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11-2019

### ESI score for dislodged g-tubes: Summary

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## **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



**Children’s Mercy**

[jbartlett@cmh.edu](mailto:jbartlett@cmh.edu)

If you have questions regarding this Specific Care Question – please contact [jmichael@cmh.edu](mailto:jmichael@cmh.edu) or

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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 "Gastrojejunosomy Tubes+")	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL	789
<b>PubMed, Yield: 58</b>				
"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])				
<b>Methods Used for Appraisal and Synthesis</b>				
<sup>a</sup> 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).				
<sup>a</sup> Moher D, Liberati A, Tetzlaff J, Altman DG, The PRISMA Group (2009). Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. PLoS Med 6(7): e1000097. doi:10.1371/journal.pmed1000097 <b>For more information, visit <a href="http://www.prisma-statement.org">www.prisma-statement.org</a>.</b>				
<b>Question Originator</b>				
J. Brown, BSN, CPEN, CPEN A. Marks, MSN, RN, CPN				
<b>Medical Librarian Responsible for the Search Strategy</b>				
K. Swaggart, MLIS, AHIP				
<b>EBP Team Member Responsible for Reviewing, Synthesizing, and Developing this Document</b>				
J. A. Bartlett, PhD, RN				
<b>Acronyms Used in this Document</b>				
Acronym	Explanation			
CAT	Critically Appraised Topic			
ED	Emergency Department			
ESI	Emergency Severity Index			
EBP	Evidence Based Practice			
GT	Gastrostomy Tube			
<b>Date Developed/Updated</b>				
11.18.2019				

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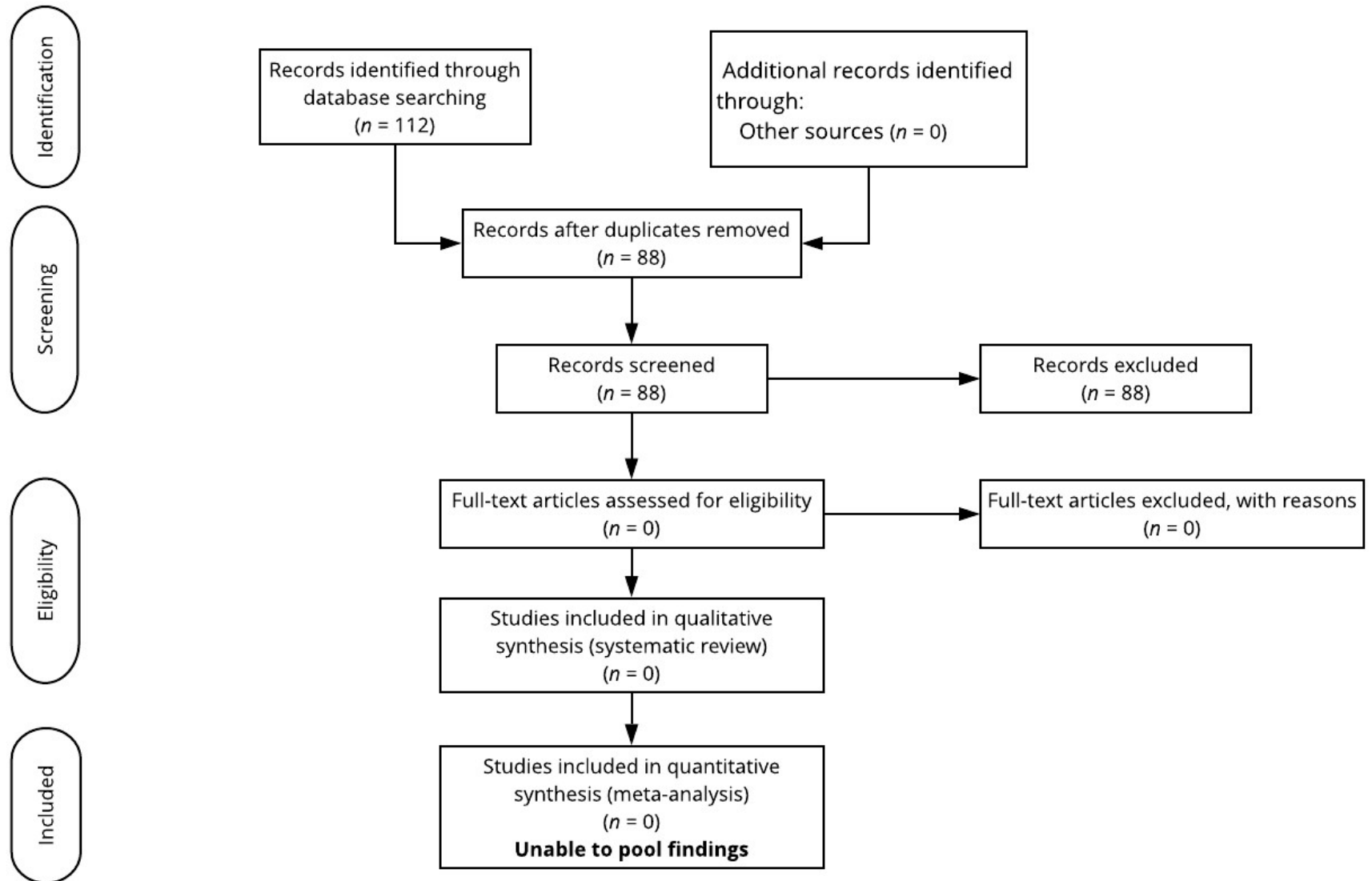


Figure 1. Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA)<sup>a</sup>

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### 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/>.
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- 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.