

To feed, or not to feed? Evaluating enteral nutrition practices in surgical neonates

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Background: Early enteral feeding initiation following surgical procedures in neonates has demonstrated several benefits. In high income countries, where parenteral nutrition is readily available, enteral feeding initiation is often delayed. This study seeks to examine clinical factors and decision-making processes that guide nutrition practices in surgical neonates in the United States (US) and Kenya.

Methods: A REDCap survey was developed and distributed to pediatric surgery attendings and fellows at Riley and Peyton Manning Children's Hospitals in Indiana (US) and Shoe4Africa Children's and AIC Kijabe Hospitals in Kenya. Nine responses were collected during the initial two-week long pilot, then analyzed using REDCap and SPSS 25.

Results: Responses were collected from eight pediatric surgery attendings and a fellow practicing in Indianapolis, IN. The three most highly ranked clinical factors important for initiation of enteral feeds were stability of the patient, nasogastric or orogastric output color, and gastric output volume. Factors most highly ranked for advancement of feeds included frequency and volume of emesis and abdominal distension. These factors were similarly ranked for foregut and hindgut procedures. Protocols for pyloric stenosis (n=6) include initiation of enteral nutrition within 24-48 hours. Four of nine respondents felt that surgeons at their institution are not aggressive enough in feeding surgical neonates. The primary perceived barrier to achieving full enteral nutrition was patient gut dysmotility (n=8). All respondents felt that they were similarly (n=4) or more (n=5) proactive in feeding surgical neonates compared to their peers.

Conclusions and Impact:

Feeding practices in surgical neonates are dependent on individual clinician decision-making processes and patient factors. Once the data from the Kenyan surgeons is collected, comparisons between practice patterns will be analyzed. Real-world enteral feeding practices will be evaluated in an adjunct observational study, which we hope will inform protocols with earlier enteral feeding initiation in the future.