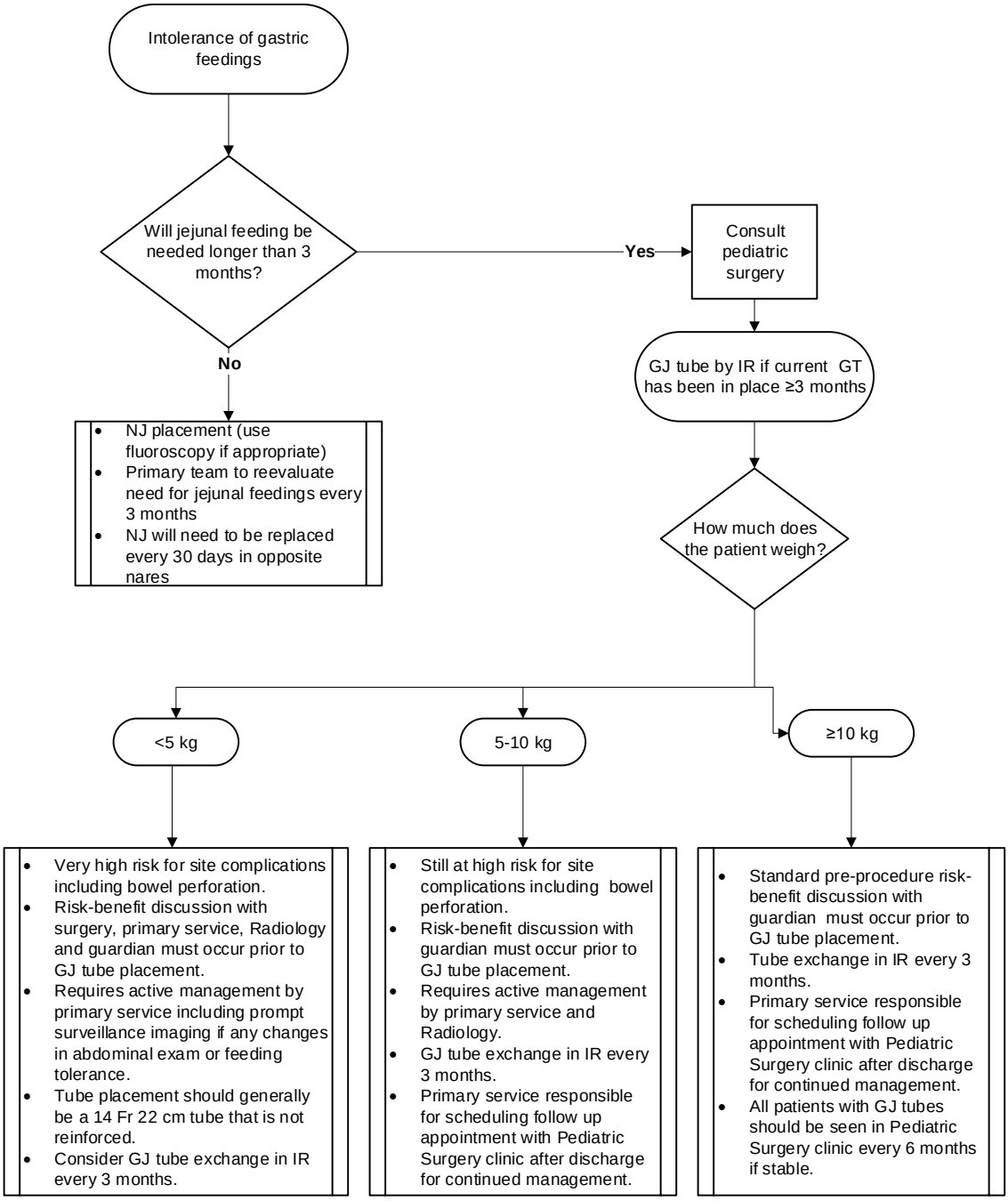
Clinical Pathways Program

Guideline: Pediatric Gastrojejunal (GJ) Tube, INPATIENT

Updated: November 18, 2021

Clinical algorithm:



