

INCLUSION CRITERIA

- Inpatient or outpatient candidate for new gastrostomy (G-tube) placement

EXCLUSION CRITERIA

- G-tube revision/conversion

MEASURES

- Order set utilization
- Preop checklist completion
- Time to postoperative feed initiation
- Emergency department returns following discharge
- Postoperative length of stay

NOT ROUTINELY RECOMMENDED

- Upper gastrointestinal (UGI) series without recurrent emesis
- Routine prophylactic fundoplication

¹RED FLAGS

- Pain with feeding
- Emesis
- Abdominal distension
- Fresh bleeding
- Leaking at tube site

SAME DAY DISCHARGE (SDD) CRITERIA

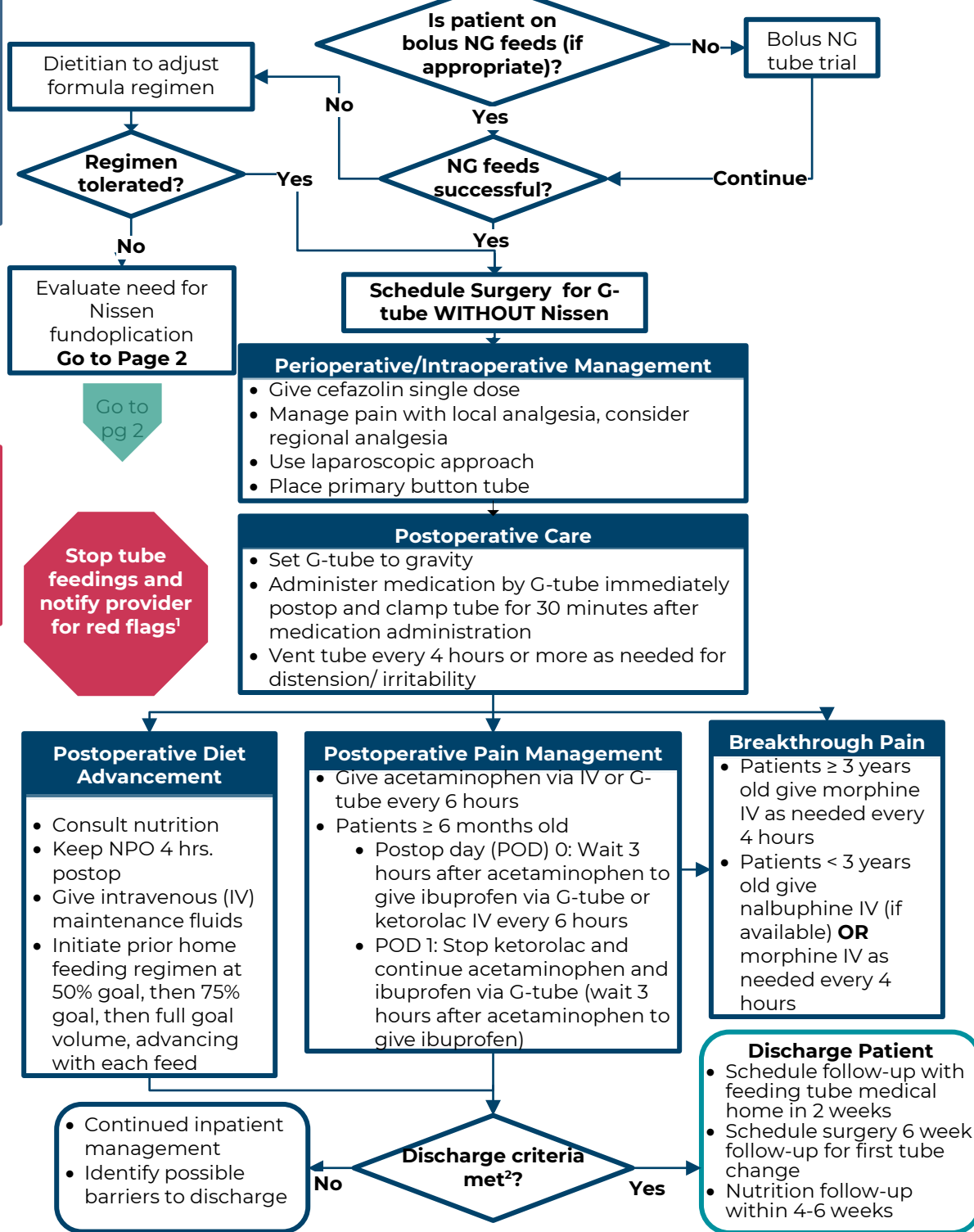
- Parents interested in SDD **AND**
- Successful nasogastric (NG) feed preop **AND**
- Preop tube education completed

