ANSWERING REVIEWERS

Dear Editor,

Please find, as requested, the below revisions for the manuscript titled: "Enteral Nutrition Administration in a Surgical ICU: Achieving Goals with Better Strategies."

The responses appear in bold below each comment.

We look forward to your response.

Title: Enteral nutrition administration in a surgical intensive care unit: Achieving goals with better strategies

Authors: Sara Wilson, Nagendra Madisi, Adel Bassily-Marcus Anthony Manasia, John Oropello, Roopa Kohli-Seth

Reviewers Comments:

Reviewer #1:

1. Primary significant finding is reduction in time to achieve goal tube feed rate. Perhaps more expansion of discussion section to define where and how the protocol can be optimized, in order to achieve significant improvement in the other important parameters, would be appropriate

   Response: The highlighted portion was added to paragraph 3 of the Discussion to define areas where the protocol may be optimized to achieve improvement.

   Future research should focus on patient outcomes and quality indicators to promote the use of protocols for EN administration in the SICU, and further extended to other ICUs throughout the hospital. Optimizing the EN protocol by providing distinct instructions for how to minimize feeding interruptions could improve the parameters where significant progress was lacking between the pre and post intervention phases. Guidelines and strategies for moving the location of the tip of the feeding tube more distal in the jejunum could also assist in reducing length of hold times for feeding intolerance. Incorporating volume-based practices that summarize how to adjust tube-feeding rates in order to "catch-up" may also assist in optimizing the protocol, and increasing the overall administration of nutrition daily. By developing standards of practice and guidelines for when to hold and restart enteral feeds, we improved the overall administration of nutrition provided.

Reviewer #2:

1. This is an interesting well-written paper, focused on a topic, where data from literature are lacking. However, some minor revisions are needed. In details, I'd suggest the authors better explain their EN feeding protocol as the provision of Figure 1 may not be sufficient for

the Readers. They should provide specific and clear-cut data on their protocol within the text. Additionally, the retrospective nature of present study does not allow to draw solid conclusions. Authors should better discuss this point.

Response: The highlighted portion was added to the "Intervention" section of "Materials and Methods" to provide further details on the Feeding Protocol as outlined in Figure 1.

The EN protocol delineated steps for initiating, advancing and maintainingnutrition support in these patients. Following implementation of the protocol, EN was started at half the goal rate. Gastric residual volumes were checked six hours after initiation. If GRV were less than 250 mL, EN feeds were advanced to goal rate with GRV and signs and symptoms of intolerance monitored every six hours, for the first 24 hours, or until confirmation of tolerance of tube feeding at the goal rate. In the event that GRV was more than 250 mL, the bedside nurse would inform the physician on call for further assessment of symptoms such as abdominal pain, distention, tenderness, vomiting or high GRV (≥500 mL). In the presence of any of these symptoms, EN feeding was held for 3 hours with reevaluation thereafter. With implementation of the protocol, if symptoms were absent, the ICU team could start promotility agents, if not otherwise contraindicated. Promotility agents used included metoclopramide and erythromycin. The GRV was then rechecked after six hours and feeds advanced as indicated above. If EN was held due to intolerance or inability to advance to goal rate, PN support was considered. Stop rules for procedures were also developed to guide practitioners on the appropriate timing for holding EN support. For emergent procedures feeds would be held and NGT placed to suction to decompress the stomach. For non-emergent procedures, including planned surgery and elective tracheostomy, holding feeds six to eight hours prior to procedure was suggested, and for pressure support or weaning trials, holding feeds one hour prior to trial was advised. It was recommended that feeds be restarted upon return from procedure; pending confirmation from the primary team or upon determination that extubation was not possible (Figure 1). Nurses and physicians were educated on the protocol. The importance of clear and accurate documentation, including reason and duration of feeding interruptions was emphasized.

Response: The highlighted portion was added to paragraph 4 of the Discussion to address the limitations of the retrospective nature of the study.

Given the retrospective nature of our study, we are unable to establish cause and effect. The study does not draw solid conclusions, however the data can be used to provide descriptive characteristics, and add to the limited literature available.

Response: The highlighted portion was added to the Conclusion to better address the inability to draw solid conclusions.

This study suggests a user friendly EN protocol in conjunction with extensive ongoing education may lead to shorter time to achieve goal rate, and enhance overall administration of nutrition to surgical critical care patients.

Thank you for your consideration. Please address all correspondence concerning this manuscript via e-mail to nagendra.madisi@mountsinai.org.

Sincerely,

Nagendra Madisi, MD
Critical Care Fellow
Icahn School of Medicine