

UC Irvine

Western Journal of Emergency Medicine: Integrating Emergency Care with Population Health

Title

Sports Medicine Training in Airway & Trauma (STAT) Curriculum for Sideline Event Providers

Permalink

<https://escholarship.org/uc/item/9xx934w2>

Journal

Western Journal of Emergency Medicine: Integrating Emergency Care with Population Health, 27(2.1)

ISSN

1936-900X

Authors

Gosine, Krishen
Kabbash, Michel
Fernandez, Rosemarie
[et al.](#)

Publication Date

2026-03-27

DOI

10.5811/westjem.64217

Copyright Information

This work is made available under the terms of a Creative Commons Attribution License, available at <https://creativecommons.org/licenses/by/4.0/>

procedures completed, ultrasounds completed, total patient encounters, and inservice exam scores. A standardized process was implemented to collate these data prior to each semi-annual review, generating a concise summary slide for every resident that displayed individual performance relative to class-specific averages. A series of color-coded slides tracked each resident's historical and projected progress within the Milestones framework, benchmarked to class expectations. To enhance efficiency, a countdown timer with an audible cue was added to structure faculty discussions. Faculty were surveyed pre/post-intervention using an online survey tool with a five-point Likert scale and responses were analyzed utilizing a Wilcoxon signed-rank test. Timesheets were reviewed pre- and post-intervention for total time billed for CCC meetings.

Impact: Pre/post-intervention surveys asked faculty members to report if our process of assessing resident progress was accurate, consistent, data-based, popularity-based, efficient, and/or rewarding and improvement was seen in all surveyed categories with the most significant improvement demonstrated in perceived accuracy and efficiency (both reaching $p < 0.05$) with effect sizes ($r \approx 0.35-0.40$) by Wilcoxon analysis. A trend towards reduced hours by faculty for CCC meetings was demonstrated, suggesting savings in faculty time and program budget.

41 Creating Individualized Learning Plans with Large Language Models for Emergency Medicine Residency In-Service Training Exam

Michael Bernazzani, Jennifer Carey, Alexandra Nordberg

Educational Objectives: Develop a workflow using a large language model (LLM) to generate early drafts of individualized learning plans (ILPs) for medical knowledge gaps.

Introduction/Background: ABEM published that there is a national decline in qualifying and in-training examination performance for EM residency programs over the last six years. ACGME also requires the programs create ILP's to help residents meet their milestones. Current ILP creation centered around medical knowledge is labor intensive; requiring a faculty to resident ratio of 1:4. A lack of scalable, standardized tools for ILP development represents a significant gap in educational support. LLM's offer a solution by generating early drafts that faculty refine, reducing the time required for creating ILPs.

Curricular Design: We developed a stepwise chatbot using a LLM to synthesize de-identified ITE reports including: domain performance, overall score, predicted pass probability, and standard error. With optional inputs of resident learning preferences and clinical schedule. We incorporated the ABEM content blueprint to ensure heavily tested domains were prioritized. The chatbot then produced a structured

ILP; outlining resources, timing, and question volume. A faculty member reviewed each plan. The prompt underwent two iterative refinements to improve output structure and weighting logic.

Impact/Effectiveness: The LLM was able to generate the initial ILP, followed by faculty review. Overall this was found to save faculty time. One faculty member produced four ILPs in half a day compared with historical estimates of one day per resident. Removing the initial drafting burden substantially reduced the workload, and allowed faculty to focus on higher-level review. Anecdotally, plans appeared comparable to traditional versions with improved structural consistency. The workflow requires only an ITE report, a LLM, and a template prompt, supporting feasibility and adaptability for other residency programs.

42 Sports Medicine Training in Airway & Trauma (STAT) Curriculum for Sideline Event Providers

Krishen Gosine, Michel Kabbash, Rosemarie Fernandez, Alejandro Sanoja, Sarah Chrabaszcz, Joshua Altman, Jasmine Holmes, Dante Lorenzo-Rodriguez

Background: Effective pre-hospital airway and trauma management are critical competencies for sports medicine physicians providing sideline coverage at athletic events. Airway and non-orthopedic trauma management are not currently core competencies for sports medicine fellowships. Additionally, sports medicine fellowship trainees are recruited from various specialties and as a result have significant variation in baseline non-orthopedic emergency care.

Educational Objectives: The objective of the STAT workshop is to develop sideline and trauma management skills in sports medicine physicians providing sideline coverage.

Curricular Design: We applied Kern's approach to the design of a curriculum for sports medicine physicians. Subject matter experts (board-certified sports medicine physicians trained in orthopedic surgery, emergency medicine, and family medicine external to the design team) reviewed training content, specific procedure learning objectives, and checklists/critical actions for each procedure. Content and checklist items were revised based on feedback. Training strategies employed (1) asynchronous learning to support development of foundational knowledge, (2) a simulation-based session to provide hands-on skill training in a controlled environment, and (3) in-situ simulation to support transfer of skills to the sideline setting. Training targeted basic and advanced life support skills including bag-valve mask ventilation, airway manipulation, advanced airway placement, automated defibrillator use, and trauma skills of securing spinal immobilization and needle thoracostomy. Each station was guided by procedural checklists and offered trainees the opportunity to gain mastery of the

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