²DISCHARGE CRITERIA

- Tolerating goal feeds (*May be discharged prior to reaching goal feeds*)
- Adequate pain control
- Family educated about feeding tube care
- Home equipment available

Initial Preoperative Evaluation

- Utilize feeding tube preoperative (preop) checklist
- Establish feeding tube medical home
 - Identify durable medical equipment (DME) company for equipment and formula
- Consult nutrition to determine feeding goals 2-4 weeks preop
- Consult feeding therapy if indicated
- Educate family about procedure and enteral feeding expectations
- Consult social work to identify psychosocial barriers and family readiness



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NISSEN RECOMMENDATIONS

- Prophylactic fundoplication is not recommended for any patient population
- Patients under 1 y.o. who are unable to demonstrate tolerance of NG feeds (due to physiologic regurgitation) and who are unable to protect their airway may be considered for fundoplication with G-tube placement

'RED FLAGS

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- Abdominal distension
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SAME DAY DISCHARGE (SDD) CRITERIA

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- AND**
- Successful nasogastric (NG) feed preop
- AND**
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DISCHARGE CRITERIA

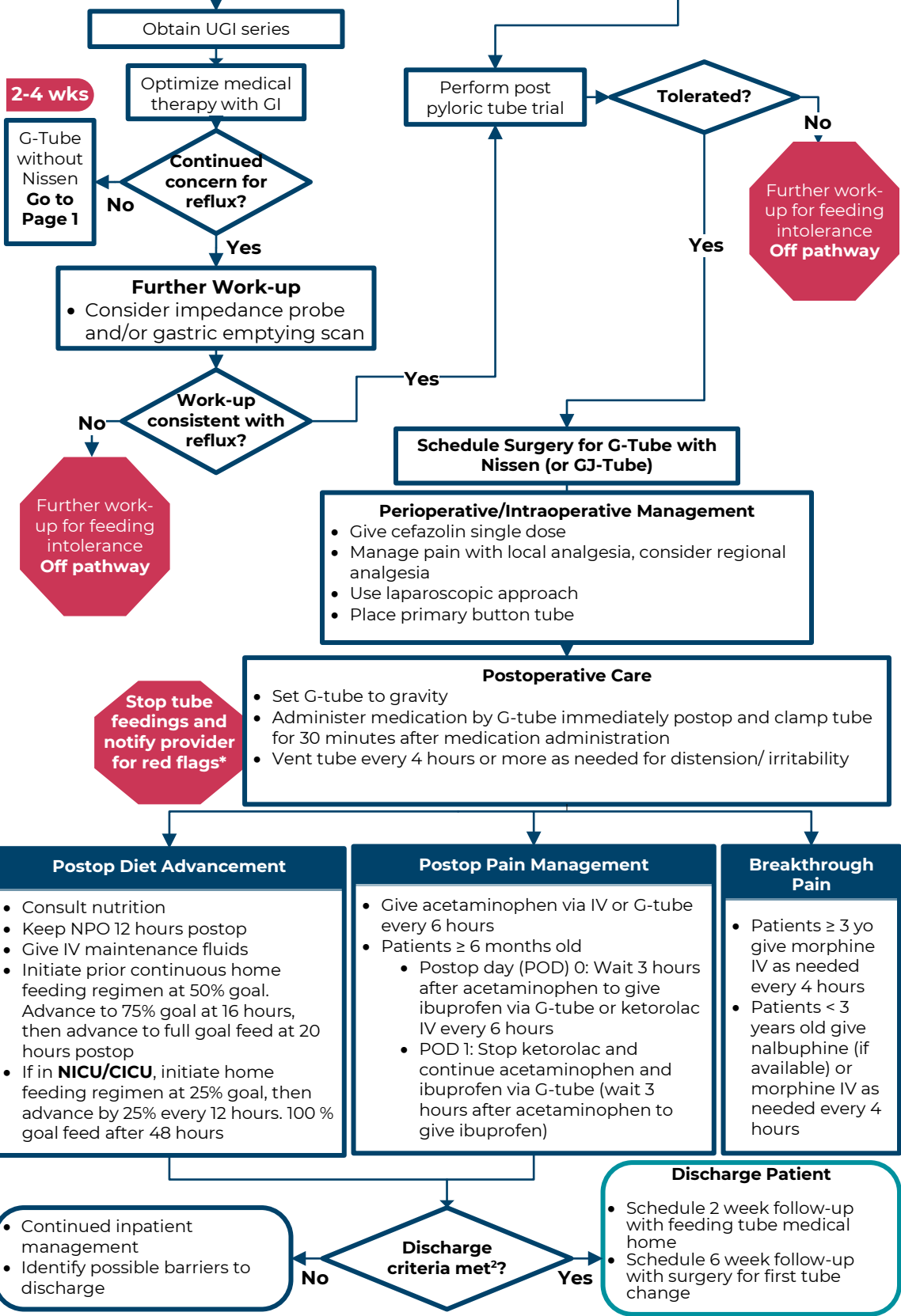
- Tolerating goal feeds (*May be discharged prior to reaching goal feeds*)
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Possible GERD

