indeed, the American Society of Anesthesiologists Difficult Airway Algorithm encourages practitioners to "actively pursue opportunities to deliver supplemental oxygen throughout the process of difficult airway management."[5]

It is imperative that the anesthesiology community continue to teach residents techniques for airway management beyond direct and video laryngoscopy with a focus on those techniques that allow for continuous oxygenation and ventilation during airway management. Equally as important, once these skills are attained, anesthesiologists must make efforts to maintain these skills through their practical application. We hope that, rather than highlighting the efficacy of video laryngoscopy over other techniques, the article by Aziz *et al.* will serve to underscore the importance of the competent practitioner having an arsenal of techniques, with which they are well versed, to secure the difficult airway.

Competing Interests

The authors declare no competing interests.

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In Reply:

We thank Drs. Xue *et al.*, Drs. Herway and Benumof, and Drs. Maslow and Panaro for their interest and thoughtful comments regarding our recent publication.[1] They offer several interesting insights and questions regarding our article that we wish to address.

All three letters point out that video laryngoscopy was not universally successful as a rescue technique and that other approaches to intubation and oxygenation should be considered. Furthermore, training and competency with other primary or rescue tools should be maintained. We absolutely agree. The practical application of our findings provides a framework for prioritizing how to best invest time and training in rescue techniques. The sugraglottic airway in particular offers advantages to maintain oxygenation and ventilation as a definitive airway or as a conduit for final tracheal intubation. Indeed, many patients in this data set were effectively temporized in this fashion. However, when used to guide tracheal intubation with or without the use of a flexible bronchoscope, the supraglottic airway was not as successful as video laryngoscopy. Nor was the flexible bronchoscope as successful. Does this mean that these well-established techniques should be abandoned? Certainly not! They have a clear role when video laryngoscopy is not feasible or when used by providers more experienced with these techniques. That said, if a higher risk of failure is anticipated or when preparing for an unanticipated difficult direct laryngoscopy, our data support the immediate availability of video laryngoscopy.

It is likely true that performance with the supraglottic airway and flexible bronchoscopic intubation would have been improved with better training. However, this data set represents the experience of 353 distinct attending anesthesiologists in large tertiary care academic medical centers. While they all may have experienced different performance with different training, we believe this sample represents the reality of clinical practice in academic medicine in the United States. Similar discussions occurred in the United Kingdom regarding rescue surgical airway approaches after publication of the fourth national audit project.[2] The study observed higher success rates with the scalpel approach compared to percutaneous techniques, and national guidelines soon called for only the scalpel technique.[3] Appropriate cautionary editorials were provided that discussed the importance of training and human factors when selecting rescue techniques.[4] We believe both of these rescue situations represent opportunities for improvements in training, but it is as important to recognize why certain techniques may have failed and why one performed better than the other. We believe the high success rate with video laryngoscopy relates to ease of use and experience in both urgent and nonurgent situations. Furthermore, we recognize that competence at the highest level may not be feasible with all available devices, and it is useful to understand what may work most frequently in most providers' hands. We need to understand better why such a large group of anesthesia providers may have not performed as well with flexible bronchoscope techniques and intubating supraglottic airways. We also hope that our article will encourage others to research these questions.

Xue *et al.* had a particular question about the definition of a failed direct laryngoscopy attempt. They are correct that we cannot confirm that the initial direct laryngoscopy attempt was optimized through patient positioning or laryngeal manipulation. However, all intubations were supervised or performed by anesthesiologists with sufficient experience. Furthermore, we did describe alternation of direct laryngoscopy blade types (see table 4 of our article[1]). We agree that often an inadequate laryngeal view with direct laryngoscopy can be overcome with optimization maneuvers or when utilizing a gum-elastic bougie. These cases were *a priori* excluded from analysis as we were interested in the mechanisms of rescue after direct laryngoscopy has failed by whatever means. We cannot determine why direct laryngoscopy was abandoned after one attempt and/or if tube placement was actually attempted along with that failed direct laryngoscopy. Certainly, the providers who performed direct laryngoscopy first aimed to intubate the patient but simply could not, even though such appropriate adjuncts were available and/or used. So, we did not describe *failed intubation via* direct laryngoscopy *per se*, but we do believe we appropriately described *failed direct laryngoscopy*.

Maslow and Panaro had some questions about the validity of the data set that we believe represent a misunderstanding that should be clarified. They question the high exclusion rate from the primary query. The automated query identified 7,259 cases that involved multiple laryngoscopy attempts and notations of device(s) of interest in an effort to "screen" the electronic record for potential cases as only the narrative could describe the actual sequence of events. These were not necessarily failed direct laryngoscopy attempts but a trigger to further evaluate the record. The final analysis included 1,427 failed direct laryngoscopy cases from 346,861 intubation records (0.4%). Also, our data do not address the primary success rate of either direct laryngoscopy or video laryngoscopy. The data set only speaks to the success rate of various techniques after direct laryngoscopy has failed. So, the primary success rate of video laryngoscopy is not reported. However, we did publish such findings in a different study and observed a 98% success rate with video laryngoscopy as the primary technique despite early clinical experience with the device.[5]

Competing Interests

The authors declare no competing interests.

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Calculating Ideal Body Weight: Keep It Simple

To the Editor:

We read with much interest the editorial on protective ventilation by Hedenstierna and Edmark in the December issue of Anesthesiology.[1] We agree with most of the ideas put forward. However, as thoracic anesthesiologists, we strongly believe in the importance, during one-lung ventilation, of low tidal volume based on ideal body weight.[2,3]

Many authors still recommend using the gender-specific Acute Respiratory Distress Syndrome Network (ARDSnet) formulas to calculate ideal body weight.[4] Ideal body weight is computed in men as 50 + (0.91 × [height in centimeters − 152.4]) and in women as 45.5 + (0.91 × [height in centimeters − 152.4]). A simple alternative would be to compute ideal body weight as the weight corresponding to an ideal body mass index of 22 kg/m^2. Ideal body weight is then simply calculated as 22 × ([the actual patient's height in meters]^2) or by using body mass index charts available on our anesthesia cart.[5] We chose 22 kg/m^2 as the ideal body mass index after comparing the ideal body weight corresponding to body mass indices ranging from 20 to 25 to ideal body weight calculated from ADRSnet formulas. For example, a 1.75-m man would have an ideal body weight of 67 kg (22 × [1.75^2]) compared to 71 kg if using ARDSnet; a 1.60-m woman would have an ideal body weight of 56 kg (22 × [1.60^2]) compared to 52 kg if using ARDSnet.

The method we propose is simple and easy to remember. The same computation applies for both men and women and involves simple arithmetic.