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Implementing the use of Deliberative Practice on Teaching Endotracheal Intubation To First Year Medical Students

Tiffany Tse, Ronald Hall, M.D.*

Purpose

Deliberate practice is defined as a learning theory that values a learner's holistic ability to learn a task while integrating improvements in targeted skills. The theory states that in order to achieve maximal efficiency, a learner needs time for self-reflection and instantaneous feedback to make improvements before engaging in the next task. Here, we created an Intubation Training Module to study the effectiveness of deliberate practice on teaching endotracheal intubation to first year medical students.

Methods

A two-part intubation workshop was created to investigate the effectiveness of deliberate practice and to compare intubation competency between the number of intubation cycles assigned. In Part 1, subjects (n=6) were given a lesson on airway intubation by an attending emergency medicine physician. An Airway Checklist was used as a guide. Deliberate practice and feedback was provided to students in real-time. The number of intubation cycles completed by each student varied: 1x, 5x, and 7x. Part 2 of the workshop occurred a week after where students were asked to recall the Airway Checklist steps to assess their retention rate. Performance and retention rates of the 3 groups were compared.

Results and Conclusions

A survey was provided after the initial workshop to collect qualitative feedback; the initial endotracheal intubation workshop was well received by medical students and student mean satisfaction was 9.5 (0 being completely unsatisfied, 10 being extremely pleased). An ANOVA test was conducted among the 3 groups to compare retention rate; using the Airway Checklist, the number of checkboxes for each subject was calculated to assess retention rate (p-value = 0.664). Statistical significance could not be determined; future work will include increased sample size and higher intubation cycles for comparison.