- Child is not consistently tolerating bolus gastric feeds secondary to reflux
- OR**
- Concern for reflux leading to aspiration

Definite GERD

- Child is not able to tolerate gastric feeds secondary to reflux
- OR**
- Definite history of reflux leading to aspiration



Antibiotics

Medication	Dosage	Route	Max. per Dose
cefazolin (Ancef)	30 mg/kg	IV	Weight <120 kg: 2,000 mg/dose Weight ≥120 kg: 3,000 mg/dose

Analgesics

Medication	Dosage	Route	Max. per Dose
acetaminophen (Tylenol)	15 mg/kg/dose Q6H	G-Tube	1,000 mg
ketorolac (Toradol)	0.5 mg/kg /dose Q6H	IV	15 mg
Ibuprofen (Motrin)	10 mg/kg/dose Q6H	G-Tube	600 mg
morphine	0.05 mg/kg/dose Q4H PRN	IV	2 mg
nalbuphine (Nubain)	0.1 mg/kg/dose Q4H PRN	IV	20 mg

Feeding Tube Placement Checklist:

1. Nasogastric/nasoduodenal feeding trial successfully completed (at goal feeding regimen)?:
2. Upper GI study completed and ligament of Treitz is in correct position?:
3. Feeding Tube Medical home (provider managing feeds) identified? If Yes, specify: (GI/DRS/Rainbow/PCP/PCP w/telehealth dietitian/Cardiology/""if no specify provider""/Other):
4. Nutrition/tube feeding plan determined (including goals and timelines)?:
5. Will the patient be followed by Nemours dietitian after feeding tube placement?:
6. Will the patient be followed by a Nemours feeding therapist after feeding tube placement?:
7. Family social/psych readiness assessed during social work evaluation?:
8. Durable Medical Equipment (DME) company identified for feeding tube supplies and formula?:
9. Based on the questions above, is patient ready to be scheduled for feeding tube placement?:

Clinical Pathway Abbreviations

Abbreviation	Definition
GERD	Gastroesophageal reflux disease
NG	Nasogastric
NPO	Nothing by mouth

Disclaimer: The clinical pathways are based upon publicly available medical evidence and/or a consensus of medical practitioners at Nemours Children's Health ("Nemours") and are current at the time of publication. These clinical pathways are intended to be a guide for practitioners and may need to be adapted for each specific patient based on the practitioner's professional judgment, consideration of any unique circumstances, the needs of each patient and their family, and/or the availability of various resources at the health care institution where the patient is located.

VERSION MANAGEMENT

- Version 1.0 (10/9/2023): Go Live.
- Version 2.0 (09/01/2026) Lookback Review. References Updated

Questions about this pathway should be directed to clinicalpathways@nemours.org.

