

**Abstract:**

**Background:** Understanding social determinants of health (SDH) and their intersection with EM, also known as social emergency medicine (SEM), is an important area of EM training. Despite the requirements of milestones disposition (PC7) and systems-based management (SBP2), little training material has been made available to teach this competency. Our goal was to create a curriculum to address these training gaps that could be easily adopted by EM training programs.

**Curricular Design:** RISE-EM: Resident Instruction in Social Emergency Medicine is a video-based training curriculum that consists of four 20 minute modules and a pre-post multiple choice test. While this offers scheduling flexibility, reflection from the pilot run suggests the course is best received when applied over several weeks with interleaved group discussions. With core objectives from the Social Medicine Reference Toolkit, a team of experts developed EM specific module content with material from the Inventing SEM conference. Using longitudinal cases, a conceptual framework is reinforced and built upon throughout the modules (Figure 1). Recurring “nudges” encourage participants to identify SEM implementation in and out of the ED.

**Impact:** RISE-EM has been successfully implemented in one conference with 48 faculty, residents, and medical students, receiving a strongly positive reception. Six participants completed pre-and post- assessments of SEM knowledge and self-efficacy in addressing SDH in the ED. Using paired-samples t-tests, we found that SEM knowledge improved by 3.2 points on average out of 19 questions ( $t(5)=3.63, p=0.015$ ), while self-efficacy improved by 4.8 points out of 26 possible ( $t(5)=3.24, p=0.023$ ). We are creating discussion guides and practice cases so this innovation can be more easily implemented by new programs. We see this project as a valuable tool EM residencies can use to address milestones PC7 and SBP2 in their curricula.

## 48 Safely Securing a Chest Tube Using Cadaveric and Manikin Models

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**Learning Objectives:**

1. Teach EM residents how to safely and proficiently suture and secure a chest tube in a controlled setting as a precursor to performing the procedure in a high intensity clinical setting.
2. Bring attention to the potential operator risk associated with suturing in a chest tube.

**Abstract:**

**Introduction/Background:** Inserting a chest tube is an important life saving procedural skill for emergency medicine residents but there is not enough focus on the suturing and securing portion of the procedure. Rather, much of the focus is on making the initial incision through the chest wall into the intercostal space and wedging the tube into the pleural cavity. We propose that suturing and securing the chest tube is just as critical as the initial steps to avoid operator injury from a needle poke and to ensure the chest tube is securely fastened.

**Curricular Design:** At our bi-weekly simulation and procedural skills training day, EM residents are divided into groups of 3-4 and rotate through various simulation and skills stations. One day included this chest tube securement station. An experienced EM faculty member and PGY-3 senior EM resident gave a 5-minute introduction of the procedure and then guided the resident learners through a step-by-step approach using a life form manikin and human cadaver. One-on-one training took place of suturing, gauze placement, and connecting to the pleur-evac system with special attention dos and don'ts to avoid self-injury through needle poke and rib fractures.

**Impact/Effectiveness:** We identified a gap in the training of our EM residents when it came to safely suturing and securing a chest tube. We hear of many cases where a chest tube was placed quickly in a trauma patient and the resident was injured due to a needle poke or a broken rib. As a result, we immediately included this training into our training curriculum to emphasize the importance of effectively securing a chest tube in preparation for the clinical setting. The step by step approach provided necessary time for the EM residents to comprehend and perform the procedure proficiently. This amplified the focus on the final steps of the procedure to intentionally note the importance and risk involved in suturing a chest tube in place.

Module 1 Introduction to Social Emergency Medicine	Module 2 How Humans Change the Definition of Illness	Module 3 Cognitive Framework: Social Factors at the Bedside	Module 4 We Can't Do This Alone: An Approach that is Interdisciplinary and Multi-Sectoral
<b>Objectives</b> <ul style="list-style-type: none"> <li>• Understand the role social determinants of health (SDH) plays in emergency system patients' health</li> <li>• Be able to state why SDH are important to the ED provider</li> <li>• Be able to identify opportunities to address SDH in various scenarios</li> </ul>	<b>Objectives</b> <ul style="list-style-type: none"> <li>• Understand the ability of society to shape medical definitions</li> <li>• Discuss the composition of high-frequency ED users</li> <li>• Use four lenses to help navigate disposition in socially complex patients</li> </ul>	<b>Objectives</b> <ul style="list-style-type: none"> <li>• Discuss and describe how bedside factors impact health equity and health outcomes</li> <li>• Understand challenges of physicians to provide health equity</li> </ul>	<b>Objectives</b> <ul style="list-style-type: none"> <li>• Be able to describe examples of innovative programs and pathways to discharge</li> <li>• Become acquainted with local resources and community programs</li> <li>• Apply this knowledge to patient cases</li> </ul>

