procedure. Trainees completed pre- and post-training surveys to assess procedural confidence.

Impact: Five non-emergency medicine sports medicine physicians completed training. All participants (5/5) reported increased confidence in their ability to perform these procedures. To our knowledge, this is the first simulation-based training for management of sideline emergencies that targets non-emergency medicine physicians. Additionally, incorporation of both lab-based and in-situ simulation provides a scaffolded approach to skills development and implementation.

43 Emergency Medicine Smackdown! A Novel Debate Session in Residency Didactics Using Artificial Intelligence

Nathaniel Ladaga, Jeffrey Jones, Thomas Peterson, Megan Courtley

Introduction/Background: Traditional slide-based didactics yield lower satisfaction, engagement, and retention than interactive formats. Case-based and debate-style learning improves outcomes in medical education. Building on these findings, "EM Smackdown!" was developed in 2024 as a quarterly, debate-style session integrating Artificial Intelligence (AI) search tools to support literature discovery and discussion of controversial EM topics.

Education Objectives: By the end of the session, learners will be able to conduct targeted literature reviews on clinical EM questions, effectively utilize AI-based and online tools, critically appraise and cite evidence to support their clinical decision-making, and demonstrate professionalism during structured debates. Faculty evaluators use observations of discussions and literature review skills to inform ACGME milestone assessments.

Curricular Design: Each 90-minute session begins with a faculty-developed EM vignette and corresponding management dilemma. Residents and students, randomly assigned to teams led by senior residents, review literature to construct arguments supporting or opposing management choices. Teams present findings with citations during a moderated debate. Post-session surveys assess learner comfort with rapid, targeted literature searches and solicit feedback for future topics.

Impact/Effectiveness: Participants reported that an "EM Smackdown!" session was more engaging than traditional lectures, enhanced understanding, and improved efficiency in locating reliable evidence. This model simultaneously promotes literature analysis, professional discourse, and AI integration. Given the current scarcity of AI-based curricula in medical education, this innovative format provides a practical and adaptable framework for modernized, evidence-driven didactic learning.

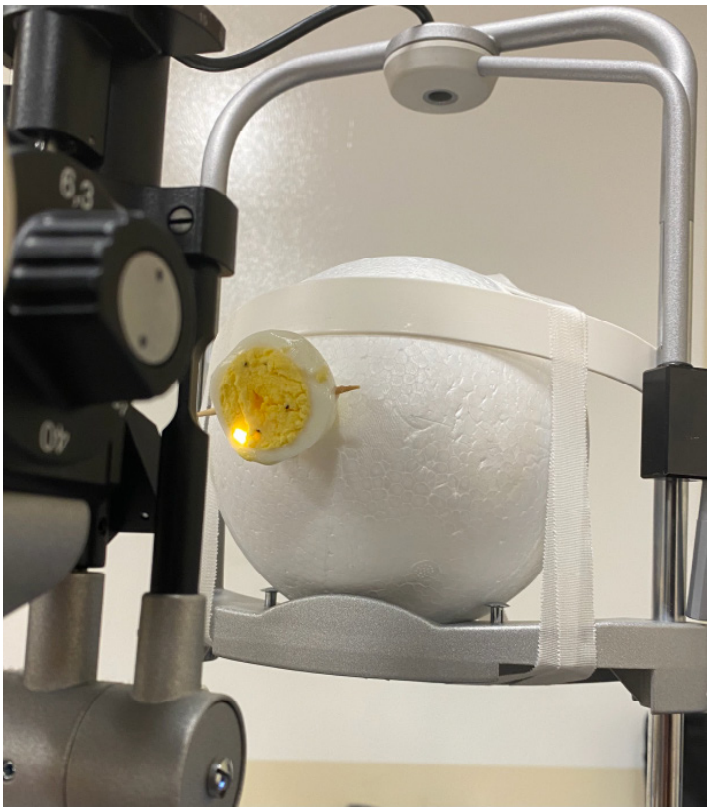
44 Eye on the Prize: Simulating Corneal Foreign Body Removal Training for Emergency Medicine Residents Using Hard-Boiled Eggs

Charles Wyatt, Hyunjoo Lee

Background: Nearly 12 million emergency department visits annually involve ophthalmologic complaints. Proficiency in corneal foreign body (CFB) removal via slit lamp is essential for emergency physicians; however, EM residents report less than 10 hours of dedicated ophthalmologic training during residency. Despite the clinical importance, no standardized teaching approach exists in EM residency curricula. Various simulation materials including cow eyes, agar plates, and paraffin have been explored, but hard-boiled eggs represent a novel, accessible, low-cost alternative warranting investigation as a teaching tool.

Educational Objectives: To evaluate whether hard-boiled egg simulations for CFB removal significantly improve EM residents' procedural proficiency and confidence levels, and to assess whether this approach is feasible, cost-effective, and practical for routine implementation across different training levels.

