



Figure 2. Clue locations.

26 Escape this Emergency Room: Simulation Education During a Pandemic

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Learning Objectives: To provide emergency medicine (EM) residents an educational activity that promotes teamwork and wellness. It includes cooperative problem solving, task-delegation, pride in team accomplishments, and recall of emergency medicine knowledge all while staying compliant with social distancing guidelines.

Abstract:

Background: Escape Room is a game in which participants solve puzzles in order to escape a room. The game engages participants’ knowledge and problem-solving while also encouraging teamwork. In professional medical education, strategies that promote active learning are in demand. Activities like Escape Rooms can foster wellness among the residents based on overwhelming satisfaction from participants in previous studies. Furthermore, social distancing

Table.

What is your current level of training? PGY-	Did the Escape Room encourage you to work together as a team? Yes=1, No=2	Should Escape Rooms like this be used to enhance resident wellness? Yes=1, No=2	Did the Escape Room provide or reinforce medical education? Yes=1, No=2	Please feel free to provide comments.	How can we improve the Escape Room experience?	Complete?
3	1	1	1		All residents should have the opportunity to participate in special simulation events like this. Enhances wellness, class bonding, team work	Yes
3	1	1	2	Too simple for pg3-4	More difficult med content for pg3-4	Yes
3	1	1	1		I thought it was a great experience	Yes
3	1	1	1		Organizing some of the boxes to correspond to specific patients or clues would be helpful. A little frustrating to have answers but not know how to use them/which box to use them on	Yes
3	1	1	1		Do more of these escape rooms, super fun! Had to work together, problem solve and think outside the box.	Yes
2	1	1	1		Nothing	Yes
2	1	1	1	So much fun and I felt I got to practice real medical skills and use knowledge. I honestly wish I could do one of these once/ week	Standardized sheets with information at the beginning like instructions , how many boxes, etc.	Yes
2	1	1	1		This was a great exercise. I would definitely be down to do another.	Yes
2	1	1	1		Standardized set of instructions prior to activity	Yes

during the COVID-19 pandemic has limited the ability of residencies to gather large groups for didactics. The Escape Room format by its nature, provides an activity that requires fewer learners at a time to be present. Its implementation can foster wellness through social interaction while staying compliant with local public health guidelines.

Design: EM simulation faculty devised puzzles based on a mass casualty incident. The scenario presented EM residents with multiple simulated patients. Residents identified the solutions to the puzzles as they resuscitated patients, performed procedures, identified injuries, calculated medication doses and triaged arrivals. Prior to presenting a high-fidelity environment with manikins, procedural-trainers and locked-boxes, faculty piloted the scenario with low-cost elements like envelopes, pictures and index cards. This pilot defined the flow of the escape room and offered an alternative



Figure 1.

table top version. The completed Escape Room was played by 3-5 residents in a large simulated resuscitation bay with 5 manikins (Figure). Afterwards, residents completed a survey assessing how well the activity promoted education, teamwork and wellness.

Effectiveness: In 2020, 19 residents divided into teams played the escape room in sequence. According to survey results (Table 1), they answered yes regarding the activity's promotion of education, teamwork and wellness. Respondents commonly asked for more. In practice, Escape Room can be an effective social and educational tool during a pandemic.

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

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Learning Objectives: To reinforce Emergency Medicine knowledge and professional skills in a fun, team-based, "escape room" style game. Options were available for medical students and residents.

Abstract:

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

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, more emphasis on functional communication, and a virtual option.

28 Foundations III: A Shared, Open Access Emergency Medicine Senior Resident Curriculum

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Learning Objectives: We developed Foundations III (F3) to offer a comprehensive open-access curriculum that exposes advanced emergency medicine learners to complex content including critical care, care of vulnerable populations, personal and professional development.

Abstract:

Introduction: Best practices in education recommend incorporating level-specific content to didactics. The Foundations of Emergency Medicine (FoEM) I and II courses have been widely adopted and offer targeted content for junior learners. However, programs have limited shared curricular resources that challenge senior residents and incorporate non medical knowledge based skills to prepare residents for independent practice.

Curricular Design: Foundations leadership created a comprehensive list of potential topics based on the EM Model, existing Foundations content, and personal experience. Final course topics (Table 1) were chosen by incorporating feedback from existing Foundations site leaders and additional expert educators. Next, we recruited forty content experts including EM and non-EM physicians as well as non-physicians. The pedagogy of each session was decided by the primary author in consultation with the course directors. Sessions employ a clinically-relevant, discussion based format with a focus on experiential learning. Vetted asynchronous content is available for review before or after sessions. In addition, each session includes an instructor guide to prepare non-expert faculty to facilitate.

Impact: The F3 curriculum includes 500 pages of original expert content and was successfully implemented for use by over 2,500 learners. Responses from an online evaluative survey show 90.6% of faculty site leaders strongly agree/agree that F3 adds value to their residency's educational program and 82.3% of learners strongly agree/agree F3 adds value to their education. 74.8% of learners agreed/strongly agreed that F3 helped prepare them for independent practice. Learners identified many topics as most valuable including billing and coding, ethics, and critical care; several identified "all of them" as highest value.

Future Directions: The F3 course directors plan iterative revisions of the curriculum based on annual learner/leader feedback.