AUTHORS & REFERENCES

Central Florida Authors: Teerin Meckmongkol, Carrie N. Balthazar; Brian M. Bender; Ana Burleson; Norman Carvalho; Kaity Colon-Sanchez; Stacy Elliott; Nilam S. Gandhi; Edna Gilliam; Cara Harwell; Craig Johnson; Alex Lopilato; Andrea Rivera-Sepulveda; Sarah Russo; Martin Smutny; Teerin Meckmongkol; Michele Young; Kimberly J. Zalewski;
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- Acker SN, Trinh BB, Partrick DA, Stewart CL, Bensard DD. Is Routine Upper Gastrointestinal Contrast Study Necessary prior to Laparoscopic Gastrostomy Tube Placement in Children?. *Eur J Pediatr Surg*. 2016;26(1):29-33. doi:10.1055/s-0035-1563675
- Barnhart DC, Hall M, Mahant S, et al. Effectiveness of fundoplication at the time of gastrostomy in infants with neurological impairment. *JAMA Pediatr*. 2013 Oct;167(10):911-8. doi: 10.1001/jamapediatrics.2013.334
- Berman L, Sharif I, Rothstein D, Hossain J, Vinocur C. Concomitant fundoplication increases morbidity of gastrostomy tube placement. *J Pediatr Surg*. 2015;50(7):1104-1108. doi:10.1016/j.jpedsurg.2014.07.013
- Berman L, Baird R, Sant'Anna A, et al. Gastrostomy Tube Use in Pediatrics: A Systematic Review. *Pediatrics*. 2022;149(6):e2021055213. doi:10.1542/peds.2021-055213
- Dekonenko C, Svetanoff WJ, Osuchukwu OO, et al. Same-day discharge for pediatric laparoscopic gastrostomy. *J Pediatr Surg*. 2021;56(1):26-29. doi:10.1016/j.jpedsurg.2020.09.044
- Devin CL, Linden AF, Sagalow E, et al. Standardized pathway for feeding tube placement reduces unnecessary surgery and improves value of care. *J Pediatr Surg*. 2020;55(6):1013-1022. doi:10.1016/j.jpedsurg.2020.02.033
- Edwards S, Davis AM, Bruce A, et al. Caring for Tube-Fed Children: A Review of Management, Tube Weaning, and Emotional Considerations. *JPEN J Parenter Enteral Nutr*. 2016;40(5):616-622. doi:10.1177/0148607115577449
- Fraser JA, Stewart S, Pierce AL, Orrick BA, St Peter SD, Oyetunji TA. Evaluating caretaker satisfaction with same-day discharge after gastrostomy tube placement. *J Pediatr Surg*. 2023;58(1):70-75. doi:10.1016/j.jpedsurg.2022.09.013
- Goldin, A, Libby, A, Abermanis, J, et al. Gastrostomy Tube Placement. Seattle Children's Hospital. 2013
- Hannah E, John RM. Everything the nurse practitioner should know about pediatric feeding tubes. *J Am Assoc Nurse Pract*. 2013;25(11):567-577. doi:10.1002/2327-6924.12075
- Hendrickson RJ, Poola AS, Sujka JA, et al. Feeding Advancement and Simultaneous Transition to Discharge (FASTDischarge) after laparoscopic gastrostomy. *J Pediatr Surg*. 2018;53(11):2326-2330. doi:10.1016/j.jpedsurg.2018.04.035
- Jensen AR, Renaud E, Drucker NA, et al. Why wait: early enteral feeding after pediatric gastrostomy tube placement. *J Pediatr Surg*. 2018;53(4):656-660. doi:10.1016/j.jpedsurg.2017.06.015
- Jones CW, Smith JR, Paton EA, Harrell CR, Huang EY, Corkins MR. Outcomes Associated With Early vs Late Initiation of Exclusive Enteral Feeding Regimens Following Laparoscopic Gastrostomy Tube Placement in the Pediatric Patient. *Nutr Clin Pract*. 2020;35(5):911-918. doi:10.1002/ncp.10503
- Khan FA, Nestor K, Hashmi A, Islam S. To Wrap or Not? Utility of Anti-reflux Procedure in Infants Needing Gastrostomy Tubes. *Front Pediatr*. 2022;10:855156. Published 2022 Mar 7. doi:10.3389/fped.2022.855156
- Lam C, Dick K, Bethell G, et al. Implementing an early feeding pathway post gastrostomy insertion reduces inpatient stay. *J Pediatr Surg*. 2020;55(5):861-865. doi:10.1016/j.jpedsurg.2020.01.024
- LaRiviere CA, Parimi C, Huaco JC, Acierno SA, Garrison MM, Goldin AB. Variations in preoperative decision making for antireflux procedures in pediatric gastroesophageal reflux disease: a survey of pediatric surgeons. *J Pediatr Surg*. 2011;46(6):1093-1098. doi:10.1016/j.jpedsurg.2011.03.035
- Paul F, Perkins J, Jiang H, McCabe M. Impact of the early initiation of feedings on hospital length of stay in children post-PEG tube placement. *Gastroenterol Nurs*. 2014;37(5):344-349. doi:10.1097/SGA.0000000000000065
- Richards MK, Li CI, Foti JL, et al. Resource utilization after implementing a hospital-wide standardized feeding tube placement pathway. *J Pediatr Surg*. 2016;51(10):1674-1679. doi:10.1016/j.jpedsurg.2016.05.012
- Rosen D, Schneider R, Bao R, et al. Home Nasogastric Feeds: Feeding Status and Growth Outcomes in a Pediatric Population. *JPEN J Parenter Enteral Nutr*. 2016;40(3):350-354. doi:10.1177/0148607114551967
- Rosen R, Vandenplas Y, Singendonk M, et al. Pediatric Gastroesophageal Reflux Clinical Practice Guidelines: Joint Recommendations of the North American Society for Pediatric Gastroenterology, Hepatology, and Nutrition and the European Society for Pediatric Gastroenterology, Hepatology, and Nutrition. *J Pediatr Gastroenterol Nutr*. 2018;66(3):516-554. doi:10.1097/MPG.0000000000001889
- Rosenfeld EH, Mazzolini K, DeMello A, et al. Postoperative Feeding Regimens After Laparoscopic Gastrostomy Placement. *J Laparoendosc Adv Surg Tech A*. 2017;27(11):1203-1208. doi:10.1089/lap.2017.0295
- Schweitzer M, Aucoin J, Docherty SL, Rice HE, Thompson J, Sullivan DT. Evaluation of a discharge education protocol for pediatric patients with gastrostomy tubes. *J Pediatr Health Care*. 2014;28(5):420-428. doi:10.1016/j.pedhc.2014.01.002
- Soscia J, Friedman JN. A guide to the management of common gastrostomy and gastrojejunostomy tube problems. *Paediatr Child Health*. 2011;16(5):281-287. doi:10.1093/pch/16.5.281
- Vernon-Roberts A, Sullivan PB. Fundoplication versus postoperative medication for gastro-oesophageal reflux in children with neurological impairment undergoing gastrostomy. *Cochrane Database Syst Rev*. 2013;2013(8):CD006151. Published 2013 Aug 28. doi:10.1002/14651858.CD006151.pub3
- Wiernicka A, Matuszczyk M, Szlagatys-Sidorkiewicz A, et al. Tolerability and safety of early enteral nutrition in children after percutaneous endoscopic gastrostomy placement: A multicentre randomised controlled trial. *Clin Nutr*. 2019;38(4):1544-1548. doi:10.1016/j.clnu.2018.08.018

