

*In Reply:*

Thank you for providing an opportunity to respond to the interesting letters written by Drs. Cumberworth, Meyer and Eikermann, Austin and Lam, Caruso *et al.*, and Zhang *et al.* In our study, “Nondepolarizing Neuromuscular Blocking Agents, Reversal, and Risk of Postoperative Pneumonia,”<sup>1</sup> a small minority of patients (approximately 4%) had only a supraglottic airway device used during the case. Approximately 6% of patients included in our analysis were admitted postoperatively to the intensive care unit with an endotracheal tube in place. We did not formally adjust for these groups of patients in our analyses but agree that doing so may have strengthened our findings. Regardless of this potential improvement, based on our results, we agree with the sentiment that reversal of neuromuscular blocking agents should be both routine and guided by neuromuscular transmission monitoring (preferably quantitative). We appreciate that current national practices around neuromuscular monitoring are evolving and not uniform. National practice guidelines would help, as would additional refinements to the monitoring technology itself, given its immaturity. Our research group recently published an article outlining existing barriers and calling for the development of more robust, user-friendly neuromuscular monitoring technology.<sup>2</sup> Finally, we appreciate the comment regarding residual confounding in our propensity analysis. Although not included in table 1 of our article (Patient Demographics and Clinical Characteristics before and after Matching),<sup>1</sup> the rates of smoking and chronic obstructive pulmonary disease were similar between groups. We appreciate very much the interest in our work and hope that our findings will help raise attention to the importance of developing strategies to reduce postoperative pneumonia.

**Competing Interests**

The authors declare no competing interests.

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**References**

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2. Hund HC, Rice MJ, Ehrenfeld J: An evaluation of the state of neuromuscular blockade monitoring devices. *J Med Syst* 2016; 40:281

(Accepted for publication April 13, 2017.)

*In Reply:*

After a careful rereading of the letter from Drs. Meyer and Eikermann, we remain confused as to their objection to our editorial.<sup>1</sup> Their concern seems to be semantic in nature.

In particular, they seem uneasy with the term *routine*. We think that they have ignored the basic message that we were attempting to make.

As stated in our editorial, neostigmine administration is not required once it has been determined that the train-of-four (TOF) ratio at the adductor pollicis has returned to a value of 0.90 or greater. This information can only be ascertained by using a quantitative neuromuscular monitor. Unfortunately, we suspect that the great majority of anesthesia practitioners still do not have access to these devices. What then is a clinician who only possesses a conventional peripheral nerve stimulator to do at the end of surgery when tactile or visual fade on TOF stimulation can no longer be detected?

It is our contention, in these circumstances, that the risk of respiratory complications from failure to reverse residual block far outweighs any theoretical adverse effects of neostigmine-induced “paradoxical paralysis.” We are unaware of any documented clinical morbidity associated with the use of low-dose neostigmine (less than or equal to 0.04 mg/kg) even when administered at TOF values of 0.90 or greater.

**Competing Interests**

Dr. Murphy has served as a consultant for Merck & Co. (Kenilworth, New Jersey). The other author declares no competing interests.

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(Accepted for publication April 13, 2017.)

## Assessing Success of Rescue Intubation Techniques after Failed Direct Laryngoscopy

*To the Editor:*

In a multicentered, observational study comparing the success rate of commonly used rescue intubation techniques after a failed direct laryngoscopy, Aziz *et al.*<sup>1</sup> showed that video laryngoscopy was associated with a higher success rate of rescue intubation and was more commonly used than other tools, including a fiberoptic bronchoscope, a supraglottic airway device, an optical stylet, and a lighted stylet. In addition to the limitations described in the discussion, however, there are several questions in this study that must be clarified.