59 Guess Who: Repurposing Childhood Nostalgia as a Gamified Teaching Tool

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Background: Guess Who is a deductive reasoning board game that many modern learners grew up enjoying. Unbeknownst to them as they strategically formed questions during gameplay, they were also learning to analyze salient features, while working on memory, auditory processing, vocabulary, social and communications skills, and making pivotal decisions to deploy either the typical binary questions versus deciding on the more pointed "bold play."

Educational Objectives: We aimed to use the same premise to hone these crucial skills amongst our trainees while teaching the often perplexing topic of rashes. The game board can be repurposed and outfitted with new card decks for subsequent topics. Our next proposed iteration for instance is orthopedic injuries.

Curricular Design: We reimagined gameplay to be team-based, allowing for collaboration and bonding. Two teams compete in a head-to-head challenge, each outfitted with a board that includes images of 24 must-know emergency medicine rashes. Each team selects a card from a separate pile of cards containing the same 24 images. The game's objective is to be the first to determine which card the opposing team has selected. Players alternate asking various yes or no questions to eliminate possibilities, such as:

"Is your rash blanching?"

"Is your rash Nikolsky positive?"

"Is your rash infectious?"

Well-crafted questions allow players to strategically eliminate multiple cards at once. A faculty member oversees the gameplay, acting as fact-checker, and moderator, while also providing educational pearls. Impact/Effectiveness: According to the follow-up survey evaluating this activity, trainees reported that they felt more confident in their ability to recognize and describe rashes. It serves as a novel way for programs to teach a particularly difficult topic, notoriously resistant to rote memorization. Since its implementation "Guess Who" has also created more awareness of creative ways in which to enhance didactic conference learning. We aim to share our activity with other programs via QR code so that they too can easily implement this activity as a free, open-access medical education resource.

60 Procedural Competency in Emergency Medicine Resident Physicians in Training: How is Competency Maintained, Evaluated, and Improved?

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Background: Procedures are a crucial skill set for emergency medicine (EM) physicians. ACGME requires residents to complete a certain number of procedures for graduation but assessing procedure competency has not been formalized among EM residency programs. (1)

Educational Objectives: We aimed to identify common mistakes in performing procedures in EM residents and correlations between numbers of performed procedures and their competency.

Curriculum: We evaluated residents' ability to perform a lumbar puncture, central venous access, thoracostomy, and intubations, via simulated scenarios using standardized procedure evaluation forms. Each assessment had key steps to complete in the pre-procedure, procedure, and post-procedure sections. Residents were graded Y if they completed the task spontaneously, R if completed with a reminder and N if unable to complete. The total score was based on the percentage completed without a reminder. Numbers of performed procedures were obtained from a self-reported database.

Impact/Effectiveness: We identified common mistakes through this process. For lumbar puncture, residents often forgot to call the timeout, discuss indications, risk/benefits of the procedure. In central venous access, ability to maintain sterile technique and proper needle handling were the concerns. Reminders were needed to use local anesthesia, proper chest tube size and placement technique when performed thoracostomy. For intubation, many concerned areas were found including calling time out, checking and verifying equipment, troubleshooting and passing the tube correctly, evaluating airway and post-intubation treatment.

We found no statistically significant correlation between procedure counts and competency score except for central venous access which had the highest procedure count (figure 1 and 2). Our findings affirm the benefit of utilizing simulation to identify procedure incompetency especially in the least-performed procedures.

	Procedure Count				Competency grade			
Procedure	Minimum	Maximum	Mean	Median	Minimum	Maximum	Mean	Median
LPs	0	7	3	2	0.882	0.971	0.937	0.941
Intubations	3	27	18	19	0.786	1.000	0.918	0.952
Thoracostomy	1	7	4	5	0.789	1.000	0.951	0.974
Central Venous Access	3	40	22	24	0.905	1.000	0.973	0.976
Total	0	40	12	6	0.786	1.000	0.945	0.952

Figure 1. Statistical Measures of Central Tendency for Procedure Count and Competency Grades.

