Mandatory Competency-based Difficult Airway Management Training at the University of Pittsburgh

Department of Anesthesiology—Preliminary Findings.

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ABSTRACT

The University of Pittsburgh Medical Center is a self-insured health care system consisting of 20 tertiary care, specialty and community hospitals affiliated with the University of Pittsburgh School of Medicine. Approximately 140 practicing Anesthesiologists serve this system through the Department of Anesthesiology. Tracking of open and closed claims within the health system reveals seven figures in claims (1981-to-date) related to difficult airway management (DAM) between the Departments of Emergency Medicine and Anesthesiology. In 2003 as part of system wide patient safety effort, a mandatory competency based simulation-training program was initiated by the Department of Anesthesiology at the Peter M. Winter Institute for Simulation, Education and Research (WISER). Pre and Post simulation based competency evaluations and surveys were coupled to this effort. The following is a report of the preliminary results of 46 subjects.

METHODS

The training course (12 Continuing Medical Education hours) includes approximately 4hrs. of pre workshop self-paced, didactic review over the Internet and 8 hrs. of actual workshop training at WISER. The workshop component includes only one hr. of formal lecture (focused on review of the concepts underlying the ASA guidelines) with the rest being “hands-on” simulation based training at a ratio of 1 facilitator to 2 trainees to 1 simulator.

RESULTS

At the time of this abstract 46 attendings have completed training and agreed to be part of this study. Demographically all were board certified, 29 had greater than 10 years clinical experience, 32 of 46 described themselves as either “expert” or “competent” difficult airway managers prior to this evaluation and 17 of 46 had prior exposure to simulation training. Pretest pass rate (pass all 4 scenarios) was 22% and posttest was 93% on the first attempt and 100% by the second. In the Emergent pathway the simulator would expire after 5 minutes if an airway with ventilation was not established, in the pretest 26% of time the simulated patient expired as opposed to 2% in the first attempt posttest.

CONCLUSION & REFERENCES

This study suggests that difficult airway management, as envisioned by the ASA Difficult Airway Algorithm, can be systematically taught and that performance in applying this standard can be measured quantitatively through simulation. This study also suggests that on average, board certified Anesthesiologists may not be competent as defined by these guidelines.