

3 Teaching Handovers to Medical Students in the ED: Addressing Entrustable Professional Activity (EPA) #8

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Background: Patient handovers are a critical part of the emergency medicine physician's clinical practice. Effective handovers relay critical patient information and ensure patient safety. The AAMC EPA #8 highlights the importance this principle in medical education. However, there are very few programs designed to address this important goal.

Educational Objectives: To assess the medical students' view of the current curriculum and to evaluate the utility of an educational curriculum addressing patient handover in the ED.

Curricular Design: At the beginning of each 4th year EM elective, students were asked to complete a survey to assess their familiarity and previous education on handovers. Students were then instructed to carry out supervised student to student handovers in the ED at beginning and end of shift throughout the rotation. Observations by residents/faculty were recorded utilizing a standardized checklist with specific domains based on EPA 8 guidelines. At mid rotation, students were given a 1 hour didactic session on handover barriers/models including IPASS, and students practiced handover of simulated patients. At the end of the rotation, students filled out a second survey. 35 students participated in the curriculum from April to October of 2015.

Impact/Effectiveness: A 5-point Likert scale was used to assess each student's familiarity with handovers. On pre-didactic surveys, 25% of the students reported they had no familiarity. 31% of these students felt comfortable doing a handover. 8% of these students reported prior handover experience. 34% of the students had no familiarity with IPASS. Post didactic session, 96% reported that they have a least a strong familiarity with the handover process (scoring 4 or 5). Of these, 80% practiced a handover at least 3 times. 85% of the students felt comfortable doing a handover after the training. Post didactic session, 65% of the students agreed or strongly agreed that they received beneficial feedback and felt more comfortable with the handover process in the ED setting. Improvement was noted on feedback forms. This simple education program suggests that focused didactics, opportunities to practice this skill under direct observation, and feedback by faculty is important in the entrustment development.

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Background: The ACGME has developed a set of milestones with clearly defined criteria for assessment and feedback for each residency program. However, the milestones are designed to provide a more global assessment and may lack the granularity to be a useful feedback tool for learners. Evaluation of procedural skill often involves direct observation by a supervising physician. Evaluators are required to prepare summative judgments of the competency of the learner and then provide constructive feedback. However, direct observation can be influenced by many factors including the success or failure of the procedure, the degree of difficulty, the degree of attentiveness of the evaluator and recall bias. In the clinical environment, direct observation can be logistically difficult, subsequently making evaluation and feedback less effective. A recording will mitigate the impact of some of these factors, providing an accurate record for later review.

Educational Objectives: We are seeking to test a novel system for evaluating procedural skills among residents using first-person video (Google Glass).

Curricular Design: This project utilizes Google Glass, to capture a first-person recording of the procedure to address deficiencies with direct observation. After the recording the video will be reviewed by resident and evaluator. We aim to develop a comprehensive system that includes self-assessment, detailed feedback, and evaluation of the evaluator. The primary outcome measures will be the assessment of procedural competency for vascular access and the identification of errors, critical actions, and confounding variables that occurred during the procedure. Secondary outcome measures include the effectiveness and utility of first-person video recording for assessment. Procedural competency will be assessed using a validated checklist and the ACGME Milestones assessment tool. In addition, during the video review the evaluator will identify and note any technical or non-technical errors in an open-ended comment box, noting the time at which it occurred for future review.

Impact/Effectiveness: The expectations of the ACGME in regards to evaluation is increasing, and ensuring the procedural competence of residents is essential. If effective, first person video evaluation could aid in creating a more accurate assessment of resident skills and more accurate and useful feedback for the resident.

Educational Soundbites Oral Presentations

1 Incorporation of First-Person Video to Improve the Assessment of Procedural Skills

2 Innovative Curriculum for Media Interactions

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Background: Mass media has a crucial role in influencing healthy behaviors and notifying the public about health concerns. It is important that physicians maintain the public trust by providing accurate, credible, and unbiased information. When interactions with the media are not carefully thought out, there can often be negative repercussions on a personal and institutional level. The purpose of the media workshop was to prepare residents to tactfully handle delicate situations that involve print and digital media. This course is important because it assisted residents in the development of critical thinking skills, effective communication, and providing health information concisely.