Clinical guideline summary

CLINICAL GUIDELINE NAME: HDVCH Gastrojejunal (GJ) Tube

PATIENT POPULATION AND DIAGNOSIS: <18 years old, cannot tolerate gastric feedings, and will need jejunal feedings longer than 3 months

APPLICABLE TO: All Spectrum Health Sites

BRIEF DESCRIPTION: Decisions around the placement and maintenance of gastrojejunal (GJ) feeding tubes for infants and children requires collaboration between pediatric, surgical, and radiologic teams in conjunction with the family/caregiver. This clinical practice guideline outlines the multidisciplinary HDVCH practice guidelines related to gastrojejunal tube placement, feeding, and exchange.

OVERSIGHT TEAM LEADER(S): Emily Durkin; Brad Betz; Mitch DeJonge; Andrea Hadley; Robert Fitzgerald

OWNING EXPERT IMPROVEMENT TEAM (EIT): n/a

MANAGING CLINICAL PRACTICE COUNCIL (CPC): Children's Health CPC

CPC APPROVAL DATE: 1/28/2021

OTHER TEAM(S) IMPACTED (FOR EXAMPLE: CPCs, ANESTHESIA, NURSING, RADIOLOGY): Pediatric surgery; Pediatric Radiology; Neonatal; Hospitalist and Intensivist groups; Pediatric GI; Pediatric Neurodevelopmental

IMPLEMENTATION DATE: 1/15/2021

LAST REVISED: 11/18/21

FOR MORE INFORMATION, CONTACT: Emily Durkin

Clinical pathways clinical approach

TREATMENT AND MANAGEMENT:

Enteric Tube Placement/Exchange Scenarios:

Refer to Enteric Tube Placement/ Exchange Decision Flowchart.

The patient does not tolerate gastric feedings and will require a GJ-tube but does not have a G-tube

- Any patient who has an NJ tube will need a consultation with Pediatric Surgery to determine if the patient will require temporary NJ-tube feeds versus a surgically placed GJ-tube. If it is determined that the patient does not need long-term transpyloric feeds, the team managing the jejunal feedings is responsible for reassessment for continued jejunal feedings every 3 months. *Consider exchanging the tube in Fluoroscopy every 30 days, changing nares each time.* If jejunal feeding is indicated longer than 3 months, the Pediatric Surgery team should be consulted to evaluate the best long-term surgical feeding option for the patient and caregiver(s) (Nissen/ GT vs. primary GJ-tube)
- Referral to Pediatric Surgery can occur at any time to review surgical options for enteral feeding.

The patient does not tolerate gastric feedings and will require a GJ-tube and has a G-tube in place

- ***For GT in place less than 3 months, consultation with Pediatric Surgery is required before placing making any adjustments to the tube.***
    - Refer to Gastrostomy Care - Pediatrics and Neonatal Policy.
- Consultation with Pediatric Surgery can occur at any time when the need for other surgical options (i.e Nissen/GT vs. GJ tube) requires review.
- The GJ-tube should be changed every 3 months to maintain proper positioning, prevent tube clogging, and prevent development of excessive tube stiffness which may lead to perforation.
- The decision to place a GJ tube is based on multiple factors including ***patient weight.***

    - **Patients <5 kg**. Placement of a GJ tube is associated with high risk of site breakdown and bowel perforation. In these circumstances, a risk-benefit discussion by the primary team with the family/caregiver of the increased risk is required. Consultation with General Surgery is mandatory. Tube placement should be a 14 Fr 22 cm tube that is not reinforced. GJ Tube requires active management by the primary service including prompt surveillance imaging if any changes in abdominal exam or feeding tolerance occur.

    - **Patients 5-10 kg** Patients between 5-10 kg are still at risk for bowel perforation and site breakdown. Requires active management to return to gastric feeding. The primary team should have a risk-benefit discussion with the family/caregiver prior to conversion to a GJ tube in Radiology. If the tube has been in place < 3 months, consultation with Pediatric Surgery is required prior to conversion to GJ tube in Radiology. GJ tube requires active management by the primary service and Radiology with replacement scheduled every 3 months. Primary team responsible for scheduling follow up in General Surgery clinic after discharge for further management (replacement, sizing, conversion back to gastric feedings). Consideration should be made whether the need for transpyloric feedings is short- or long-term, including temporary NJ placement until acute illness has resolved.

