

Use of Simulation Education for Improving Knowledge and Confidence Caring for the Acutely Decompensating Hospitalized Patient in Advanced Practice Providers Enrolled in a Post Graduate Hospital Medicine Training Fellowship

Purpose: Explore utility of simulation education for post graduate Advanced Practice Providers who are participating in a post graduate fellowship in Hospital Medicine with a focus on training providers to care for hospitalized patients who are acutely decompensating.

Objective: Provide post graduate Advanced Practice Fellows (APF) an opportunity to respond to, and care for hospitalized patients who have a MET/RR called due to either abrupt change in vital signs or patient clinical status (tachycardia, hypotension, hypoxemia, altered mental status/encephalopathy). Provide a practice without risk environment for APFs to evaluate patient, formulate differential diagnosis, create and implement treatment plans, receive direct and indirect clinical coaching. Measured outcomes tracked include feelings of confidence caring for the acutely decompensating patient, knowledge acquisition and retention using a pre and post test.

Methods: APFs participate in two sessions in the UCHealth Simulation Center. First session consists of simulations involving tachycardia, hypotension, hypoxemia. APFs complete simulation individually while cohort watches on a non-recorded screen. Session is followed by detailed debriefing where primary learning points are discussed with all APFs. APFs return to Simulation Center 3-4 months later with similar format to session but simulated cases involve more complicated patient scenarios. APFs complete a pre-survey and post-survey during the first session and an exit survey after the second measuring confidence intervals on a four-point Likert Scale. APFs also complete a written assessment prior to any simulation at first session and retake same assessment after completion of the second session. All responses are anonymous but are tracked using a unique identifying number known only to the APF themselves.

Results: There is a 100% decrease in responses of "rarely" feeling confident in taking care of acutely ill/hospitalized patient and understanding of pathophysiology in the decompensating patient between both rounds. There was increased rate of reporting "sometimes" feeling confident caring for critically ill/decompensating patients (26.7% vs 70% pre vs post and 26.7% vs 85.7% pre vs exit) and "often" feeling confident caring for critically ill/decompensating patients (0% vs 20% pre vs post), increased "often" feeling confident caring for acutely ill/hospitalized patients (10% vs 28.6% post vs exit) and increase in "often" understanding of the pathophysiology in the critically ill/decompensating patient from pre vs post (26.7% vs 80%) but decrease in from post vs exit (80% vs 28.6%). There was increase in the correct responses to the pre and post test (16.30 \pm 2.26 vs 18.20 \pm 1.64).

Conclusion: There is an improvement in reported confidence caring for the hospitalized patient, caring for the decompensating patient, and understanding of pathophysiology of decompensating patient from pre survey compared to the post and exit survey, but perceived confidence appears higher from the post vs exit survey showing these feelings are not lasting over the course of 3-4 months through the

fellowship. There is also a slight improvement in the score on the pre test vs the post test. Given there have been so few response rates due to a small population, more data is needed to see if these trends continue.