Educational Objectives: This curriculum was designed to successfully teach residents to communicate successfully when interacting with the media. It also allowed residents to develop their critical thinking skills. Our expectation was to develop a sincere dialog between residents and faculty that will assist them when interacting with the media in the future.

Curricular Design: A senior staff writer whose focus is medicine related news provided a lecture of information about how to prepare for and properly approach television and print interviews. Impromptu mock interviews were given to residents related to current health issues. These were recorded and reviewed by the remainder of the participants to provide immediate feedback. Anonymous pre and post workshop evaluations were provided consisting of questions in which participants responded on a five point Likert scale. Sixteen evaluations were completed. Respondents agreed that media conversations with physicians greatly impact audience's opinions (4.1); however most had no prior experience with media personnel (1.4) nor had they attended a similar workshop in the past (1.1). Results of the post-workshop evaluation revealed that participants felt more confident about talking in front of the camera (4.4) and the workshop was a good way of learning about the importance of media relations (4.4).

Impact/Effectiveness: The participants demonstrated increased comfort and knowledge in communicating with media and providing concise information to the public. This will ultimately contribute to further development of team management skills assessed by EM milestone twenty-three.

3 Mass Casualty Simulation for EM Residents

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Background: While mass casualty preparedness and knowledge has moved to the forefront of medicine in recent years, training for these incidences in EM residencies has remained minimal. An understanding of triage systems in a mass casualty incident is vital in managing the influx of critical patients during these events. Few examples of triage

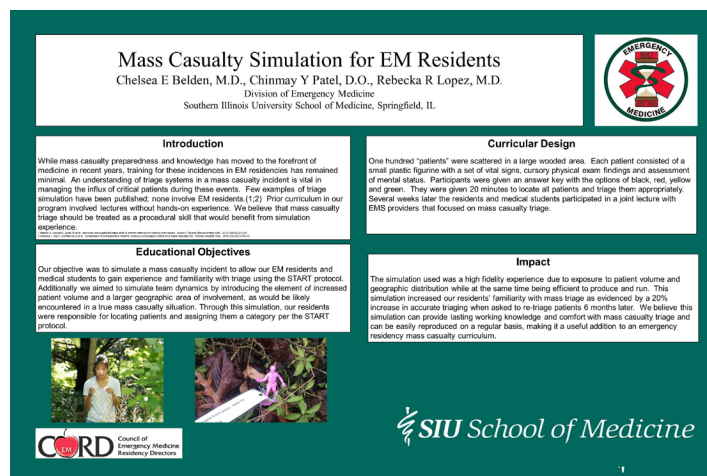


Figure 1.

simulation have been published; none involve EM residents. (1;2) Prior curriculum in our program involved lectures without hands- on experience. We believe that mass casualty triage should be treated as a procedural skill that would benefit from simulation experience.

1 Nilsson A, Aslund K, Lampi M et al. Improved and sustained triage skills in firemen after a short training intervention. *Scand J Trauma Resusc Emerg Med.* 2015 Oct 20;23(1):81.

2 Claudius I, Kaji A, Santillanes G et al. Comparison of Computerized Patients versus Live Moulaged Actors for a Mass-casualty Drill. *Prehosp Disaster Med.* 2015 Oct;30(5) 438-42

Educational Objectives: Our objective was to simulate a mass casualty incident to allow our EM residents and medical students to gain experience and familiarity with triage using the START protocol. Additionally we aimed to simulate team dynamics by introducing the element of increased patient volume and a larger geographic area of involvement, as would be likely encountered in a true mass casualty situation. Through this simulation, our residents were responsible for locating patients and assigning them a category per the START protocol

Curricular Design: One hundred “patients” were scattered in a large wooded area. Each patient consisted of a small plastic figurine with a set of vital signs, cursory physical exam findings and assessment of mental status. Participants were given an answer key with the options of black, red, yellow and green. They were given 20 minutes to locate all patients and triage them appropriately. Several weeks later the residents and medical students participated in a joint lecture with EMS providers that focused on mass casualty triage.

Impact/Effectiveness: The simulation used was a high fidelity experience due to exposure to patient volume and geographic distribution while at the same time being efficient to produce and run. This simulation increased our residents’ familiarity with mass triage as evidenced by a 20% increase in accurate triaging when asked to re-triage patients 6 months