    - **Patients >10 kg**. The existing G-tube can be exchanged to a GJ tube in Radiology if it has been > 3 months since surgical placement. Standard pre-procedure discussion with the family/caregiver should include the risk of tube breakage, need for replacement every 3 months, and feeding considerations for jejunal feeds (i.e. continuous feeds with pump). The primary team is responsible for facilitation of follow up after discharge in Pediatric Surgery Clinic. Pediatric Surgery will assume responsibility for scheduled tube replacement orders, sizing, site care, and plan to return patient to gastric feeds if

indicated. All patients with GJ tubes should be seen in Pediatric Surgery clinic every 6 months if otherwise stable.

GJ-tube Conversion Procedure for Inpatients:

- Primary care team
  - Identifies need for post-pyloric feedings and verifies the age of the existing gastrostomy, if applicable.
  - Has a discussion with family/care giver about jejunal feeding risks and specifics:
    - Risks associated: Perforation, tube malfunction, tube malposition.
    - Requirement for continuous drip feedings
    - The tube cannot be exchanged in the home and requires exchange in HDVCH Radiology every 3 months.
      - Refer to GJ Replacement Decision Flowchart
      - Refer to Decision making GJ Replacement Questionnaire
  - Enters order **"IR GI Convert G-tube to GJ Tube" (*Please note, these tubes are NOT placed in IR, but are actually placed in HDVCH Fluoroscopy).***
  - Consider conversion of all medications to liquid for jejunal administration if possible, including new prescriptions for home. Note that crushed meds administered in jejunal tubes are at high risk for clogging tube requiring urgent replacement.
    - Refer to Emergent Feeding Plan for Patients with Clogged, Malfunctioning, or Dislodged GJ-tubes Outside of Hours of Standard Operation of HDVCH Fluoroscopy
  - Identifies who will be managing feeds after discharge. Consider consultation with Gastroenterology or Neurodevelopmental Pediatrics to help establish routine outpatient care and an emergent feeding plan for jejunal feedings with input from Care Management.
  - Arrange follow up in Pediatric Surgery Clinic for tube care (Care Management team to assist). Call 616-458-1722 to arrange follow up appointment prior to discharge.
  - Verifies that GJ tube instructions are completed upon discharge (GJ tube teaching by Nursing and patient handouts/instructions)
    - These instructions should include the direct phone number to schedule the tube exchange (616-267-1638) to avoid unnecessary trips to the Emergency Department.
    - Refer to Patient/ Family GJ Tube Discharge Teaching Instructions
- Fluoroscopy team
  - Converts or changes G-tube to GJ-tube, if appropriate
    - Verifies age of gastrostomy tract
    - Places GJ-tube using guidelines above (tube size and type)
    - Inspects site and notifies Pediatric Surgery if there are concerns about skin breakdown/integrity.

