Office of Evidence Based Practice (EBP) – Critically Appraised Topic (CAT): Emergency Severity Index Score for Dislodged Gastrostomy Tube (GT)

Specific Care Question

Should all patients presenting to the Emergency Department (ED) with a dislodged gastrostomy tube (GT) have a higher Emergency Severity Index (ESI) acuity assigned to decrease the need for stoma dilatation to replace the gastrostomy?

Recommendations from the Evidence Based Practice Team

A recommendation cannot be made when a higher ESI acuity should be assigned as no literature was found to answer this question. However, based on a recommendation obtained from a Children's Mercy pediatric surgeon all patients, presenting to the ED, with a dislodged GT should be assigned a higher ESI acuity when possible. When there is a lack of scientific evidence, standard work should be developed, implemented, and monitored.

Literature Summary

Background. There is a paucity of literature related to concomitant complications of GT since the establishment of this surgical technique in the 1990s (Friedman, Ahmed, Connolly, Chait, & Mahant, 2004; Peters, Balduyck, & Nour, 2010). One complication, dislodgement of the GT in pediatric patients, has a reported occurrence range between 2% (Peters et al., 2010) and 37% (Friedman et al., 2004). At Children's Mercy, for FY 2019, 398 patients presented to the Emergency Department with a dislodged GT. The Children's Mercy Care Process Model entitled *Gastrostomy Tube Dislodged* (2018) does not prescribe the ESI acuity level that should be assigned when a patient presents with dislodged GT. Based on anecdotal perceptions there is a discrepancy in the escalation of care for patients with dislodged GT as not all patients, with dislodged GTs, are seen immediately. Dr. Jason Fraser, Pediatric Surgeon at Children's Mercy, recommended that all of these patients be escalated, when possible, as the GT tube track can close within a few hours (personal communication, October 30, 2019).

Study characteristics. The search for suitable studies was completed on Monday, October 14, 2019 (see Figure 1). J. Bartlett, PhD, RN reviewed the 112 titles and/or abstracts found in the search and identified no guidelines or single studies that answered the question. One reference (Shah & Shah, 2019) was found that indicated that if a tube was dislodged a temporary tube should be placed to prevent track closure however no citations substantiated this recommendation.

Summary by Outcome

Decreasing need for stoma dilatation. No studies were identified that measured this outcome.

Identification of Studies

Search Strategy and Results (see Figure 1)

Records identified through database searching *n* = 112

Additional records identified through other sources *n* = 0

CINAHL, Yield = 54

#	Query	Limiters/Expanders	Last Run Via	Results
S3	S1 AND S2	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL	54

S2	"stoma" OR "dislodged" OR "replacement" OR "dislodgement"	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL	73,978
S1	(MH "Gastrostomy Tubes") OR (MH "Gastrojejunostomy Tubes+")	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL	789

PubMed, Yield: 58
"dislodged gastrostomy tube" OR (("gastrostomy tube" OR Gastrostomy[mesh]) AND (displacement OR exchange OR revisit OR replacement OR readmission OR ((confirmation OR confirmatory) AND (imaging OR fluoroscopy)))) AND (child OR children OR paediatr* OR pediatr*) AND ("last 10 years"[PDat])

Methods Used for Appraisal and Synthesis

[a]The Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) flow diagram depicts the process in which literature is searched, screened, and eligibility criteria is applied (Moher, Liberati, Tetzlaff, & Altman, 2009).

[a]Moher D, Liberati A, Tetzlaff J, Altman DG, The PRISMA Group (2009). *P*referred *R*eporting *I*tems for *S*ystematic Reviews and *M*eta-*A*nalyses: The PRISMA Statement. PLoS Med 6(7): e1000097. doi:10.1371/journal.pmed1000097 **For more information, visit www.prisma-statement.org.**

Question Originator

J. Brown, BSN, CPEN, CPEN
A. Marks, MSN, RN, CPN

Medical Librarian Responsible for the Search Strategy

K. Swaggart, MLIS, AHIP

EBP Team Member Responsible for Reviewing, Synthesizing, and Developing this Document

J. A. Bartlett, PhD, RN

Acronyms Used in this Document

Acronym	Explanation
CAT	Critically Appraised Topic
ED	Emergency Department
ESI	Emergency Severity Index
EBP	Evidence Based Practice
GT	Gastrostomy Tube

