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Power Half Hour: A Short, Sweet, and Clinical Image-Based Peer-to-Peer Educational Curriculum

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#### **Authors**

McCafferty, Lauren  
Carter, Leah  
Schaub, Andrew

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set of simulated patients that were deemed to be appropriate for their level of training. Cases included the following patient scenarios: exposure to an unknown environmental agent, hazardous building fire, mass casualty incident triage, and hemorrhagic shock management. Learners not directly involved in the case observed from the audience. This three-hour simulation session was conducted during weekly conference using simulation mannequins, high-fidelity low-cost models, and faculty acting as patients and other personnel. Designated faculty members judged teams on their teamwork and management. After each case, faculty members conducted a debrief focused on the educational objectives for the case. After the simulation session, the residents completed a likert-type survey to assess resident learning and engagement.

**Impact:** The residents provided overwhelmingly positive feedback. They found that this simulation was more educational than other types of activities, helping them better understand and manage the relevant emergent pathology.

## 9 Gotta Escape EM all! Emergency Medicine Resident Education with Gamification

*Kevin Hon, Marion-Vincent Mempin*

**Learning Objectives:** Priapism drainage; Common causes of hyperkalemia; Pacemaker EKGs and errors; Common toxic botanicals and their treatments; Beta-blocker toxicity management; Psychiatric medical emergencies; Resuscitation of adult and pediatric burn victims; Wilderness resuscitation skills.

**Introduction/Background:** Traditional conferences provide a uniform, didactic review. Modern residents can benefit from a structure that engages them in active learning with immersive and collaborative experiences. Activities like flipped classrooms, simulation, and virtual learning have improved upon the ennui of prior conferences. We seek to appropriate the escape room to review key, uncommon topics in emergency medicine (EM) as a conference activity to address areas of improvement in residents' knowledge prior to their in-training exam (ITE).

**Educational Objectives:** At the completion of the escape room activity, residents and medical students will be tested upon and be able to perform the following: Priapism drainage Common causes of hyperkalemia Pacemaker EKGs and errors Common toxic botanicals and their treatments Beta-blocker toxicity management Psychiatric medical emergencies Resuscitation of adult and pediatric burn victims Wilderness resuscitation skills.

**Curricular Design:** A survey-based needs assessment was done by EM residents about the topics which needed more review before their ITE. Topics were assessed to determine an optimal method for review: lecture, group

session, or gamification. Those selected for gamification were designed to fit a predetermined theme to complement a ninety minute conference lecture alternative escape room. Residents were split into four groups and raced to complete the activity. Afterward, residents were provided a review over each topic and the escape room was surveyed for its effectiveness and satisfaction with respect to the review of the objectives.

**Impact/Effectiveness:** An anonymous Likert scale survey provided to residents showed 90% rating the activity successful in achieving its academic goal and 95% as an activity that residents wanted to implement again in the future. 93% of residents who provided feedback regarding topic selection agreed that the activity addressed their prior curricular deficits.

## 10 Power Half Hour: A Short, Sweet, and Clinical Image-Based Peer-to-Peer Educational Curriculum

*Lauren McCafferty, Leah Carter, Andrew Schaub*

**Learning Objectives:** Our goal was to address knowledge deficiencies encountered by residents on shift through a peer-to-peer didactic curriculum covering high-yield EM core content through a series of clinical images obtained in our ED.

**Background:** In an EM residency curriculum, there are clinical scenarios encountered by trainees that are not adequately addressed in a traditional didactic format. When residents encounter these scenarios, they have the opportunity to enhance their own clinical acumen with "just in time" learning but no organized way to share the new information with their peers. There is evidence showing that peer-to-peer teaching fosters a supportive learning environment while not sacrificing the integrity of content delivered. Additionally, this format solidifies the concepts for the teaching resident and promotes their development into a skilled educator.

**Curricular Design:** In order to address knowledge deficiencies encountered by residents on shift, we created Power Half Hour (PHH), a resident-led didactic series, presented bi-monthly in conference, that centers around a series of clinical images. The images, including a combination of physical exam findings, ECGs, and diagnostic images, are presented with high-yield, clinically relevant teaching pearls.

