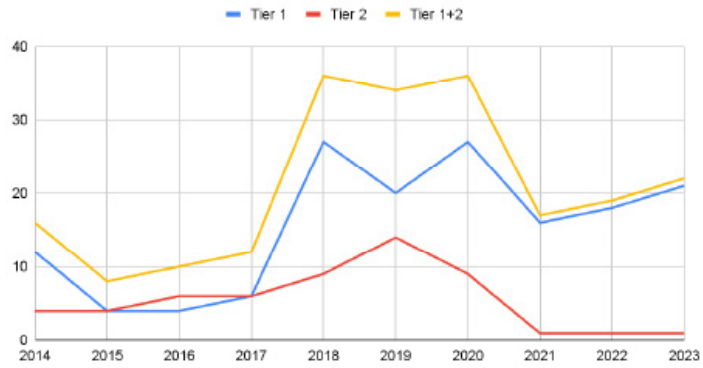

Figure 1. Research projects by tier 2014-2023.

6 Optimizing Scholarly Impact: Implementing the Scholarly Oversight Committee for Elevated Resident Output

Megan Wudkewych, Danielle Turner-Lawrence, Brett Todd

Background/Objectives: Providing an organized approach to resident scholarship is imperative to fostering academic development of residents, cultivating skills for lifelong learning, and contributing to medical knowledge. However, there is no standardized method for oversight and advancement of resident research and scholarship. We aim to introduce a strategy for residency programs to oversee and elevate EM resident scholarship.

Curricular Design: Recognizing the necessity for an organized system to enhance scholarly output, we created a Scholarly Oversight Committee (SOC). The SOC consists of a committee leader, director of EM research, and supporting faculty, who oversee research projects through quarterly meetings. These sessions involve reviewing project progress, identifying potential roadblocks, and providing targeted feedback. The SOC intervenes when residents face challenges in meeting benchmarks, conducts structured meetings with faculty advisors, and formulates tiered guidelines to assure all projects meet minimum standards. The success of the program depends on actively involved faculty, regular updates, and the establishment of clearly defined tiers. Initially, project tracking presented a challenge, leading to the creation of a dynamic living spreadsheet in response, as well as the initiation of a research forum to support a culture of scholarship.

Impact: The success of this innovation was primarily gauged by monitoring the rise in higher-level scholarly output standardized by the tiers and the increase in national or regional presentations. This has led to an overall improvement in the quality of scholarly projects, with a 237% surge in the number of projects published or presented at national or regional conferences per year despite the impact of the pandemic in 2021 (see graph 1). In conclusion, the SOC model, when combined with interested faculty, class-based deadlines, and tiered guidelines, holds the potential for applicability in many programs.

Figure 1. Residents were given 6 question needs assessment survey before and after documentation course. Followng the course, 90% of residents felt they had adequate training on documentation.

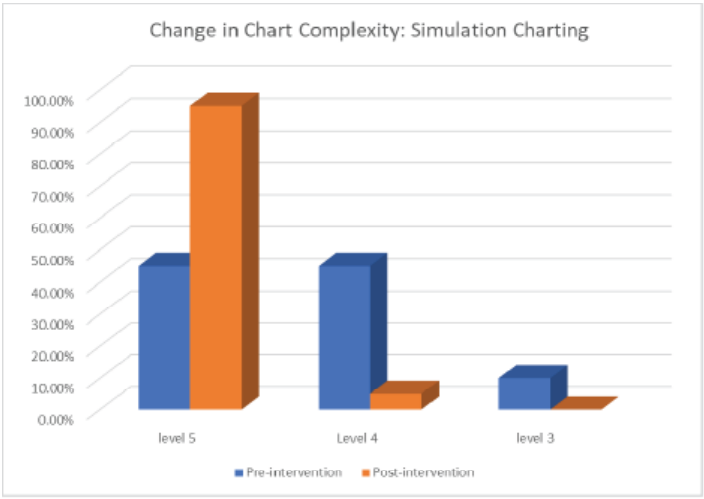

Figure 2. Residents participated in a simulated encounter of a highly complex case and were tasked with documenting to the appropriate coding level, which was a level 5 for both simulations. Prior to the course over 50% of the charts were downcoded from a level 5 to a level 4 compared to only 5% after completion of the course.

7 Enhancing Documentation in Emergency Medicine Resident Education Through Didactics and Simulation: Curriculum Development and Assessment

Jacqueline Dash, Jeremiah Ojha, Michael Buxbaum

Introduction/Background: Accurately documenting patient encounters is a fundamental skill that underpins the

quality of patient care, medical billing, and legal protection for healthcare providers. The education and training surrounding charting and documentation in emergency medicine residency have often been relegated to on-the-job learning, without formal didactic instruction. This deficiency leads to inefficiencies, inconsistencies, and even potential legal vulnerabilities. In response, an innovative curriculum was developed and implemented.

