

UC Irvine

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

Title

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

Permalink

<https://escholarship.org/uc/item/2bh555fk>

Journal

Western Journal of Emergency Medicine: Integrating Emergency Care with Population Health, 21(4.1)

ISSN

1936-900X

Authors

Schwartz, Kristy
Kahl, Nicolas
Oyama, Leslie C.

Publication Date

2020

Copyright Information

Copyright 2020 by the author(s). This work is made available under the terms of a Creative Commons Attribution License, available at <https://creativecommons.org/licenses/by/4.0/>

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.

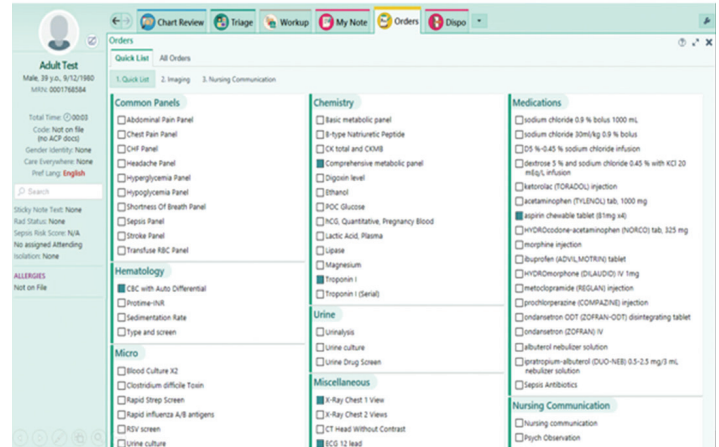


Figure 1. Screenshot of order entry system used in simulation

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

monkey bite. Necessary skills included ECG/radiograph interpretation, visual diagnosis, and common procedures. Gamification allowed participants to demonstrate puzzle-solving skills and teamwork. Teaching points were provided via QR code upon exiting the escape room.

Impact/Effectiveness: Competitive events reinforce core knowledge and build teamwork essential to EM. Anonymous feedback was overwhelmingly positive; the event was perceived as “extremely” or “very” engaging and effective. Feedback included enjoyment of the novel teaching tool and reinforcement of intellectually stimulating content, and recognition of improvement from the prior year’s Escape Room. Future events will focus on puzzles contributing to the escape and emphasis on functional communication.

15 Extinguishing Burnout Before It Happens: Measuring the Impact of an Executive Coaching Program on a Cohort of Emergency Medicine Junior Faculty

Papanagnou D, McKnight R, White J, O’Connell A, Brader T, Tomaselli P, Crossman M, Sielicki A, Bradley C, Naples R / Thomas Jefferson University

Introduction: Despite increasing prevalence of burnout in EM physicians, few solutions to address the epidemic have been offered. Studied extensively in psychology, coaching can mitigate burnout. Specifically, coaching improves self-awareness, self-regulation, empathy, and engagement. To date, there are no studies that measure the impact of coaching on EM physician wellbeing.

Objectives: Our goal is to assess executive coaching’s impact on junior EM faculty. Specifically, the innovation aims to: 1) examine the feasibility of a coaching program for a cohort of junior faculty; 2) measure the impact of coaching on resilience; 3) detect changes in specific emotional intelligence competencies, before and after the program; and 4) identify factors that support productive coaching relationships from focus groups.

1. Examine the feasibility of a coaching program for a cohort of junior EM faculty;
2. Measure the impact of coaching on resilience;
3. Detect changes in specific emotional intelligence competencies, before and after the program;
4. Identify factors that support productive coaching relationships.

Design: Junior faculty (<5 years out of residency) from an urban, academic, level-1 Department of EM (DEM) were solicited to participate in a yearlong executive coaching program, launched in November 2019. Fourteen from 18 potential junior faculty self-enrolled. In an effort to collaboratively address the burnout epidemic, the DEM developed an academic, non-financial relationship with a head coach to secure 14 seasoned, volunteer coaches to serve each of the faculty. Coaches have begun meeting with

faculty for monthly 1.5-hour sessions, using several personal assessments as vehicles for reflection. Faculty completed a monthly Connor-Davidson Resilience Scale to detect changes in resilience; the Emotional Quotient Inventory, administered at the start / end of the program; and the Hogan and DISC Personality Inventories. The program will conclude with focus groups to qualitatively identify themes that support coaching.

Impact: Our faculty coaching program represents a first initiative to prospectively measure the impact of executive coaching on indices predictive of burnout. Aggregated data will inform recommendations that can be applied to residents.

16 Global EM Without Boarding a Flight: A Novel Trans-National Educational Partnership in International EM

Mahendru N, Hankin Wei A / Reading Hospital Tower Health, Emory University Hospital

Introduction: Many residents and residency programs – in the US and abroad – have an interest in including a global EM component to their curriculum. However, in many cases, these opportunities are only available to a small number of residents due to funding constraints, travel costs, health/safety concerns, and family responsibilities. For residencies overseas, in addition to aforementioned constraints, there are difficulties with visas and credentialing challenges. We present a novel and productive collaboration between an EM residency in Pennsylvania and one in Mozambique to engage in shared teaching and scholarly collaboration to meet a need identified by the Mozambican residents.

Learning Objective:

1. Engage in shared case discussions to learn management of complex EM patients in diverse clinical settings
2. Collaborate to create an educational newsletter for generalist physicians in Mozambique
3. Identify key EM skills for trauma and airway skills that are transferrable to low-resource setting

Curricular Design: The residency leadership of the two partner residencies – in Pennsylvania and Mozambique – worked together to identify shared goals and objectives. After this, the two residency programs hosted a shared case conference via a video meeting platform to share clinical and educational experiences. Then, an email was sent to residents of both programs seeking volunteers to work collaboratively on development of newsletter articles for Mozambican general physicians. Three teams of two residents each were paired – each containing a Mozambican and American resident – and worked together to draft the article on locally-relevant and resource-appropriate topics.

Impact: This project resulted in the creation of the inaugural national newsletter of the first Mozambican EM Residency. This was an innovative partnership between two