

UC Irvine

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

Title

Ultrasound-Guided Mystery Key Identification: An Interactive Learning Module 2.0

Permalink

<https://escholarship.org/uc/item/5sk617k9>

Journal

Western Journal of Emergency Medicine: Integrating Emergency Care with Population Health, 24(3.1)

ISSN

1936-900X

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Publication Date

2023

DOI

10.5811/westjem.61041

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different EM residencies, small groups of residents and medical students rotated through the “Price is Right” game station. Each group had 6 learners and the game took 15 minutes. Fifteen different groups rotated through. 14 tests commonly ordered in the ED were placed on a game wheel including: complete blood count w/ differential, comprehensive metabolic panel, type and screen, brain natriuretic peptide, blood culture, quantitative beta human chorionic gonadotropin, urinalysis, urine drug screen, rapid strep test, ethanol level, CT head without contrast, CT abdomen and pelvis without contrast, CT cervical spine and portable chest x-ray. The cost of each of these tests was on an index card placed on a table. Learners spun the wheel and used the available index cards to choose the correct cost. If they were incorrect, they could try again. The game ended when learners correctly matched the costs with all 14 tests.

Impact/Effectiveness: Learners considered the exercise educationally valuable and gamification an effective learning modality. This easily implemented activity will be incorporated into our residency’s formal cost awareness curriculum and repeated each academic year.

43 The Residency Olympics: A Novel Gamified Curriculum for Emergency Medicine Residents

Brian Smith, Jessie Chen, Timothy Khowong, Anita Lui, Nao Yoneda, Saumil Parikh

Introduction: Current Emergency Medicine (EM) residents can benefit from more interactive and creative learning strategies over traditional lecture-based curricula. Incorporating gamification into didactics has been shown to promote participation from learners. A novel “Residency Olympics” competition can motivate educators to create more immersive learning tools and boost resident participation.

Objectives: Our goal was to create an “Olympics” competition in which residents earn medals based on four contests. We hypothesize that our novel competition will be both engaging and entertaining to residents while also providing EM-relevant educational material.

Curricular Design: Residents were randomly divided into four teams, with equal distribution of PGY levels. The Olympics spanned one month, with each week having a theme relevant to EM: “Sonolympics” for ultrasound, “Simlympics” for simulation, “Smallympics” for pediatrics, and “Smartlympics” for medical education. During our scheduled weekly conferences, residents competed in 4-6 events relevant to that week’s theme. After each event, facilitators conducted a debrief to review key learning points. Each event was scored based on teamwork, communication, and time to task completion. Teams earned Gold, Silver, and Bronze medals for 1st, 2nd, and 3rd place,

respectively. At the end of the competition, the team with the highest overall medal count was declared the winner and earned prizes.

Impact: The “Residency Olympics” was entertaining and educational. Residents completed an anonymous 5-point Likert scale survey to assess the competition’s impact. 90% of residents reported it was educational, 92% reported it was appropriately timed, and 92% reported it covered EM-relevant topics. Overall, 92% of residents reported they would want another Olympics event in the future. This competition can be easily integrated into any EM residency curriculum.

44 Ultrasound-Guided Mystery Key Identification: An Interactive Learning Module 2.0

Caleb Morris, Jeremi Laski, Nava Kendall, Therese Mead, Rupinder Sekhon

Introduction/Background: The utility of point-of-care ultrasound (POCUS) is dependent on operator experience. Hands-on exposure to POCUS is important to incorporate into regular residency didactics to develop skill. This gamified learning module provides experience with foreign body identification and removal using POCUS.

Educational Objectives: To develop precision with transducer manipulation and to practice ultrasound-guided foreign body removal.

Curricular Design: Seven groups of six participants used the high-frequency linear probe of a handheld GE VScan Air to identify which of four keys were embedded into a 24-oz, square, gelatin phantom. They then inserted the matching key into its corresponding lock to open a wooden chest revealing a scalpel, hemostats, and one of multiple riddles. Once solved, each riddle indicated which body part of a gelatin phantom teddy bear (head, chest, abdomen, arms, and legs) required removal of an embedded toothpick. Previous versions of this module allowed foreign body removal from any location, causing the bear to break down sooner after multiple attempts on the same region. This riddle-based format allowed the same bear to be used for all groups. Each component task was initially awarded equal points, but because teams varied widely on incision size, we ultimately awarded more points for a small, carefully planned incision.

Impact/Effectiveness: This learning module was implemented by a community academic residency in August 2022 as one of several simulation stations at an outdoor didactic event. Of the 42 participating residents and medical students, 94% described this as an effective learning activity. This gamified learning module is an easily-reproduced, engaging way to provide experience with POCUS, and may be especially useful as part of an interactive didactic day.



