

Case Based Simulation Education as a Tool to Improve Sedation Practice and Confidence in the Emergency Department

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Introduction: Simulation (SIM) training has become a novel and effective way of improving sedation skills, providing immediate feedback to the providers. Registered nurses (RNs) and paramedics are critical members of the sedation team. The objective of this study was to use simulation scenarios as a tool to both improve and assess procedural sedation skills among RNs and paramedics in the emergency department (ED). **Methods:** ED nurses and paramedics participated in 2 high fidelity simulations; 1. Airway obstruction 2. Laryngospasm from April 2017 to December 2017. The simulations took place in patient rooms in the ED. Participating staff completed a pre-test survey immediately prior to the SIM to assess confidence in using our institutional sedation checklist, recognizing and addressing respiratory insufficiency, as well as comfort in recognizing and treating airway obstruction and laryngospasm. Answers were based on a 5-point Likert scale. Immediately following the simulation, participants were given a post-test survey. In statistical analysis, the 5-point Likert scale was converted to a dichotomous variable where participants had a "high confidence" level if they reported a level of 5. Chi-square tests were used to determine if the proportion of highly confident respondents differed in proportion between the pre- and post-test groups. **Results:** 260/276 participating RNs and paramedics completed the pre-test survey (94.2% response rate); 215/276 participating RNs and paramedics completed the post-test survey (77.9% response rate). A higher percentage of staff reported "high confidence" across all 5 tested sedation complications/competencies: check list use (43.5 to 70.2%), recognizing airway obstruction (12.3 to 54.9%), treating airway obstruction (10 to 37.2%), recognizing respiratory insufficiency (27.3 to 41.4%) and treating respiratory insufficiency (27.3 to 41.4%). **Conclusion:** Simulation training is an effective method to educate emergency department staff in sedation practice. It increases confidence in sedation skills in the emergency setting.

References:

Sauter, Thomas C., et al. "Interprofessional and Interdisciplinary Simulation-Based Training Leads to Safe Sedation Procedures in the Emergency Department." *Scandinavian Journal of Trauma, Resuscitation and Emergency Medicine*, vol. 24, no. 1, 2016.