

## **UC Irvine**

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A day in the life of an emergency department (ED) patient: In-situ ED patient experience simulation for emergency medicine interns

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repair during remote lecturing in the early days of the Covid-19 pandemic.

**Curricular Design:** The model consists of a halved hotdog with an acrylic nail embedded into and glued using nail glue at the terminal rounded end. Pressure was applied to the distal acrylic nail, tearing the hotdog at the insertion site of the nail, creating a horizontal nail bed laceration consistent with a nail bed avulsion injury. Red food coloring was used to mimic bleeding from a nail avulsion. The cost was approximately \$0.20 per model. Models and suture material were available for residents to pick up at the hospital prior to the online conference.

**Impact/Effectiveness:** The model was tested with thirty-four emergency medicine residents during an online conference and simulation session performed over Zoom; the ultimate goal was to reapproximate the nail in good anatomical position with appropriately placed absorbable sutures. A voluntary survey was available for residents which yielded highly positive feedback with survey results confirming that the model provided valuable education.



Image 1.

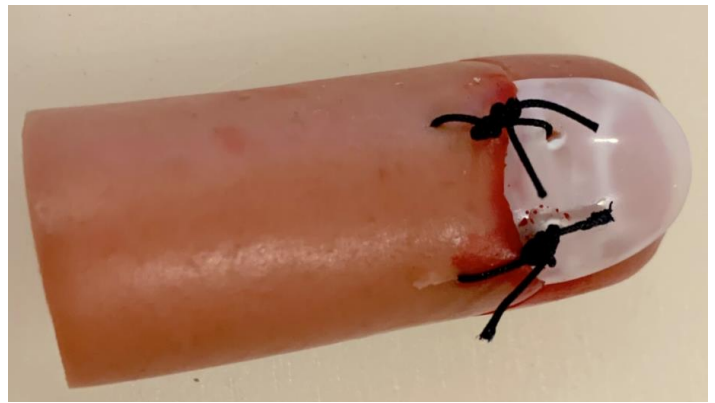


Image 2.

### 30 A day in the life of an emergency department (ED) patient: In-situ ED patient experience simulation for emergency medicine interns

*Lynn McGowan, Amber Billet, Barbara Stahlman*

**Learning Objectives:** The purpose of this educational innovation was to examine first year emergency medicine resident (EM-1) perspectives on the ED patient experience and examine how EM-1 empathy may change after experiencing a simulated ED encounter

**Introduction/Background:** Empathy is an essential trait for compassionate physicians and the importance of a positive patient experience in the emergency department (ED) is being increasingly emphasized. Currently, there is no best practice guidelines as to how to educate emergency medicine residents about patient experience.

**Curricular Design:** During the first week of EM-1 orientation, 12 residents at a community academic emergency medicine residency program consented to serve the role of patient, family member or observer. In groups of three, EM-1s navigated through four simulated ED encounters in their assigned role (left arm weakness, suicidal ideation, dyspnea, eye pain). Those role-playing as patient or family received a script based on chief complaint to utilize during the ED encounter. EM-1s individually completed a pre- and post-simulation written activity in which they listed all the tasks they believed the patient would encounter. Task totals of pre- and post-activity lists were compared using paired t-test ( $\alpha=0.05$ ). A debriefing session was conducted immediately after the simulation to obtain qualitative feedback. The entire activity took 2 hours (5 minute introduction, 15 minute pre-

activity, 40 minutes in the ED, 15 minute post-activity, 45 minute debrief).

**Impact/Effectiveness:** No significant difference was observed between pre- and post-activity task lists ( $p=0.17$ ). Overall, qualitative feedback revealed the activity felt very realistic and provided a positive learning experience. Simulated patients felt “vulnerable” and “frazzled.” Simulated family felt “anxious” and “stressed.” Observers were surprised at how many steps occurred simultaneously in the encounter. All participants reported the importance of communication.

### 31 Airway Tape Review: Learning Through Retrospective Review of Video Laryngoscopy Cases

*Justin Chapman, Lucienne Lutfy-Clayton*

**Learning Objectives:** With Airway Tape Review (ATR), we sought to implement a curriculum where actual resident airway recordings are reviewed in a group setting. The lecture series highlights best airway practices, challenging cases and common mistakes encountered by learners.

**Introduction/Background:** Airway Tape Review (ATR) provides a novel approach to covering airway curriculum through real airway cases. The advent of video laryngoscopy has allowed viewing of resident intubation by the supervising attending, improving safety and feedback in real time. Recording these intubations allows for retrospective review, knowledge translation to learners and supervisors not present and aligns curricular goals and objectives to actual cases. Reviewing these cases in a group setting provides professional development of airway skills in a safe and supportive environment for both learners and supervisors.

**Educational Objectives:**

- Review intubations to highlight curricular goals and objectives for airway skills
- Improve professional development of learners through the experience of a larger quantity and variety of intubations
- Discuss best practices in pre, peri and post intubation management
- Align ATR with curricular goals and objectives.

**Curricular Design:** We have implemented vignette-based didactic sessions that permit a “walk-through” of complex airway situations encountered by residents. Established at the UMass Chan-Baystate Emergency Medicine (EM) residency by Dr. Lutfy-Clayton and translated to the UMass Chan EM residency, our lecture series consists of a 1-2 hour quarterly interactive session with a collation of resident intubations pre-reviewed and edited to highlight teaching objectives. The session emphasizes resident participation and can be paired with relevant resident education including journal club and simulation to provide for additional spaced repetition.

**Impact/Effectiveness:** Retrospective review plays a key

role in development of clinical acumen as an EM physician. ATR provides a means to decelerate and distill discrete airway skills through repetition and the impact of real cases. Potential future uses for video laryngoscopy review include regular, direct resident feedback and tracking of resident improvement.

### 32 A Novel Curriculum for Reducing Distal Radius Fractures in an Emergency Medicine Residency Program

*Steven Morrin, James Willis, Kayla Basedow, Lauren McCafferty*

**Learning Objectives:** We developed a curriculum using a high-fidelity model for residents to learn proper reduction of closed, stable distal radius fractures without orthopedic consultation.

**Background:** EM residents are expected by the ACGME to be competent in managing orthopedic injuries. Given that these injuries make up 20% of ED visits, it is essential that residents feel comfortable and competent in managing them. In a recent survey sent to alumni of several EM residencies, more than half of respondents reported feeling not at all or somewhat prepared to independently reduce closed fractures. They also stated seeing wrist and distal radius and ulna fractures most frequently. We also received resident feedback from our own program that they felt uncomfortable reducing these fractures without orthopedic consultation, even though it fell within their scope of practice.

**Educational Objectives:** We developed a curriculum using a high-fidelity model for residents to learn proper reduction of closed, stable distal radius fractures without orthopedic consultation.

**Curricular Design:** Residents were given pre-reading materials on distal radius fracture reduction. During the session, residents were shown a brief presentation on the finger trap reduction technique and relevant anatomy. They were then given a demonstration by faculty using a SawBones high-fidelity simulation arm model. The simulation arm bones are radiopaque, allowing for both pre- and post-reduction x-rays in order to display proper alignment. After demonstration of reduction and radiographic confirmation, residents were able to practice closed reduction and x-ray interpretation under direct supervision.

**Impact/Effectiveness:** We administered an identical six-question survey before and after in which we assessed residents’ current comfort level with distal radius fracture reduction and splinting. Few residents (17%) initially reported feeling comfortable reducing closed distal radius fractures. After the intervention, almost all residents (88%) reported feeling comfortable. We are currently collecting follow-up data on comfort and frequency of orthopedic consults in the ED.