resident clinical productivity in the form of new patients assigned per hour, however they do not assess variability in productivity by year nor do they account for patients assumed in passoff. We also lack data regarding resident clinical productivity distributions for contextualization of resident performance compared to peers.

Objectives: (1) Report variability in resident clinical productivity as measured by standard deviations (SD) from class mean in new patients per hour and patients assumed in passoff per hour (2) Compare differences in variability across training levels to determine if an intervention should be considered to prevent the exaggeration of productivity differences across class years (eg improve low performers if differences are greater at higher levels).

Methods: We obtained all residents assigned and notes written for all patients at an urban academic emergency department from 7/2022 - 6/2023. Credit for a new patient required both assignment to the patient and writing a full note. Credit for assuming a patient in passoff required assignment as a subsequent resident for ≥30 minutes. Resident schedules were merged to derive per-hour values. We calculated descriptive statistics, compared variances using Levene's test, and plotted deviations from mean performance by class.

Results: 139,731 encounters were analyzed. SD in new patients per hour and patients assumed in passoff per hour did not increase with training level (Table 1). Class differences in variance of new patients per hour was statistically significant and highest for 2nd year residents. Most residents are within 1 SD of class means and outlier residents (>2 SD from mean) were uncommon ~1 per class (Figure 1A-B).

Conclusions: Most residents' metrics are close to class means and deviation was not greater at higher training levels. Future work may focus on other factors such as patient complexity and addressing low outlier performers.

Table 1. Standard deviations in new patients per hour and patients assumed in passoff per hour by level of training.

	EM 1	EM 2	EM 3	EM 4	p*
New patients per hour (SD)	0.06	0.12	0.05	0.06	.03
Patients from passoff per hour (SD)	0.04	0.08	0.06	0.08	.26

* P value from Levene's test for equality of variances
EM = Emergency medicine training year
SD = standard deviation

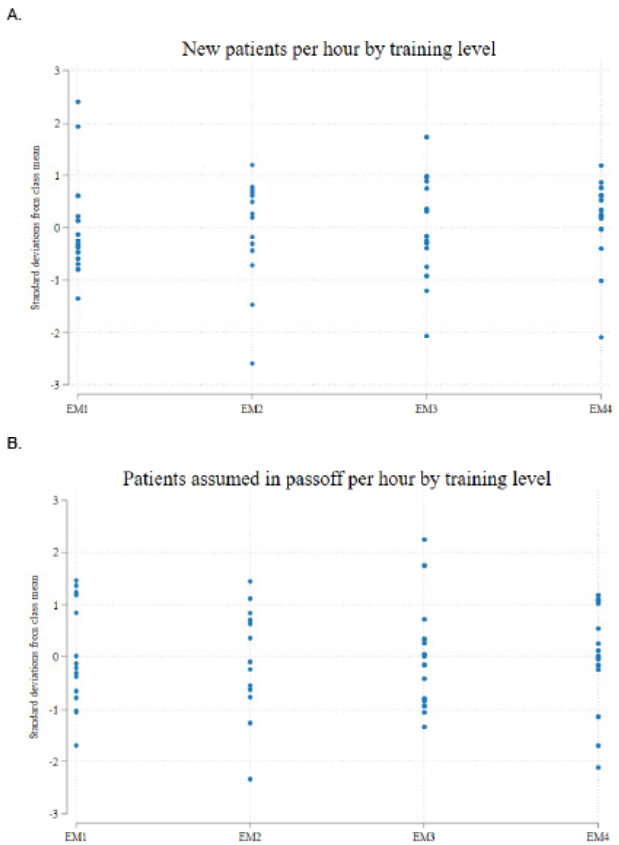

Figure 1A-B. New patients per hour and patients assumed in passoff per hour by training level as standard deviations from class means.

55 Innovative Teaching Format: Chemical, Biological, Radiological, Nuclear, Explosive Emergencies

Jeremiah Ojha, Chrissy Van Dillen, Josef Thundiyil, Linda Papa

Introduction/Background: Given the increasing frequency of mass casualty incidents and the persistent threat of terrorist attacks, our curriculum committee developed a teaching module for Emergency Medicine (EM) residents to better prepare for chemical, biological, radiation, nuclear, explosive (CBRNE) events. Studies and experience demonstrate that clinician preparedness is a critical piece in an effective response to CBRNE events. We sought to evaluate whether an interactive CBRNE education module would improve knowledge among learners about how to respond to these emergencies. Educational

Objectives: 1. To improve knowledge of CBRNE events 2. To understand the role of antidotal therapy and decontamination in CBRNE emergencies 3. To practice resuscitation in simulated CBRNE cases

Curricular Design: This module was developed by content expert teams in conjunction with a disaster management educational programmer to teach CBRNE emergencies. The teams sought to improve knowledge, skills, and attitudes for six emergency topics: Personal Protective Equipment (PPE), nerve agents, botulism, airway irritants, radiation, and cyanide. The sessions utilized various teaching methods including simulation-based resuscitations, hands-on practical training, case-based presentations, and table-top discussions. This was taught over a 2.5-hour session at a single accredited EM Post Graduate Year (PGY) 1-3 Residency Program to EM residents.

