

Educational Objectives: This activity aimed to (1) strengthen residents' understanding of key terms, diagnostic criteria, and management strategies for aortic dissection; (2) improve recall and application of these concepts in high-pressure clinical scenarios; and (3) enhance teamwork and communication skills through competitive, game-based learning.

Curricular Design: The activity was implemented during weekly resident conference with 12 participants split into two teams. A 5×5 Code Names–style grid incorporated terminology related to aortic dissection, including diagnostic classifications, imaging modalities, treatments, and management priorities. A Spymaster provided single-word clues to guide teammates toward selecting the correct terms while avoiding the “assassin” card. Following the session, residents completed a four-item post-activity survey using a 5-point Likert scale assessing motivation, engagement, challenge, and perceived preparedness for managing cardiovascular emergencies.

Impact/Effectiveness: Ten residents completed the survey. Participants reported high motivation to learn cardiovascular content through this gamified format (mean 4.6/5). All respondents (100%) agreed or strongly agreed that the game was more engaging than traditional educational methods (mean 4.9/5). Residents also found the activity appropriately challenging (mean 4.6/5), with 90% agreeing it tested their abilities more effectively than standard instruction. Additionally, 80% reported feeling better prepared to manage real-life cardiovascular emergencies following participation (mean 4.0/5). Future iterations will expand this gamified approach to additional high-stakes cardiovascular and emergency medicine topics.

25 Hands-On Learning: Transforming Resident Education in Hand and Wrist Fracture Management

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Intro/ Background: Emergency physicians frequently manage hand and wrist fractures. However, recent data has shown that many EM residents lack confidence in this component of the ABEM Model of Clinical Practice, highlighting the need for prioritization of orthopedic curricula in residency didactics.

Educational Objectives: By the end of our conference session, EM residents will be able to:

- Accurately interpret radiographs of distal radius fractures
- Develop confidence in independently performing distal radius reductions without Orthopedic consultation
- Execute proper technique for fracture reduction management through hands-on demonstration

Curriculum: Targeting PGY 1–4 EM residents, a five-hour session combining didactics and hands-on training

was delivered during conference time. The core curriculum centered on wrist anatomy, structured hand examination, radiographic interpretation of distal radius fracture variations, and faculty-led demonstrations of fracture reduction principles. Learners rotated through a series of hands-on stations designed to reinforce key steps in distal radius fracture reduction including application of finger traps, performance of hematoma blocks, reduction techniques using 3D-printed models, and immobilization and splinting techniques.

Impact/Effectiveness: Thirty-seven participants completed pre-training assessments and 43 completed post-training evaluations. Knowledge improved significantly, with identification of Colles fractures increasing from 62% to 91% and Smith fractures from 43% to 88% (both $p < 0.001$). Procedural comfort showed marked improvement, with mean comfort scores increasing from 1.77 to 3.33 on a 5-point scale (effect size $d = 1.8$). The percentage of participants reporting comfort performing fracture reduction without consultation increased from 3% to 77%. These findings demonstrate statistically significant knowledge gains and clinically meaningful improvements in procedural confidence. Next steps include measuring residents' skill retention and procedural comfort in practice.

26 RECAP: Revamping of Clinical Assessment Practices

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Introduction: The Standardized Letter of Evaluation (SLOE) is an integral part of the emergency medicine applicant's profile and allows programs to view EM bound students through a consistent lens. Despite the vital importance of the SLOE, when the time comes for Clerkship Directors to compose them, there is usually a dearth of direct observational data due to the natural time constraints imposed by a number of simultaneous rotators and lack of enthusiasm from educational faculty for completing shift evaluations. Current Standard Direct Observational Tools (SDOTs) exist to evaluate trainees during patient encounters but do not directly correlate to SLOEs.

Educational Objectives: The objective was to determine if a dedicated resident as a teacher on an education rotation utilizing a direct observational tool could generate additional data for use in writing SLOEs.

Curricular Design: A new evaluation form was created to reflect the competencies that are evaluated by SLOEs. A PGY-3 resident on a medical education rotation was tasked with direct observation of rotating medical students during a patient encounter and then giving them real-time feedback on their presentations. They were then asked to fill out the new evaluation form with comments on their interactions with the student.