Educational Objectives: The objective of this curriculum is to empower emergency medicine residents with a comprehensive understanding of documentation's critical role in patient care, billing, and legal protection. Through this curriculum, residents gained proficiency in navigating evolving coding guidelines, maximizing relative value units, and implementing best practices to efficiently and accurately document.

Curricular Design: A needs assessment was performed, which showed only 40% of our residents felt they had sufficient training on documentation. Hence, a documentation curriculum was developed which blended didactic lectures with simulated patient encounters. Residents were provided with 6 50-minute lectures, which focused on the requirements for billing, efficiency, and best practices. Residents participated in a simulation case before and after the course, which involved critical care and a medical error. They were required to write a note documenting this case. These notes were evaluated, and feedback was given.

Impact/Effectiveness: A post-intervention survey showed 90% of our residents felt they had sufficient training on documentation. Following completion of the course residents were given another SIM and only 5% of charts were downcoded from a level 5. This curriculum can easily be adopted by other institutions. It was well received by our residents, and it improved their charting competence and confidence.

8 Expanding FOAMed to Voice Activated Artificial Intelligence: Mental Practice of Emergency Medicine Procedures via Alexa

Megan High, Ryan Tabor, Tim Henderson, Ryan McKillip

Background: EM physicians are responsible for performing a variety of life and organ-saving interventions. However, given the infrequency of some high acuity, low occurrence (HALO) procedures, opportunities to hone these skills can be rare. Mental practice (MP), the visualization of a set of actions, has consistently demonstrated a positive impact on performance of medical procedures, but it lacks feedback. Voice activated artificial intelligence (VAAI) (e.g. Alexa, Siri) offers an accessible format for interactive MP.

Objectives: Create an open access VAAI resource to facilitate MP of HALO procedures.

Design: Three experienced EM physicians identified nine HALO procedures via consensus: lateral canthotomy, transvenous pacing, cricothyrotomy, needle cricothyrotomy, pericardiocentesis, resuscitative hysterotomy, thoracotomy, newborn delivery, and cranial burr hole. An Amazon Alexa application was created which guides a user through MP of each procedure. Alexa was selected for its voice interaction features and ability to run on both mobile phones or smart devices. Users select a procedure and then are prompted to visualize the necessary supplies, then the procedure itself and finally potential complications. After each prompt, Alexa allows time for visualization before reading back a script of the appropriate supplies and steps (Figure).

Impact: Since August 2022, use of the application has grown organically, with 16 activations and 65 sessions on mobile (4/65), smart speaker (28/65), or television platforms (26/65). Application performance has been high, with 100% (65/65) appropriate endpoint responses, indicating it has functioned without error. As users grow, a study of its effect on procedure performance is needed. VAAI is an underutilized medium for medical education tools. This project represents a novel format for free open access medical education (FOAMed), and demonstrates an innovative method for enhancing physician proficiency.

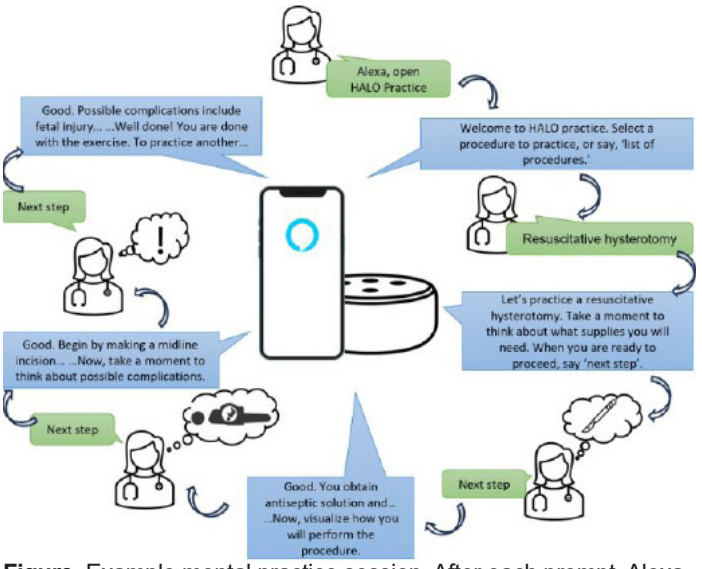

Figure. Example mental practice session. After each prompt, Alexa allows time for visualization before reading back a script of the appropriate supplies and steps.

9 Trauma-Informed Verbal De-escalation Curriculum for Emergency Medicine Residents

Samara Albazzaz, Jeremiah Ojha, Kelly MacKenzie, Jessica Parsons, Erica Harris

Introduction: Use of violent restraints for agitation in the ED contributes to patient morbidity through physical and psychological harm. The process of restraining is also time