The Effectiveness of In-time Training of EMS Treatment Protocols for High Stress Clinical Simulations

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Introduction

- Clinical skills training is limited in the first 2 years of medical school, and is rarely tested in a high pressure situation.
- The goal of this stimulation was to create a high pressure training situation and provide an opportunity for students to test their skills.
- The purpose of the simulation was to determine the effectiveness of in-time training for medical students in a high pressure situation.

METHODS

- 16 M1's and M2's from the Brody School of Medicine participated in the Medevac Osprey simulation at the ECU Innovation Design Lab.
- Prior to the simulation, students were provided with copies of EMS treatment algorithms for review
- In-person training in emergency patient management:
  - Airway management
  - Tension pneumothorax decompression
  - Wound care
  - Primary survey
- Before entering the simulator, students were administered a short pre-test used to measure the effectiveness of the trainings.
- Students completed simulation in groups of four
  - Responsible for evaluating and treating two trauma patients
- Students completed post-simulation survey

RESULTS

- Post-simulation survey results - 15 students completed the survey – Items rated on 5 point Likert scale
- It was beneficial to be trained in an algorithmic assessment technique prior to the simulation – 5/5
- It was beneficial to learn and practice specific clinical skills prior to the simulation – 5/5
- The trauma algorithm and specific skills trainings were relevant to the simulation – 5/5
- It was beneficial to have a prompted pre-test prior to the simulation – 4/5

IMPACT/LESSONS LEARNED

- The majority of simulation participants indicated that they found the in-time training and prompted pre-test beneficial to their performance in the Medevac Simulation.
- Most students rated their individual and group performance highly, indicating that they felt the training they received was sufficient to overcome the barriers of the simulated high-pressure environment of the osprey training simulator.
- Participants stated that they enjoyed having hands-on skills training prior to the simulation. Participant feedback for the pre-training and scenario was overwhelmingly positive
- The majority of the students indicated that they would like to participate in a similar type of training in the future.
- Overall feedback from participants and surveys show that the in-time training was an effective way to teach the clinical skills required to complete the simulation scenario.
- Clinical skills are often taught in a controlled, low pressure environment, and little opportunity exists to practice skills under stressful conditions
- Training opportunities in which clinical skills are practiced under high pressure situations may better prepare students to utilize those skills in clinical practice

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