Figure 1. Breakdown of course modules by individual objectives.



Figure.

## 49 Single, Daily Multiple-Choice-Question: A Microlearning Tool for a Core Emergency Medicine Clerkship

Moises Gallegos, MD, MPH; William Dixon, MD, MSED; Danielle Miller, MD

**Learning Objectives:** We sought to deliver interspersed, concise teaching points on core content while providing direction for additional reading. Using pre-scheduled learning sets messaged to students each morning, we also hoped to create a more cohesive and dedicated learning experience.

### Abstract:

The breadth and depth of Emergency Medicine (EM) can be both attractive and daunting for medical students exposed to the specialty on clinical rotations. For clerkship directors and education faculty, it can be difficult to review a representative amount of content in the short duration of a clerkship. For students, it can be challenging to know where and what to read for end-of-clerkship exams. Furthermore, social-distancing policies during the COVID-19 pandemic limited in-person instruction, potentially contributing to perceptions of decreased formal teaching. Creative use of interspersed learning sets can provide direction for and supplement the clerkship curriculum.

EMED Daily was created as part of a required EM clerkship at Stanford. Each EMED Daily is a single, multiple-choice-question (MCQ) bundled with relevant medical and procedural knowledge, as well as testing strategy for core EM content. Online survey software is used to automate the delivery of the next EMED Daily each morning. Building on

concepts of “pushed” delivery from eLearning and digestible teaching moments from Microlearning, the EMED Daily allows students to engage in retrieval practice and review curated material while eating breakfast, brushing their teeth, or walking to shift. Learning sets reflect core topics from the Clerkship Directors in EM (CDEM) medical student curriculum and include links to free open access medical education (FOAMED) resources. MCQs are not graded individually, but a completion rate of 75% is required for credit towards a final grade.

The EMED Daily has been well received by students. In 6 months, the average completion rate was 96%, well above the required amount. Students commented that the EMED Daily sets “were simple and good for framing,” and “a great way to review a small amount of info every day.” Additionally, as COVID policies affected the type of patients students could see, question sets were adjusted to supplement learning as needed.

## 50 Snow White Escape Room: Gamification for Emergency Medicine Residents

Kevin Hon, DO; Anita Lui, DO; Marion-Vincent Mempin, MD, FACEP

**Learning Objectives:** Our goal was to gamify medical education for emergency medicine (EM) residents by creating an Escape room based off of various EM topics. We hypothesize that our novel learning session would improve resident engagement and knowledge retention over traditional, lecture-based conferences.

### Abstract:

**Introduction:** Today’s emergency medicine (EM) residents are learning differently than their educators and benefit from more immersive education over lecture-based curricula. An Escape Room provides a unique opportunity to gamify learning for residents to collaborate, synthesize, and engage in a competitive environment in order to escape a locked room. This mini-curriculum provides stepwise instructions and tools needed to implement an escape room.

**Curricular Design:** Residents were assessed on their understanding of START triaging, toxicology, ventilators, venereal diseases, ultrasound, hyponatremia, and electrocardiograms. Residents were divided into four equal groups. There were seven locked puzzle boxes placed in the front of a classroom that sequentially led to the next puzzle. All groups attempted to “escape” their rooms simultaneously by sending a runner to unlock the corresponding box. Faculty members assisted with hints and assessed for the correct solutions. Learners were challenged with a series of Snow White themed puzzles. (Full description of the puzzles are available as an appendix for educators but have been purposefully omitted to prevent exposure to potential learners). Teams were timed, penalized for hints, and given