

Changes in Situational Awareness of Emergency Teams in Simulated Trauma Cases Using an RSI Checklist

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Introduction

Situational awareness (SA) is the team understanding patient stability, presenting illness and future clinical course. Losing SA has been shown to increase safety-critical events in multiple industries. SA can be measured by the previously validated Situational Awareness Global Assessment Tool (SAGAT). Checklists are used in many safety-critical industries to reduce errors of omission and commission. An RSI checklist was developed from case review and published evidence. The New Brunswick Trauma Program supports an inter-professional simulation-based medical education program

Methods

Simulations were facilitated in three hospitals in New Brunswick from April 2017 to October 2017. Learner profiles were collected. The SAGAT tool was completed by a research nurse at the end of each scenario. SAGAT scores were non-normally distributed, so results were expressed as medians and interquartile ranges. Mann Whitney U tests were used to calculate statistical significance. To understand the effect of the of an RSI checklist a comparison was made between SAGAT scores at baseline in scenario 1, and the same first scenario completed after a washout period. A Poisson regression analysis will be used to account for the effect of confounding variables in further analyses.

Results

The group was composed of Registered Nurses (8), Physicians (7), and Respiratory Therapists (2). Situational awareness increased significantly with the use of an RSI checklist after 1 day of 4 simulations. The washout period ranged between 5 weeks and 8 weeks. The baseline situational awareness of the whole group during scenario 1 was 9 +/- 0.5 (median, IQR), and with the RSI checklist was 12 +/-1 (median, IQR). The difference was highly statistically significant, $p = < 0.001$. This level of situational awareness using checklist is comparable to the SAGAT scores after 10 scenarios.

Conclusion

In this provisional analysis, the use of an RSI checklist was associated with an increase in measured situational awareness. Higher levels of situational awareness are associated with greater patient safety. A Poisson regression model will be used to understand the confounding effects of user expertise and the likely interaction with simulation exposure.