REFERENCES (UPDATED 2026)

- Mitchell MB, Callans K, Erdei C, et al. Multi-institutional quality improvement algorithm for home nasogastric tube care for neonates. *Int J Pediatr Otorhinolaryngol*. 2024;185:112083. doi:10.1016/j.ijporl.2024.112083
- Benscoter D, Voos K, Schuler CL, et al. Transitioning medically complex infants home: lessons learned from quality improvement efforts. *J Perinatol*. 2025;45(3):404-410. doi:10.1038/s41372-024-02189-7
- Reiter AJ, Longi F, Thomae BL, et al. Pediatric gastrostomy tube placement: Avoid the incision to avoid the complications. *J Laparoendosc Adv Surg Tech A*. 2025;35(5):419-424. doi:10.1089/lap.2024.0036
- Patel DD, Schenker KE, Averill LW, May LA. Imaging of pediatric gastrostomy tube malposition: Pearls and pitfalls. *World J Radiol*. 2025;17(6):107522. doi:10.4329/wjr.v17.i6.107522
- Cassaro F, Impellizzeri P, Bartolone A, et al. Percutaneous endoscopic gastrostomy versus laparoscopic gastrostomy in pediatric age: A systematic review and meta-analysis. *J Pediatr Gastroenterol Nutr*. 2026;82(1):202-212. doi:10.1002/jpn3.70264
- Turpin AG, Vincent SA, Zomorodi A, et al. Standardized surgical approach to gastrostomy tube placement: A quality improvement initiative at a multi-hospital children's health care system. *J Pediatr Surg*. 2026;61(4):162912. doi:10.1016/j.jpedsurg.2025.162912
- Vincent SA, Meneses EC, Barone-Camp A, Acker SN, Diaz-Miron J. Gastrojejunostomy tube placement in pediatric patients: A comparison of staged versus primary techniques and associated outcomes. *J Laparoendosc Adv Surg Tech A*. 2026;36(5):397-405. doi:10.1177/10926429261427701
- Lyman B, Berman L, Carr K, et al. Guidelines for replacement of a balloon gastrostomy tube in infants and pediatric patients: The American Society for Parenteral and Enteral Nutrition. *JPEN J Parenter Enteral Nutr*. 2026;50(4):462-485. doi:10.1002/jpen.70080
- Khan MO, Thobani H, Ahmad S, et al. Association of surgical antibiotic prophylaxis with postoperative outcomes following pediatric gastrostomy tube placement: A propensity score overlap weighted analysis. *J Pediatr Surg*. 2026;61(7):163152. doi:10.1016/j.jpedsurg.2026.163152