Author's response to reviews

Title: GlideScope Use Improves Intubation Success Rates: An Observational Study using Propensity Score Matching.

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Author's response to reviews: see over
Dear Editorial Board Members:

Manuscript Title: GlideScope Use Improves Intubation Success Rates: An Observational Study using Propensity Score Matching.
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Thank you for conditionally accepting our manuscript. Below you will find our point-by-point reply, and we have submitted the newly revised manuscript for publication in BMC Anesthesiology.

This full manuscript has not been published previously, either in whole or in part, and is not under consideration for publication elsewhere. A portion of the material within was previously presented at the American Society of Anesthesiologists Annual Meeting, Oct, 2011. Chicago, IL, and was the subject of an article in Anesthesiology News.

All authors attest to the originality of the text, and the originality of any/all supporting tables, images, and supplementary electronic materials as related to this document. We also hereby affirm that ethical approval for this work was obtained as appropriate to this work and that all authors have made material contributions to this manuscript according to the rules of authorship. As detailed with the manuscript, all authors deny any competing interests. All authors deny issue with the editorial policies detailed in the instructions for authors.

Finally, all authors accept that the corresponding author will be the sole author of further communication with the editorial office related to this manuscript, including any and all revisions, and he will have the authority to communicate on behalf of all authors in regards to further correspondence with the Editor and other necessary parties.

Yours sincerely,
Michael P. Mangione

Editorial requirements:

1. **Kindly format your manuscript to include a separate Conclusions section and the funding in the Acknowledgement.**
   Done. A conclusion section has been added that reads:
   The use of the GlideScope is associated with greater first pass intubation success than direct laryngoscopy even though the GlideScope was used with more frequency in patients with predictors of difficult intubation. Furthermore, it was shown to be a particularly effective choice for intubation
success after failed direct laryngoscopy. The use of the GlideScope did result in a greater proportion of minor complications compared to direct laryngoscopy, particular for soft tissue lacerations.

2. Please remove the cover letter as an additional file.
   Done.

Reviewer 1:
Minor Revisions

• P8, line 2: please clarify the four-point scale relating to practitioner level. Does this relate to work experience, device experience, professional level etc.? How does this relate to page 14, lines 16-17?
   It reflects overall professional level, not GlideScope experience. The sentence on P8, line 2 now reads “The practitioner level (Attending Anesthesiologist, Certified Registered Nurse Anesthetist, Anesthesiology Resident, or Other) was recorded utilizing a four point scale.” The groups listed on page 14 are these same four groupings: with medical and nurse anesthesia students and respiratory therapists counting in the “Other” category.

• P8, line 8: please correct "was also recorded but a stylets use...
   Done.

• P9, line 19: please clarify: "..was built with a likelihood ration based forward selection procedure..."
   This is the method we used within the SPSS software to decide which variables would be in the regression model. Forward selection means that the model starts with only a constant term and the variable to be tested are added stepwise to the model, testing the significance of the model each time a new term is added. The likelihood ratio is the method used for determining whether or not a particular variable should stay in the model. These are fairly standard terms within regression analysis, and are included so that anyone replicating the work would be able to perform the same regression. “Ration” was corrected to “Ratio” on Page 9.

• P11, line 15: please clarify whether expected difficult refers to expected difficult with DL or GS. I assume that if the operators anticipated difficulty with GS, whey would have selected an alternative technique but this should be more clear.
   Thank you for raising this question. Correct, “expected difficulty” is in reference to intubation via direct laryngoscopy. We have clarified this by changing the following:
   Changing “difficult airway” to “difficult intubation” on P7, L10.

• P 13, line 19: suggest removal of "only" since some guidelines go beyond "multiple attempts" and recommend that no more than 3 laryngoscopy attempts in total should be performed.
   Done.

• P 14, lines 3 and 14: suggest that the statement be expanded to read that among patients deemed appropriate for post-induction laryngoscopic intubation, the GS was found to be 99% successful. The population studied was a subset of the total population who were intubated.
Presumably, some patients had awake bronchoscopic intubation or were managed with alternative devices (SGA as a conduit, light wand, optical stylet etc.).
   All of our patients were intubated with fiberoptic bronchoscopes, DL, GL, or C-MAC techniques. No other devices were used. Our sentence on P14 specifically states that, “In addition, the GlideScope was found to be 99% successful for intubation after initial failure of direct laryngoscopy.” We did not claim that the GlideScope was successful in 99%; our overall success rate was 93.6%, as stated on P12 L9. We believe that the “initial failure” statement appropriately defines the subpopulation for our 99% statement.