

Early Enteral Feeding in the Pediatric Acute Care Setting

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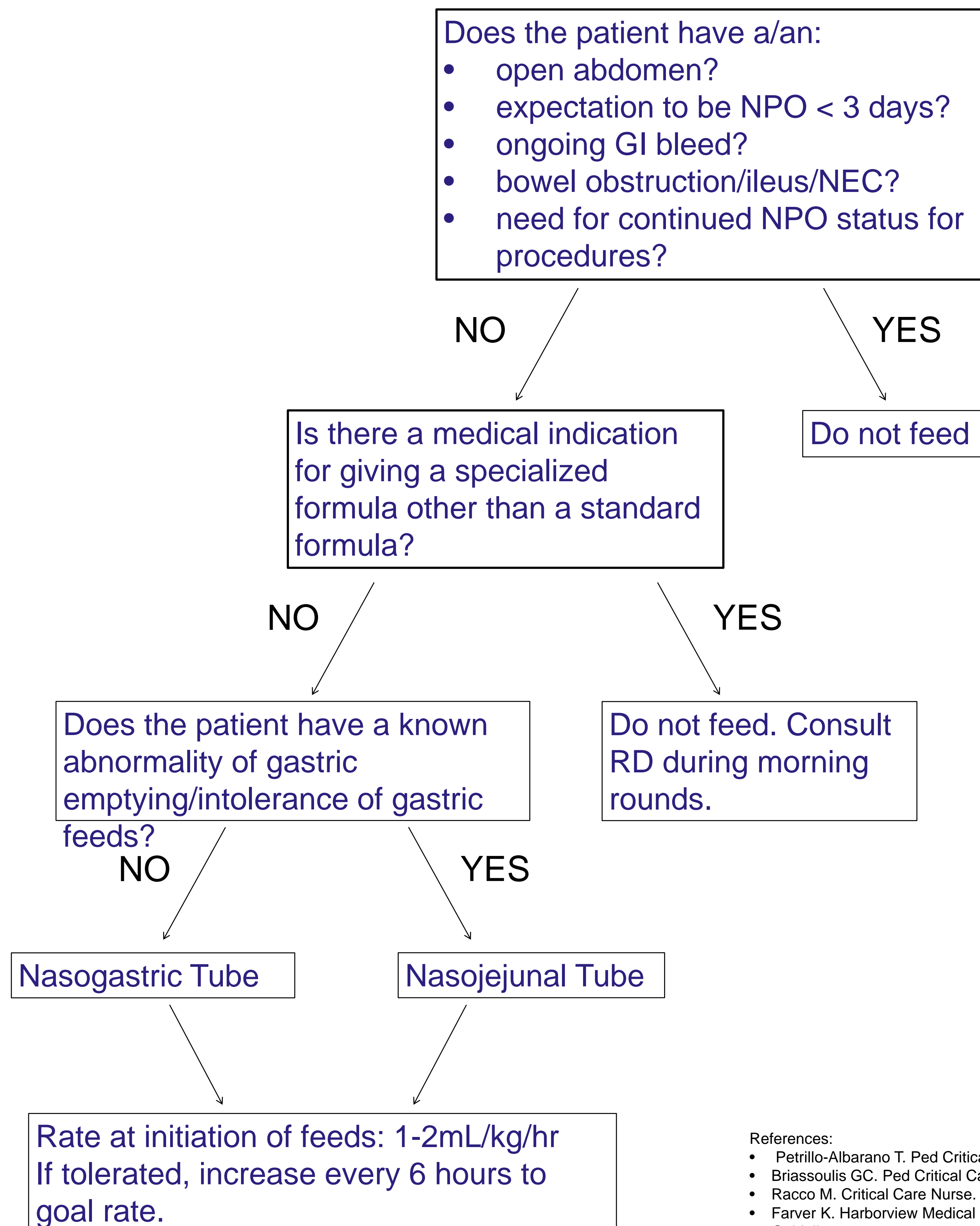
BACKGROUND

Currently, no early enteral feeding protocol exists at Seattle Children's Hospital.

CURRENT LITERATURE

- Early enteral feeding (EEN) suggested reduce the relative mortality rate in pediatric intensive care populations
- Groundbreaking research by Mikhailov et al: retrospective cohort study demonstrating a correlation between EEN and decreased mortality rates in certain populations, including
 - Mechanically ventilated
 - Altered mental status precluding oral intake
 - Anticipated NPO >5 days
 - Severe malnutrition upon admission
 - Pre-operative patients
- Populations to exclude have medical complications affecting the GI tract
 - Open abdomen
 - GI bleed, ongoing
 - Bowel obstruction
 - Ileus
 - Necrotizing enterocolitis
- General conclusion: need for further studies done, preferably **randomized control trials**, in pediatric populations

PROPOSED PROTOCOL



References:

- Petrillo-Albarano T. Ped Critical Care Med. 2006; 7(4): 340-344.
- Briassoulis GC. Ped Critical Care Med. 2001; 2(2): 113-121.
- Racco M. Critical Care Nurse. 2012; 32(4): 72-75.
- Farver K. Harborview Medical Center Enteral Feeding Guidelines.
- Mikhailov TA. JPEN. 2014; 38(4): 459-66.
- Mehta NM. Crit Care Med. 2012; 40(7): 2204-2211.
- Mehta NM. JPEN. 2014; 38(4): 410-414.

IMPLEMENTATION

- Possible in pediatric ICU only (versus cardiac ICU or neonatal ICU)
- Education of attending physicians and residents regarding formula types and feeding initiation rate
- Communication with pharmacy of formula options – standard only
- Education of nurses regarding feeding advancement rates

OBSTACLES

- Per ICU dietitians
 - Many pediatric patients admitted to the ICU are tube fed at home and have specialty formulas and/or home-blenderized formulas
 - RDs round with medical team every morning, so need for enteral nutrition as a proactive protocol may be unnecessary
 - Physicians have limiting knowledge about formula types
 - Is there an underlying condition that would be contraindicated for early enteral feeding?
- Ethical concerns regarding randomized control trials in pediatric populations