61 How Single Accreditation Has Changed the Composition of Residency Programs

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Background: Since the Match® was established, allopathic (MD), osteopathic (DO), and international medical graduate (IMG) students have utilized it for residency placements. DOs applied primarily through the American Osteopathic Association while MDs applied through Accreditation Council for Graduate Medical Education. The transition to a single accreditation system in 2020 led to a shift in the percentage of MDs, DOs, U.S. IMGs, and non-U.S. IMGs in residency programs.

Objective: This study evaluates how the move to single accreditation for DO graduates has changed the residency makeup in multiple specialties over 2014 to 2024.

Methods: Match® results were gathered from the National Resident Matching Program® database to evaluate the differences between emergency medicine (EM), family medicine, internal medicine (IM), general surgery, and orthopedic surgery. The differences in percentage of matched senior MDs, DOs, U.S. IMGs, and non-U.S. IMGs in each year were evaluated. Analysis was performed via ANOVA and chi-squared to test for significance of a p-value of < 0.05. A linear trend was used to establish the rate of available resident program positions in relation to the number of applicants per cycle.

Results: Between 2014 and 2024, there has been a significant increase in DO senior graduates and decrease in MD senior graduates in residency programs since the transition to single accreditation. The biggest increase is seen in EM as the number of DOs rose from 9.99% to 36.22% and number of MDs fell from 78.33% to 44.45%. Non-U.S. IMGs percentage increased significantly for EM, family medicine, and IM. Linear trendlines in applicants per year grew at a larger rate than available resident positions.

Discussion: The transition to single accreditation allowed DO recipients more opportunity to match into their desired programs while raising the competitiveness in specialties like EM, Family Medicine, and Orthopedics. The number of total applicants rises each year at a faster rate than available program positions, but some programs continue to have unfilled spots. More research is required to further understand the reason for increased preferences towards DO students and why some programs remain unfilled despite the increase of yearly applicants.

62 Establishing Procedural Confidence in Emergency Medicine: The Role of a Dedicated Intern Procedure Lab

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Background: Simulation-based training is essential for improving procedural skills and confidence among emergency medicine interns. Although simulation is widely used, much literature focuses on general orientation programs rather than targeted skills labs. Limited procedural exposure before internship can reduce confidence and affect proficiency. To address this, a focused Intern Procedure Lab was introduced before the academic year to enhance procedural confidence. Objective: To evaluate the impact of a dedicated Intern Procedure Lab on procedural confidence among first-year emergency medicine residents. Methods: This prospective study included 22 first-year emergency medicine residents from a residency program at a large academic hospital in New Jersey over two years. The Intern Procedure Lab, held in the hospital's simulation center, consisted of six procedural stations. Each station was led by, developed and curated by PGY2/3 residents. Each station provided 20 minutes of structured instruction on indications, contraindications, complications, materials, steps, and microskills, followed by practice attempts. Pre- and post-lab confidence levels were assessed using a 10-point Likert scale for both individual and overall procedural confidence. Statistical analysis was performed with a paired one-tailed t-test. Additionally, a site-specific procedure guide was created by the senior residents for future use within the department. Results: Confidence improved significantly, with an average increase of 2.59 (99%CI 2.57-2.61) from pre-lab (M=4.11, SD=1.1) to post-lab (M=6.81, SD=1.2) assessments. Each procedure showed a statistically significant confidence gain ($p<0.01$). Participants valued the lab's relevance and 1 effectiveness, while senior residents appreciated ownership of teaching.

Conclusion: The Intern Procedure Lab successfully enhanced procedural confidence in first-year emergency medicine residents, meeting a critical training need. The procedure guide was an invaluable addition as site-specific instruction was previously lacking. The lab's design demonstrates significant impact and can serve as a model for similar programs. Study limitations include a small sample size,