

STEPPing-UP Critical Care-Using Simulation to Save Lives.

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Abstract**Background**

The outcome of cardiac arrest and cardiopulmonary resuscitation (CPR) is dependent on critical factors, particularly early defibrillation, effective chest compressions, and assisted ventilation (AHA, 2005). Since the 2000 AHA Guidelines were released health care professionals have been taught that for every minute that passes between collapse and defibrillation, survival rates from witnessed Ventricular Fibrillation (VF) sudden cardiac arrest decreases by 7% to 10%. When bystander CPR is provided, the decrease in survival rates is more gradual and averages 3% to 4 % per minute. Post graduate nurses moving into specialty areas of High Acuity, Critical Care and Emergency Nursing require added nursing competencies for rapid assessment and management of the deteriorating patient. Patients in high acuity, critical care or emergency departments are being monitored so that deteriorating hemodynamic and respiratory status, along with lethal arrhythmias, can be identified quickly.

To develop participants' ability to effectively manage deteriorating patients requiring defibrillation and advanced airway management the project will use a high fidelity simulator in a clinical lab setting. Eligible participants will be recruited from our specialty programs, n=150 annually. The three specialty programs are designed to assist the participants in developing the knowledge and skills requisite of a registered nurse to deliver safe, quality patient care in the high acuity, critical care or emergency department setting. Participants will be recruited from both community and academic hospital practice settings.

Research Focus

Our research will compare the impact the program has on nurses' ability to develop advanced nursing competencies using the Team STEPPS™ model at the beginning and at the end of the 7 and 11 week programs. Participants' response time to management of simulated cardiac instability or respiratory distress leading to respiratory and or cardiac arrest will be measured.

This research pilot project has been awarded a Humber College research Innovation grant. Research will be starting in September 2016.

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