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Give Me a Break

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expertise (AE) so that graduates can navigate new challenges. Master Adaptive Learner (MAL) is a framework for the development of AE that can inform curricular design. Prior work shows that successful resident learners share skills in approaching the planning phase of the MAL cycle. However, we do not understand with what skills novice learners enter residency.

Educational Objectives: The objectives of our innovation were to observe how interns process the steps of the planning phase and to provide a controlled setting for interns to work through these steps.

Curricular Design: Simulation is an established educational strategy leveraging experiential learning. We developed a learning simulation guiding interns through the steps of the MAL planning phase. In our simulation, 57 EM interns at two academic centers in 2021 and 2022 were given a scripted case scenario of an intern presenting an intoxicated patient with facial trauma and a bloody airway to an attending. Interns were asked to list and prioritize their knowledge gaps and then fill their top gap using any resource until satisfied. Each intern then explained their gap prioritization and resource selection. These prompts led learners through the steps of the MAL planning phase: gap identification, gap prioritization and resource selection.

Impact: In our simulation, participants most often prioritized factual followed by conceptual knowledge, reinforcing the idea that foundational knowledge must precede practical application. Table 2 shows participants' top rationales for gap prioritization and resource selection. This data reinforces past findings about resident decision-making in learning, with 90% of participants able to fill their identified knowledge gap. This shows that in a controlled setting, novice learners can be led through the MAL model to direct their thoughts and learn from their community.

Table 1. Top gaps and types of knowledge.

Top overall and priority #1 gaps selected by participants
1. LeForte Fractures
2. Airway Management
3. Anterior Neck Injuries
Types of knowledge associated with overall and priority #1 knowledge gaps in descending frequency
1. Factual Knowledge
2. Conceptual Knowledge
3. Procedural Knowledge
4. Metacognitive Knowledge

Table 2. Top rationales for gap prioritization and resource selection.

| Top rationales for selection of #1 priority gap in order of decreasing frequency |
|---|
| 1. Airway as a time-sensitive decision and recognized knowledge gap (2-way tie) |
| 2. Knowledge gap impeding clinical decision-making |
| 3. Ability to communicate with others |
| **Top rationales for resource selection in order of decreasing frequency** |
| 1. Familiarity/comfort from prior clinical rotations/experiences |
| 2. Pathway to single comprehensive resource |
| 3. Efficiency |
| 4. Perceived to be credible |
| 5. Need for visual information |
| 6. Preferred learning style, provides evidence support, tailored for EM, and user friendly (4-way tie) |
| 7. Pathway to other possible resources |
| 8. Information that is up to date and convenience/readily accessible (2-way tie) |

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Sadie Robinson, Lauren Wendell, Sarah Hirner, Rebecca Bloch, Amanda Deutsch, Loice Swisher

Background: When emergency medicine (EM) residents were polled, only 1 in 3 took a break to eat on shift, 1 in 6 didn't go to the bathroom, and 1 in 10 took a break longer than 10 minutes, according to a multi-institutional study presented at the 2023 SAEM meeting. EM is known for long, busy shifts. There are known negative cognitive and emotional impacts when people are dehydrated and hungry, yet emergency residents are working under these conditions almost daily. Maine Medical Center explored a framework to confront this practice and incorporate a break for residents.

Objective: Implement a system to allow emergency medicine residents a 15-minute break.

Design: A coverage system was developed to allow residents 15 minutes to step off the floor during ED shifts. A chart was used to outline which residents would cover specific roles. Attendings were notified and helped to facilitate the break. This plan was presented to the department, residency leadership, and residents, who all approved and supported this project. A survey was designed for residents to complete at the end of each shift to collect data on whether a break was taken, barriers to taking a break, and emotional well-being at the end of each shift. IRB determined this project exempt.

Impact: 61 survey responses were collected over the month of October 2023. 23 of 61 respondents took a break on shift (37.7%), 38 reported no break (62.2%). The barriers preventing an on-shift break were competing priorities (44.7%), feeling like a break wasn't needed (26.3%), and feeling uncomfortable leaving with the state of the department (18.4%). Those who did not take a break were more likely to feel emotionally drained, 52.6%, compared to those who did, 26.1%. Understandably, there are many confounding factors that play into one feeling emotionally drained when leaving shift. This project clarified how frequently residents take breaks and barriers that can be addressed to help provide space for resident breaks.
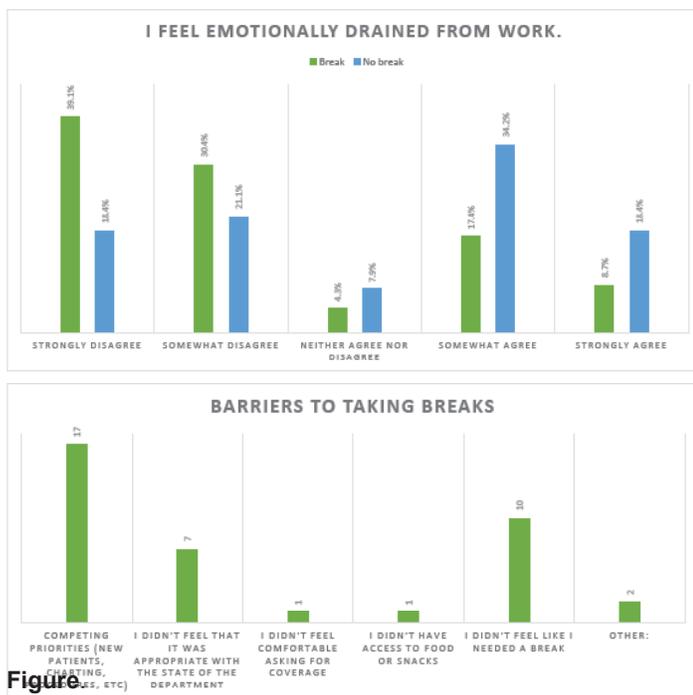
Figure

39 A Novel Model for Erector Spinae Planar Nerve Block Simulation

Karl Bischoff, Jeremiah Ojha, Nikitha Ashok, Danielle Biggs

Background: The Erector Spinae Plane (ESP) Block is a fascial plane block proven to be effective for management of pain associated with rib fractures. Inadequate management of rib fracture pain can result in poor patient outcomes. Emergency medicine physicians receive extensive training in ultrasound-guided procedures. With these skills physicians can employ nerve blocks to manage patients' pain and improve outcomes. Few models for the ESP block have been described, limiting the opportunity for safely educating residents on performance of this nerve block.

Educational Objectives: Simulation provides a controlled educational setting prior to implementation of unfamiliar procedures. The goal of this project was to create an easily reproducible model enabling simulation of the ESP block for resident education.

Curricular Design: Pork loin bone-in whole full case was selected for the model as it is a readily available cut. It is a midline cut through the spinous process which includes all of the anatomically important landmarks required for the ESP block. The cut permits visualization of ribs, transverse process, and the spinous process. The model was cut along the inferior edge of the rib and cleaned in order to provide direct visualization of the landmarks. The landmarks were then demonstrated under ultrasound guidance to each resident group. 22 ga needles were advanced in-plane in order to demonstrate proper ultrasound-guided technique and needle visualization. Flushes were used to demonstrate the lifting of the erector spinae muscle group essential to this block. Each resident was able to perform this block and was given live feedback using the model.

Impact: The model was effective in demonstrating anatomy both visually and under ultrasound guidance. Residents were able to practice proper technique and felt more prepared to perform the block on patients. This model will continue to be used in our residency program's nerve block education.

Figure.