

CORRESPONDENCE

In response to “Interventions designed using quality improvement methods reduce the incidence of serious airway events and airway cardiac arrests during pediatric anesthesia”

Sir—As an anesthesia resident I read the article “Interventions designed using quality improvement methods reduce the incidence of serious airway events and airway cardiac arrests during pediatric anesthesia” by James Spaeth et al from Cincinnati Children’s Hospital with great interest.

While the article was a report on the successful implementation of a quality improvement method, and I commend your group on reducing these serious events, I am interested in the data surrounding the decreased number of airway events and airway cardiac arrests and have some questions regarding the methodology. First, how did you define whether an event was airway related or not? Was a particular time frame used or was it classified based on the report of the provider involved? Also, did the rate of events directly associated with airway management (direct laryngoscopy, mask ventilation, etc.) in particular decrease with the described interventions?

What was the timing and location of occurrence of the serious airway events and airway-related cardiac events, especially as regards the institutional preintervention practice for adenotonsillectomy patients of extubation and airway management by post operative care unit nurses?¹ These patients are at great risk of both serious airway and cardiac events, and the presence of a trained anesthesia provider is required during their emergence, whether in the operating room or post operative care unit at the Mott Children’s Hospital at the University of Michigan.

The implementation of the use of neuromuscular blocking agents in all cases longer than 30 minutes for patients 2 years of age and under sparked significant discussion regarding clinical practice here at the Mott Children’s Hospital. I was surprised to find that the incidence of residual neuromuscular blockade did not change during the study period, despite the significantly increased use of paralytics. The available evidence in both pediatric and adult patients suggests that increased use of paralytics is associated with increased residual neuromuscular blockade, approximately 40% of the time in adults and 28% of the time in children.^{2,3} What was your institution’s rate of residual neuromuscular blockade and how did you assess it?

Also, though they were observed to be immediately available more frequently following the intervention, did the use of succinylcholine and atropine actually increase?

Finally, and this may be difficult to quantify, what role do you believe having compensation tied to success of the quality improvement measures played in achieving the positive outcome?

ETHICAL APPROVAL


No ethics approvals were necessary for this article.

CONFLICT OF INTEREST

The authors report no conflict of interest.

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