Curricular Design: Residents completed pre-simulation surveys assessing baseline experience and comfort with slit



lamp use and CFB removal techniques. A simulation model was constructed using a slit lamp, Styrofoam ball, hard-boiled egg, and pencil-lead shavings to simulate embedded corneal foreign bodies. During a structured resident conference session, participants performed CFB removal procedures on the egg-based model under supervision and completed post-simulation surveys. Confidence levels and Likert scale responses were analyzed using paired t-tests in Microsoft Excel.

Results: The simulation led to statistically significant improvements in resident procedural confidence. Mean confidence scores for performing CFB removal increased from 2.38 to 4.76 ($p < 0.001$). Confidence using a needle during CFB removal increased from 1.70 to 4.83 ($p < 0.001$). PGY1 residents demonstrated the largest relative improvement, though significant improvements were observed across all training levels, suggesting broad applicability.

Impact/Effectiveness: Hard-boiled egg simulations significantly improved residents' confidence in CFB removal. This low-cost, accessible model proved practical for procedural education across all PGY levels. Future studies should verify clinical effectiveness and validate performance outcomes.

45 Social Determinants of Health Workshop: Utilizing Simulation and Gamification to Increase Social Determinants of Health Education

Amber Billet

Introduction/Background: There is increasing need to educate Emergency Medicine (EM) residents regarding Social Determinants of Health (SDoH). ACGME requirements aside, residents need preparation to serve the unique patients in their community.

Educational Objectives:

1. Identify and understand the impact of SDoH inequity.
2. Identify the role of community health workers and how they can optimize patient care.
3. Build empathy for those impacted by SDoH factors.

Curricular Design: EM residents participated in a 5 hour workshop. Residents completed a pre-survey prior to a lecture introducing SDoH and objectives. Learners then participated in (4) attending-facilitated mini simulations consisting of 4-6 mixed PGY-level residents per group. Learners rotated through the role of patient, physician, confederate and observer in each of the four simulations which included: incarceration, religion/age, language and racism (Table 1). Each simulation comprised a 15 minute scenario, 8 minute debrief, and 2 minute transition. Learners subsequently rejoined for two brief lectures on community resources and transgender care, then modeled social roles and factors within a board game framework ("The Last Straw" or "Our World"). Residents and attendings completed a post-survey and feedback survey, respectively.

Impact/Effectiveness: A total of 21 residents and 6 attendings participated in the workshop, with 95% and 100% agreeing/strongly agreeing that the activity was a valuable use of conference time, respectively. Comparing pre- and post-survey resident responses, 33% vs 71% ($p=0.01$) agreed/strongly agreed that the ED is an appropriate venue to connect patients with community resources, 29% vs 100% ($p<0.01$) agreed/strongly agreed that they had received specific training on how to identify and intervene on SDoH and 33% vs 86% ($p<0.01$) agreed/strongly agreed that they felt confident in their knowledge of community resources and ability to connect them to patients.

Case #	1	2	3	4
Scenario	Incarceration	Religion & Age	Language	Racism
SDoH Domain	Environment Social Context	Social Context Healthcare Access	Education Access Poverty	Social Context Healthcare Access
Roles	Patient (M), Physician, Officer	Patient (E), Physician, Parent	Patient (F), Physician, Parent	Patient (M), Physician
Set Up	Patient Bed 3 chairs	Patient Bed 3 chairs	Patient Bed 2 chairs	Patient Bed 3 chairs

46 Rural Emergency Department Simulation: Resource Limited, Multipart Case Well Received by Residents

Kjerstin Hensley, Joshua Neumann, Bophal Hang

Introduction: Critical Access Hospitals face staffing shortages as most EM graduates pursue urban positions. Current simulation curricula emphasize high-resource, tertiary environments, leaving a gap in training residents to manage complex, time-sensitive emergencies with limited resources. This innovation introduces a high-fidelity simulation targeting the operational and clinical challenges of a single provider in a rural ED.

Educational Objectives: Prioritize and manage simultaneous high-acuity emergencies with minimal staff and resources; demonstrate effective clinical management of rural-relevant emergencies; execute system-based tasks, such as inter-facility transfer and resource allocation; and maintain professionalism and communication with limited nursing support and distressed families.

Curricular Design: This curriculum utilizes a three-part, single provider, high-fidelity simulation for senior EM residents in a resource limited rural ED. The three concurrent cases included a critically ill patient with a peritonsillar abscess requiring potential airway management and transfer, a patient with postpartum hemorrhage, and a patient necessitating immediate lateral canthotomy. The scenario required rapid task switching, delegation, and resource allocation. Residents completed a post-simulation survey for feedback, and performance was evaluated using a customized milestones tool and structured debrief (Supplement 3).

Impact / Effectiveness: The simulation has been