Impact: There were 36 learners given 14 objective content questions pre- and post-curriculum implementation. We received 35 responses to the pre-test and 22 responses to the post-test. The average score on the pre-test was 43% and 77.6% on the post-test (34.6% improvement). There were significant improvements in scores overall with a mean difference of 4.9 (95%CI 3.7-6.0) (p<0.001). See table 1. Conclusion: Implementation of CBRNE educational curriculum significantly improved knowledge at every PGY level on CBRNE-related emergencies.

Table 1.

	Pre-test	Post-Test	Confidence interval	Mean difference
PGY1	32.7%	74%	3.6-8.1	5.9
PGY2	47.5%	77.6%	2.9-5.9	4.4
PGY3	46.7%	81.4%	21.5-8.7	4.6

56 Local Anesthetic Systemic Toxicity (LAST) and Fascia Iliaca Compartment Block (FICB) Simulation: A Pilot Study

Katherine Griesmer, Jaron Raper, Briana Miller, Maxwell Thompson, Andrew Bloom

Introduction/Background: Regional anesthesia, including fascia iliaca compartment blocks (FICB), are increasingly falling into the scope of Emergency Medicine (EM) given the increasing training and proficiency with ultrasound-guided procedures. Though rare, local anesthetic systemic toxicity (LAST) is estimated to occur in 0.03% of peripheral nerve blocks, with a different ACLS algorithm in the event of cardiac arrest. We present a novel curriculum for a combined simulation and procedural simulation for LAST and FICB.

Objectives: Recognize clinical signs and symptoms of LAST. Develop an appropriate treatment algorithm for LAST and manage potential outcomes including cardiac arrest. Perform FICB successfully and troubleshoot complications. Determine proper lidocaine dosing to prevent LAST.

Curricular Design: 19 emergency medicine residents performed two separate but contiguous simulations with one being a LAST simulation with cardiac arrest and the other a procedural simulation involving setup for and performance of a FICB. Pre and post surveys were obtained to gauge previous comfort level and expertise compared to following the simulation.

Impact/Effectiveness: Residents reported improved comfort and knowledge in recognizing and managing LAST, as well as performing FICB. Perceptions towards recognizing and treating uncommon causes of cardiac arrest, including LAST, improved following simulation (5.11 vs 6.21, p=0.003; 3.89 vs 6.16, p=0.008). While many residents felt confident in their ultrasound skills (6.77, SD 2.23), ultrasound-guided nerve blocks were rated lower with regards to knowledge and procedural techniques prior to the simulation (4.47 vs 9.25, p <0.001). Comfort with performing FICB had a positive trend following the simulation (3.47 vs 8.56, p <0.001). Residents perceived ultrasound-guided nerve blocks, in particular FICB, as a useful skill (9.63). Figure 1. LAST perceptions Figure 2. FICB perceptions

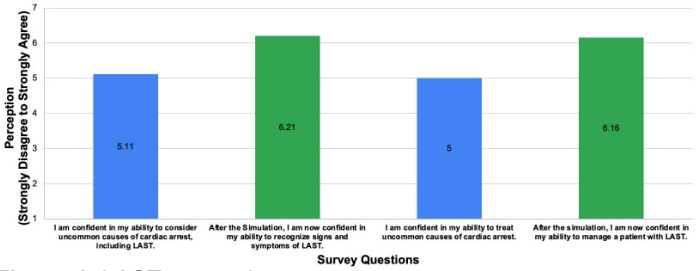

Figure 1. LAST perceptions.

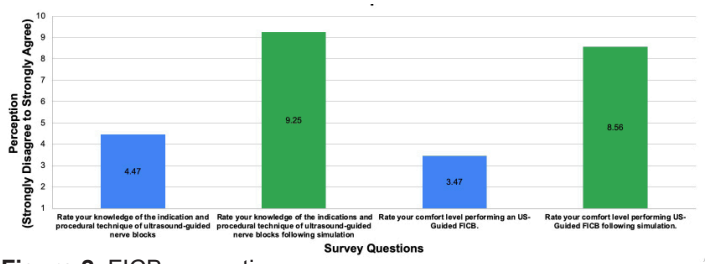

Figure 2. FICB perceptions.

57 "Heads Up!" Toxicology

Elspeth Pearce, Jeremiah Ojha

Background: Gamification is a popular way to increase engagement in didactics and motivation to learn. Another way to increase engagement is having learners teach topics as near-peers. This allows the learner-as-teacher to solidify their knowledge of a particular topic. Using both gamification and near-peer teaching I sought to enhance our toxicology content review through a small group activity.