Impact/Effectiveness: Post-rotation survey data was

collected electronically in a short-answer free text format from all 9 of our senior residents. 100% felt the new evaluation format was easy to use and helpful in providing real-time structured teaching and feedback. In prior years, the number of post-shift evaluations filled out at the end of the rotation per student ranged widely from 2-15 per student, with more evaluations being filled out for students ranked highly. Additionally, prior year evaluations infrequently provided feedback that was directly applicable to the SLOE. This year, every student had between 15-20 evaluations, 100% of which had consistent detailed data directly applicable to the SLOE. The preliminary success of our implementation is very promising here and should be considered by other programs with rotating medical students.

27 Tummy Time: Gamified Educational Session for Abdominal Ultrasounds

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Background: Ultrasound is an essential diagnostic modality for evaluating pediatric abdominal pathology. To enhance emergency medicine (EM) residents' hands-on experience, we developed a series of simulated task trainers that replicate both common conditions (e.g., constipation) and less frequently encountered pathologies (e.g., pyloric stenosis). Point-of-care ultrasound (POCUS) is routinely performed in the pediatric emergency setting; however, limited exposure can leave residents underprepared or uncertain in their imaging technique and interpretation skills.

Educational Objectives: To implement a gamified learning experience that strengthens EM residents' ability to identify and interpret pediatric abdominal ultrasound findings.

Curricular Design: A gamified educational session was held where EM residents were given a clinical prompt paired with an ultrasound-able model. Four unique models were used to show sonographic findings of constipation, intussusception, appendicitis or pyloric stenosis. Residents were directed to identify the pathology demonstrated on the model and then answer follow-up questions about management and potential complications. The session concluded with a pediatric EM faculty-led review of the characteristic ultrasound findings for each condition with real-time demonstration on the models.

Impact/Effectiveness: On a five point Likert scale survey of 14 residents, all respondents felt the activity was beneficial and enjoyable. After the session, 100% of residents noted increased confidence in identifying pyloric stenosis on ultrasound, 92.8% for identifying constipation and appendicitis, and 85.7% for identifying intussusception. Participants also rated the realism of the four ultrasound models highly, with scores ranging from 80% to 100%. The gamified ultrasound

session effectively improved resident confidence in identifying pediatric abdominal pathologies. The use of realistic, ultrasound-compatible models provided meaningful hands-on practice that helped bridge gaps in clinical exposure. These findings suggest that integrating simulation-based gamification into residency training may enhance diagnostic proficiency and learner engagement in pediatric POCUS.

28 Structured Competency-Based Curriculum for Ultrasound-Guided Peripheral Intravenous Catheter Placement

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Background: Ultrasound-guided peripheral IV catheter (USGIV) insertion is a core skill for emergency physicians, as 8–23% of emergency department patients have difficult venous access. Ultrasound guidance improves success rates and reduces complications and patient discomfort compared to traditional techniques. Despite its importance, emergency medicine residents often receive inconsistent instruction in USGIV placement, leading to variable skill acquisition. Prior studies support multimodal education using didactics, simulation, and assessment to enhance confidence and procedural success.

This innovation aims to improve first-year emergency medicine residents' procedural competency through a structured, competency-based education program combining asynchronous learning, simulation-based deliberate practice, and objective assessment. A pre-session curriculum and validated competency checklist promote standardized skill development and feedback. Pre- and post-tests, along with a retention survey, assess changes in knowledge, skills, and confidence.

Educational objectives:

1. Describe indications, contraindications, and procedural steps for USGIV insertion.
2. Demonstrate image acquisition and dynamic needle guidance on simulation models.
3. Achieve competency using a validated USGIV checklist.

Curricular Design: Residents complete pre-learning materials and a pre-test via email, followed by a two hour simulation session focused on vascular anatomy scanning and USGIV practice. Competency is assessed at session completion utilizing a procedure checklist and post-test, with follow-up surveys administered during a subsequent ultrasound rotation to evaluate retention.

Impact/Effectiveness: This project standardizes instruction for a high-frequency procedure that directly impacts patient care quality and efficiency. Preliminary data has been collected, but a revised assessment tool will be implemented in the next academic year.