**Impact/Effectiveness:** Our PHH innovation was incorporated as a recurring series into the resident curriculum. After a year of implementation, residents were surveyed on how educationally beneficial they found PHH. Of the 28 residents who completed the survey, 13 residents (46%) found PHH very beneficial, 12 residents (43%) found PHH somewhat beneficial, and the remaining were neutral. By implementing a clinical image-based

curriculum using a peer-to-peer teaching model, residency programs can address core content deficiencies, promote knowledge sharing amongst peers, and nurture resident development as educators.

## 11 Start Spreading the News: Best Practices for Summarizing and Distributing Residency Didactics

*Joseph Pereira, Ryan Bodkin, Jason Rotoli, Valerie Lou, Julie Pasternack, Linda Spillane, Emily Fitzgerald*

**Learning Objectives:** Create an easily digestible infographic including pearls from residency didactics which can be consistently reproduced with minimal time commitment to maximize learning through asynchronous spaced repetition; discover the basic functions of Canva and methods to implement this into your residency.

**Introduction:** The pandemic has introduced drastic fluctuations in clinical experiences for residents. Given these circumstances, maximizing didactic education is even more critical for trainees. Spaced repetition has been deemed a beneficial way to solidify information into long term memory for learners. Despite initiating best practices in virtual didactics, it can be difficult to engage learners adequately in virtual format to ensure active learning and promote knowledge retention. We sought to combat these challenges by designing and distributing weekly infographics summarizing key learning points from didactics.

**Curricular Design:** For any resident academic project, the rigorous schedule is an anticipated barrier to consistent production. The user-friendly graphic design platform, Canva, was used to create a template that could be easily reproduced and modified. Each week, several residents each committed to highlighting a single learning point from each lecture, editing the template, then disseminating the infographic 1 week later via multiple routes including email and social media to utilize spaced repetition.

**Impact/Effectiveness:** A survey of the CORD listserv found most respondents have interest in similar initiatives but have either failed to attempt or failed to operationalize it consistently. Barriers cited include lack of a platform, too arduous, and too time consuming. 6 months after implementing this system, we have been able to produce weekly content. Over half of our faculty and residents read these summaries, and feedback has been exceedingly positive. Faculty state they enjoy rapidly staying abreast of the topics covered in didactics if they didn't attend, and even use them as rapid reference material. Residents appreciate the reinforcement of critical concepts through spaced repetition.

This is engaging learners, faculty, and alumni, reinforcing learning points, and can be disseminated on social media.

## 12 A Deliberate Educational Initiative in Diversity, Inclusion and Racial Equity

*Vinodinee Dissanayake, Keya Patel, Sobia Ansari, Teresa Davis, Jerome Martin, Sara Hock, Braden Hexom*

**Learning Objectives:** Covering the domains of knowledge, skills and attitudes, residents were expected to analyze structural violence and health gaps, demonstrate inclusive and trauma-informed care, recognize implicit bias, use strategies to reduce it, and critically assess the EM health equity literature.

**Introduction/Background:** Since the 2003 "Unequal Treatment" report showed that health gaps are not due to access or income, racial injustice and COVID-19 have laid bare worse inequities. In 2021, the ACGME EM Milestones addressed recognition of health gaps and personal bias, however there is no guidance on how to do this. ED patients require an unbiased evaluation to ensure rapid and accurate diagnosis and treatment, but implicit bias reigns with high cognitive load. Thus, we describe a deliberate and formal diversity, inclusion and racial equity (DIRE) curriculum.

**Educational Objectives:** Residents were expected to analyze structural violence and health gaps, demonstrate inclusive and trauma-informed care, recognize implicit bias, use strategies to reduce it, and critically assess the EM health equity literature.

**Curricular Design:** An ED survey confirmed the need for this curriculum. Since July 2020, the course has been available to all ED staff but is mandatory for residents. The free online platform, Canvas, was chosen for ease of access and use, and for resource sharing, discussion facilitation, and quiz scoring. Biweekly articles, online videos, a journal club and quarterly book clubs led to health equity discourse. Residents took part in simulated cases involving diverse patients. A workshop reviewed strategies to reduce implicit bias. Residents were assessed with quizzes, reflective writing and direct observation. Based on feedback, sessions are now held monthly with more media resources, live seminars, and diverse content.

**Impact/Effectiveness:** As of July 2021, residents have had positive feedback, 100% completion rates, and high knowledge retention. Structural violence must be included in resident didactics. Simulated cases provide an avenue to assess interpersonal communication skills for residents to develop tools to partner with patients. This model may serve as a blueprint for those seeking to improve DIRE knowledge, skills and attitudes.