

## UC Irvine

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A Novel Model for Erector Spinae Planar Nerve Block Simulation

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#### Authors

Bischoff, Karl  
Ojha, Jeremiah  
Ashok, Nikitha  
[et al.](#)

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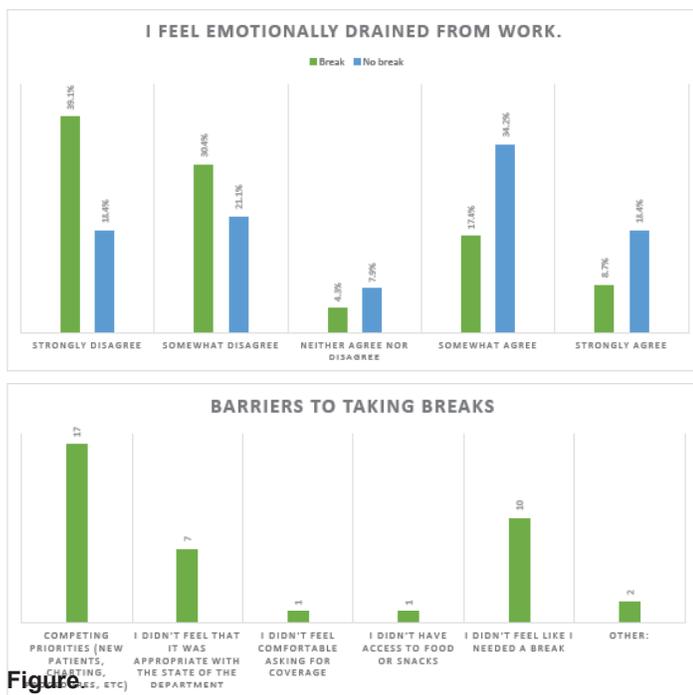
#### Supplemental Material

<https://escholarship.org/uc/item/0k0103rt#supplemental>

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**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.

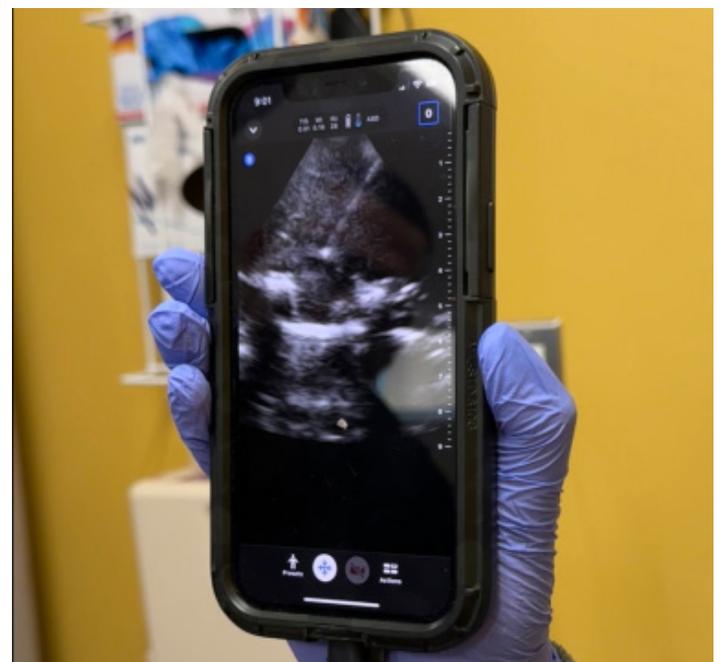


Figure.



Figure.

## 40 Implementing A Climate Change and Sustainability Curriculum for Emergency Medicine Physicians

*John Quinn, Kristie Taguma, Kavita Gandhi, Hilary Ong, Kevin Rolnick, Guy Shochat, Caroline Lee, Francesco Sergi, Esther Chen*

**Introduction/ Background:** The effect of climate change on health is a growing concern and disproportionately impacts vulnerable populations. Emergency Medicine (EM) physicians will increasingly be called upon to manage climate-related health emergencies and engage in sustainable practices. However, climate and sustainability training are absent from the 2013 Model Curriculum.

**Educational Objectives:** In an effort to fill this gap in our residency curriculum, we implemented a four-part climate lecture series during the 2022-2023 academic year. The objectives were to 1) prepare trainees to better manage

climate health emergencies, 2) integrate social and racial justice issues into climate discussions, and 3) engage trainees in clinical sustainability quality improvement projects.

**Curricular Design:** We chose a lecture format developed with input from faculty and other content experts to streamline integration into our existing didactic structure. Topics included “Climate Change, Health, and Equity”, “Climate Medicine; from Practice to Policy”, “Healthcare Sustainability”, and “Climate Medicine: Extreme Heat and Wildfires”. Feedback from attendees was collected and aggregated via MedHub.

**Impact/Effectiveness:** Feedback was positive, and many felt that the lecture series addressed a gap in training, though some requested more clinically applicable content. Following the lecture series, EM residents formed a Green Team which introduced sustainability practices to our university hospital emergency department (ED). At our county hospital ED, residents implemented an instrument-recycling program. After one month, 17% of instruments were recycled, improving to 62% in month two. These outcomes suggest success in motivating residents to participate in sustainable clinical practices. We plan to expand to a 2-year curriculum focusing on the health impacts of climate change while continuing to emphasize experiential learning with climate sustainability projects.

## 41 “Rapid Recall in Resuscitation”

*Taylor Ingram, Lindsey Picard, Julie Pasternack, Maia Dorsett, Kate Kokanovich, Fabiola Enriquez, Rachel Gartland, Joseph Pereira, Linda Spillane*

**Introduction/ Background:** A physician’s ability to order resuscitation medications proficiently is critical to patient care. Recall, pocket references and phone applications, and support from clinical pharmacists are common practice. Faculty identified gaps in residents’ ability to order such medications or use available resources efficiently without pharmacist support.

**Educational Objectives:** Simulate a high-pressure environment to evaluate residents’ ability to order commonly used resuscitation medications. Identify gaps in knowledge or ability and allow for direct formative feedback. Use the identified gaps to guide curricular change.

**Curricular Design:** A scenario-based oral exam was developed in response to a faculty survey in which critical resuscitation medications were identified. The quiz was reviewed by physicians and pharmacists for accuracy. Faculty administered the quiz to individual residents from all post-graduate years during the program’s annual comprehensive assessment. Residents had 20 minutes to provide medication names, doses, and administration