associated T1 and occipital fracture.

Conclusion: The results of this study demonstrated that 4.5% of elderly patients sustained cervical spine injuries following low-level falls; 39% of the cohort had at least one significant injury identified by the pan CT. The results from this study justify a fairly liberal approach to the use of the pan trauma CT in elderly patients.

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19 (O-E6) Active Threat: Evaluating a Borderland's Emergency Department Staff's Preparedness

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Oral Presenter: Neha Sehgal, DO

Objectives: The purpose of the study was to determine the fundamental knowledge of the current active threat policy and the effectiveness of training provided to the emergency department (ED) personnel at an urban borderland Level 1 Trauma Center in El Paso, TX, over the course of one year.

Background: The Department of Homeland Security defines an active shooter as "an individual actively engaged in killing or attempting to kill people in a confined and populated area; active shooters use firearms with no pattern or method to their victim selection." In 2012 the *Annals of Emergency Medicine* published a study highlighting 154 hospital-related shootings from 2000–2011 in the United States. Furthermore, Texas was cited as one of five states that accounted for more than a third of the hospital-related shootings, with 53% of shooting events occurring in hospitals that had 100-399 beds.

Methods: This study took place at the University Medical Center (UMC) in El Paso, TX. UMC is an urban Level 1 trauma center that sees 70,000 patients annually in a 45-bed ED. A total of 193 surveys were collected from ED personnel, which included resident physicians, faculty physicians, advanced practice providers, bedside nurses, technicians, paramedics, and nursing management. The purpose of the study was to determine their knowledge of the current active threat policy and the effectiveness of the training provided. We initially collected pre-test surveys, then provided didactic training, and immediately collected post-test surveys. The didactic training took place in the form of a standardized PowerPoint lecture given at resident conference and staff meetings over three months. We then used *t*-tests and ANOVA to compare across pre- and post-test survey results. Seven months post education an active-threat tabletop simulation was conducted to gauge ED personnel's retention during a simulated high-pressure scenario. Participants were informed that participation in the survey was anonymous and voluntary, all answers were kept confidential, and their participation in the survey had no bearing on their current and/or future employment.

Results: The following survey questions were statistically significance when comparing pre- and post-survey results. "In the event of an active threat, the current policy at UMC calls for you to take 1 of 3 actions in a specific order. What are those actions in the correct order?" 16% answered incorrectly on the pre-survey, while no one got it wrong on the post-survey, $P< 0.001$. "In the ED, where would you go to secure yourself if there was an active threat?" 36% answered incorrectly on the pre-survey, while 19% answered it incorrectly on the post-survey, $P=0.034$. "If you see a situation that has the potential to be an active threat do you call 911 or UMC security?" 62% chose the incorrect answer on the pre-survey, while 22% chose the incorrect answer on the post survey, $P< 0.001$. "On a 10 point scale, please rate how confident you are that you would know how to protect yourself and your patients in the event of an active threat, with 0 being not confident at all and 10 being completely confident." The mean pre-survey score was 5.32, while the post-survey score was 7.33, $P< 0.001$.

Conclusion: Our aim was to determine the fundamental knowledge of the current active threat policy and the effectiveness of training provided to the ED personnel at an urban borderland Level 1 trauma center in El Paso, TX. Training included a didactic presentation and an active-threat tabletop simulation seven months post education to gauge ED personnel's retention. Four survey questions indicated a statistically significant change, suggesting that even a brief didactic training can be effective. Responding to an active threat does not come naturally to most healthcare workers, which is why ED personnel warrant structured education and training.

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20 (O-D6) CP-"R" You Ready for Residency

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Objectives: The use of simulation to assess medical student competency of the AAMC Core Entrustable Professional Activity (EPA) 12: demonstrating competency in performing core procedures in providing basic patient care.

Background: EPAs are standards established by the AAMC, with the goal to identify competencies that medical students must meet prior to their initiation into residency. EPA 12 involves the demonstration of competencies in key patient care procedures, including cardiopulmonary resuscitation (CPR) and bag and valve mask ventilation. There is a paucity of studies on how to evaluate medical student competencies, especially in regard to EPA 12. This project evaluates the utility of high-fidelity simulation as a standardizable assessment tool for EPA 12 in medical student education via its use within a transition to residency program.

Methods: 62 fourth-year medical students received a lecture on Advanced Cardiac Life Support (ACLS) and then participated in a simulated case of a patient with multiple comorbidities who initially presented with chest pain and was found to have a ST-elevation myocardial infarction that deteriorated into ventricular fibrillation requiring ACLS management. Evaluators observed groups of students for performance of critical actions, such as performing the technical skills of CPR and bag-mask ventilation (PC1) and communication with the patient's family (PC7, ICS6, P6, PPD7, PPD1). A post transition-to- residency course survey was conducted to assess student confidence.

Results: Upon review of the date, 69.6% of the participants performed CPR technical skills adequately after a standardized lecture. After a debrief and individualized procedural teaching, 82.8% of the participants felt comfortable performing CPR.

Conclusion: High-fidelity simulation is an effective tool to measure a student's ability within the EPA 12 framework. By utilizing checklists with critical actions, we were able to effectively quantify team performance during a resuscitation. By interpreting the results of this checklist in real time, we were able to tailor the procedural stations portion of the course to match the students' needs. This has a high relevance to transition-to-residency courses that are typically run prior to students starting their emergency medicine residencies. Future studies can be conducted to further evaluate learner readiness for residency using this modality.

EPA 12 Checklist

Procedures to be assessed in this simulation:
- **Basic CPR**
- **Bag-mask ventilation**

PC1: Demonstrate technical skills required for the procedure
- Demonstrates necessary preparation for performance of procedures
- Correctly performs procedure on multiple occasions over time

	Yes	No
CPR		
Does the team identify that the patient requires initiation of CPR?		
Does the team use 2 rescuer CPR?		
Does the team use 15:2 compression to breath ratio?		
Does the team switch roles every 2 minutes?		
Does the team have depth of compression at least ⅓ of the depth of the chest or around 2 inches?		
Does the team place the defibrillator pads on the patient?		
Bag Valve Mask		
Does the team apply jaw-thrust maneuver to open the airway?		

PC1: Understand and explain the anatomy, physiology, indications, contraindications, risks, benefits, alternatives, and potential complications of the procedure
- Demonstrates and applies working knowledge of essential anatomy, physiology, indications, contraindications, risks, benefits, and alternatives for each procedure
- Knows and takes steps to mitigate complications of procedures

	Yes	No

Figure 1. Checklist for Critical Actions to Assess EPA 12