Figure 1. One of four keys was embedded in phantom for US-guided identification.

programs and institutions may not be able to provide residents with the resources needed. Keeping large departments current on activity in the department could increase compliance with scholarly activity requirements.

Objectives: We created a dashboard-style tool to facilitate communication in our emergency medicine residency program to improve compliance and promote the breadth activities in which residents participate.

Design: We used 2 metrics to accomplish these goals: 1) 3rd Year Compliance of Scholarly Activity (figure 1). This metric is the monthly percentage of senior residents who have logged any acceptable activity. The education management system in use at our institution is ‘New Innovations’. The stretch goal is to increase the compliance rate at the beginning of the senior year. 2) Scholarly Output Distribution (figure 2). This metric describes the activities by type divided by class. The goal is to be able to show a variety of activity in each class.

Impact: Use of this over the past 4 years has caused us to gain several insights. First, the impact of COVID restrictions

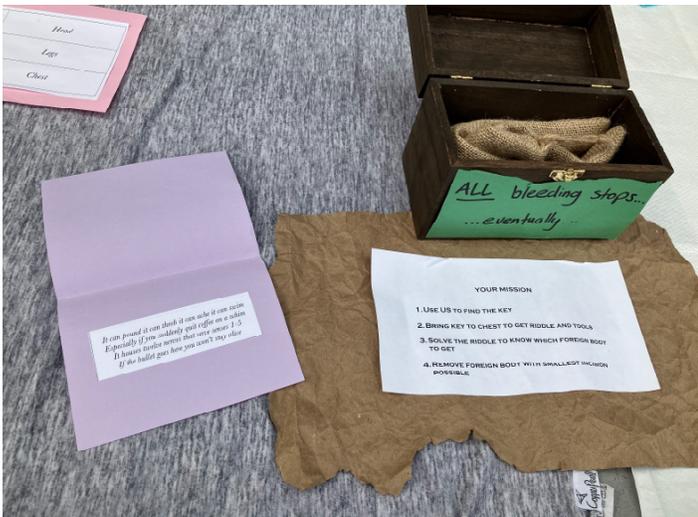


Figure 2.

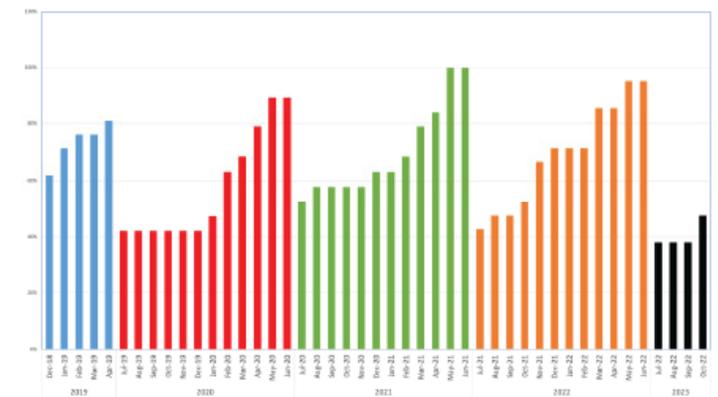


Figure 1. Third year residents new innovations' compliance by class.

45 Use and Insights from Novel Scholarly Activity Dashboard

Anwar Osborne, Mehrnoosh Samaei, Bradley Wallace, Matthew Gittinger, Jeffrey Siegelman

Introduction/Background: The ACGME requires completion of scholarly activity before graduation. In 2012, over 400 citations were issued across specialties for scholarly activity by the RRC. Individual programs track/value scholarly activity differently. Without adequate data,

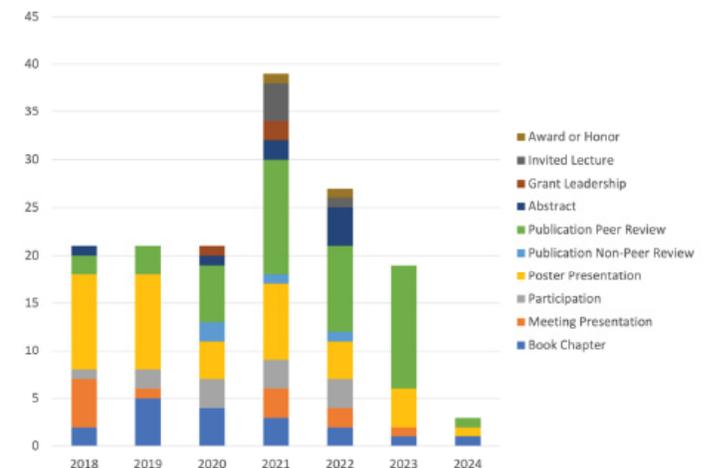


Figure 2. Scholarly output distribution by class.