Date Developed/Updated

11.18.2019

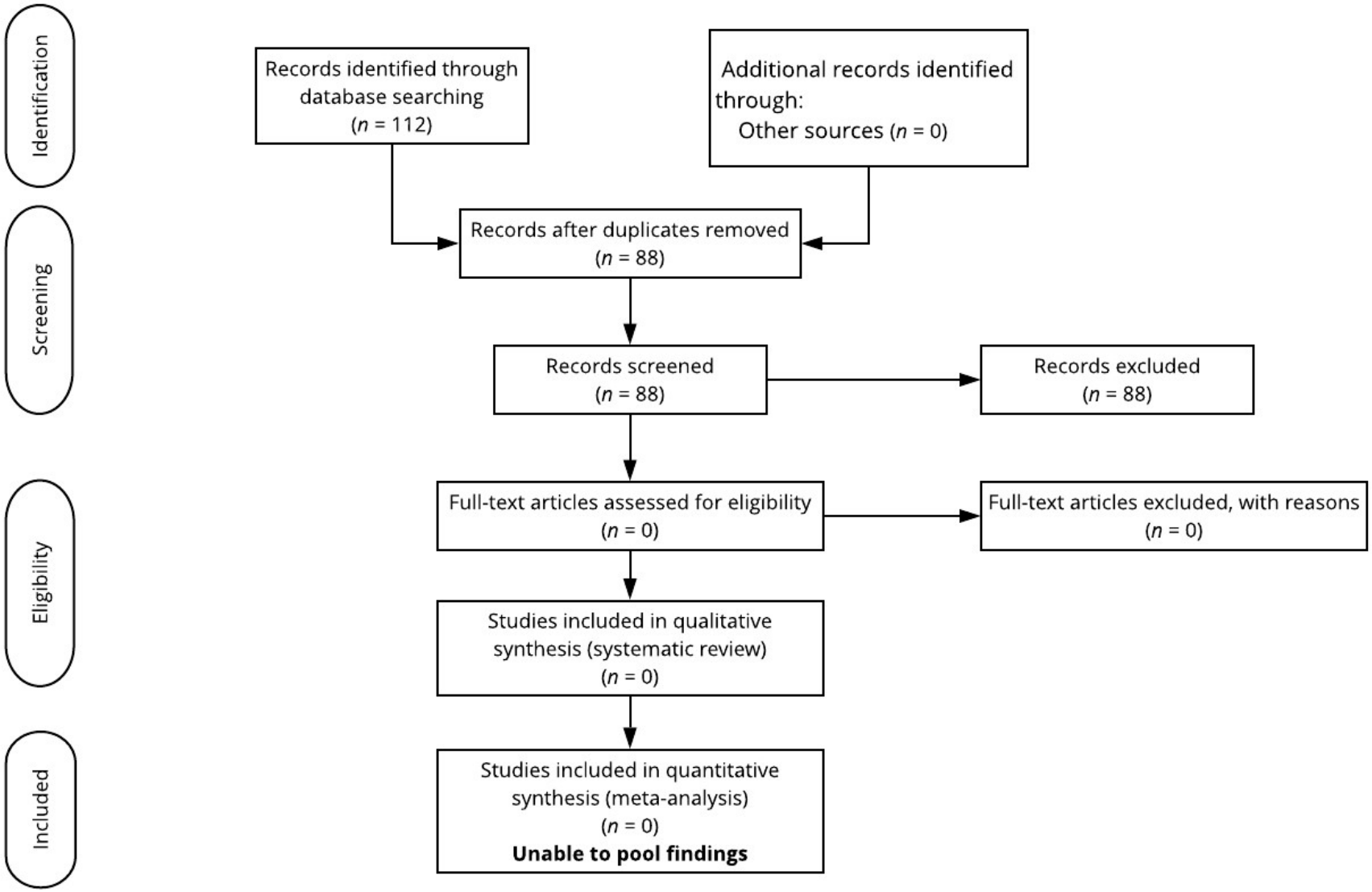

Figure 1. Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRIMSA)[a]

References

Children's Mercy Hospital (2018). *Gastrostomy Tube Dislodged Care Process Model.* Retrieved from https://www.childrensmercy.org/health-care-providers/evidence-based-practice/clinical-practice-guidelines/gastrostomy-tube-dislodged-algorithm/.

Friedman, J. N., Ahmed, S., Connolly, B., Chait, P., & Mahant, S. J. P. (2004). Complications associated with image-guided gastrostomy and gastrojejunostomy tubes in children. *Pediatrics, 114*(2), 458-461. DOI:10.1542/peds.114.2.458

Peters, R. T., Balduyck, B., & Nour, S. (2010). Gastrostomy complications in infants and children: A comparative study. *Pediatric Surgery International, 26*(7), 707-709.

Shah, R., & Shah, M. (2019). *Gastrostomy Tube Replacement*. Treasure Island, FL: StatPearls Publishing.