by a tabletop scenario with a map of a disaster scene or emergency department. Questions and tasks prompted residents to prepare for the influx of

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patients, triage numerous patients (presented on index cards), and allocate limited resources appropriately using the map. The scenario concluded with a debrief and a second lecture reviewing specific topics and challenges from the scenario. Residents took an online pre- and post-assessment which demonstrated a statistically significant increase in confidence levels in disaster preparedness following the exercise. There exists a gap in disaster medicine training, likely resulting from variability of education and emphasis in program curricula. Residents need a platform to practice disaster preparedness in a simulated setting, however large scale disaster drills can be challenging to implement as they require manpower, materials, facilities and time. The simplicity of this exercise allows it to be adapted for various scenarios and individual emergency departments as it was most recently used in Ghana. This exercise is a feasible option for introduction to disaster preparedness training.

## 13 Electronic Order Entry in Medical Simulation

Milman B, Gentges J, Nanavaty V / University of Oklahoma Health Sciences Center

**Background:** Medical simulation plays an integral role in emergency medicine resident education. Learners report that as the realism of medical simulation increases, they are more motivated to participate in simulation. Simulation centers are now able to present patients at a remarkable level of fidelity, but high fidelity diagnostic reporting is not available. Labs and imaging results are often read aloud by a moderator or printed paper results are handed to the learner.

**Objectives:** Our goal was to develop an EMR-like program that allows participants in simulation the ability to interactively order labs and imaging and display results.

- Demonstrate a low-cost, realistic EMR that can be used for simulation and oral boards cases in resident and medical student education
- Discuss how this can be easily replicated by other programs and at other facilities

Curricular Design: We designed a PowerPoint based interactive application that mirrors the EMR that our program uses in the emergency department at our primary clinical site. This is a no-cost, highly-realistic order-entry system that can be used during simulation sessions. A screenshot of the Epic orders page that we use clinically is the basis for this design. Hyperlinks allow learners to interact with the orders page. Learners initially click one of the outlined boxes seen in Figure 1, which fills in the box. Clicking a shaded box will bring the learner to a hyperlinked page with the results of that test. When creating a case for simulation, abnormal values are input by an instructor. During a simulation, learners use a bedside computer to order labs, imaging, and review results.

**Impact/Effectiveness:** Using this platform to order and view labs adds an element of realism that did not previously exist in our simulations. As the simulated environment more effectively mirrors the clinical environment, learner comfort, decision making, and diagnostic ability all improve. The platform is also useful in oral board training. This no-cost tool has increased the authenticity of our simulations. Further quantitative research using this tool is proceeding.

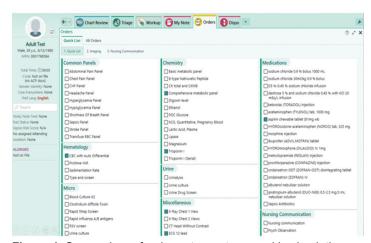


Figure 1. Screenshop of order entry system used in simulation

# 14 EscapED: A Medical Escape Room as a Novel Approach in Emergency Medicine Medical Education

Schwartz K, Kahl N, Oyama L / University of California, San Diego

Introduction/Background: Emergency medicine (EM) requires multi-tasking, team coordination, and rapid recall of extensive medical knowledge. The California American College of Emergency Physicians (CalACEP) annual conference encourages medical students and residents to hone EM skills in a novel educational environment.

**Educational Objectives:** To reinforce EM knowledge and professional skills in a fun, team-based, "escape room" style game.

Curricular Design: EscapED, a medical escape room, reinforced essential EM material, including clinical acumen, procedures, communication, and professionalism. Teams of residents or medical students performed in groups of 6-8. Several clinical stations culminated in the final stage, a riddle that could only be solved with clues from successful completion of each station. Given the conference's proximity to Disneyland, EscapED was inspired by Disney characters and well known superheroes. Stations included mass casualty triage of injured Storm Troopers, management of former Mouseketeer child stars with wayward adult toxicologic presentations, diagnosis and treatment of a Frozen character's hypothermia, and a cypher decoding rabies treatment for