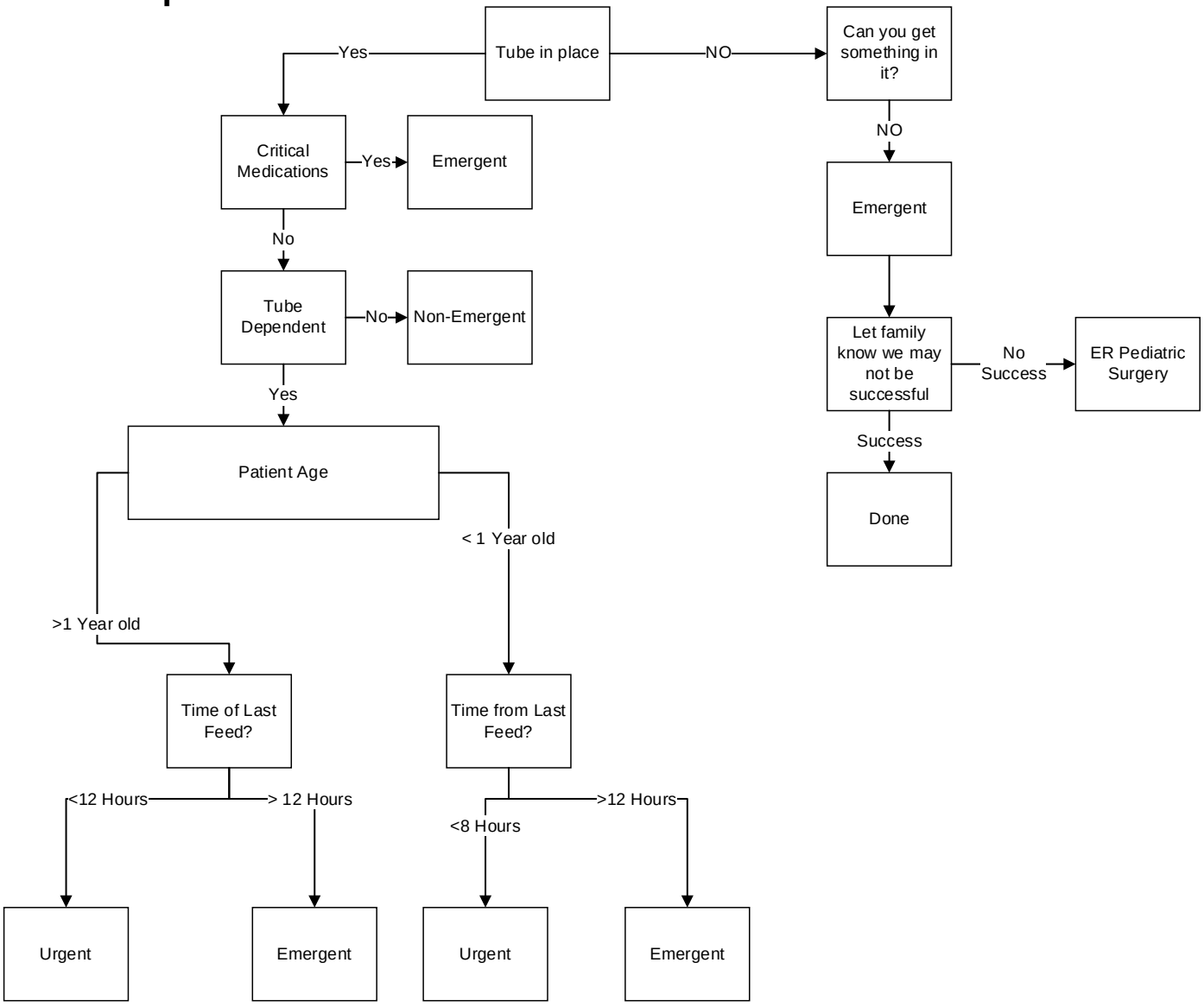
- Inpatient nursing
  - Completes education with family:
    - How to use and care for the tube
    - Troubleshooting
    - When to have tube exchanged (every 3 months if possible)

- Reviews the pump patient will be using at home

GJ-tube Conversion Procedure for Outpatients:

- The primary care team should make the determination that GJ-tube conversion is indicated based on the same guidelines developed for inpatients.
- GJ-tube placement is scheduled as outpatient procedure.
- The primary care team assumes responsibility for managing jejunal unless another specialty team is involved (i.e. Gastroenterology, Neurodevelopmental Pediatrics, or Pediatric Surgery).
- Primary team schedules follow up appointment with Pediatric Surgery for GJ tube maintenance.

GJ Replacement Decision Flowchart



Decision Making GJ Replacement Questionnaire

Critical medications

- Is your child taking any critical meds? (for seizure, cardiac, enzymes…)
- If so, can these meds be given/taken PO, via G-port, or rectally?

Feedings

- Is your child on continuous feeds via the J-port?
- How long has it been since their last feeding?
    - If your child is < 1 year, have they gone > 8 hours without any feeds/fluids?
    - If your child is > 1 year, have they gone > 12 hours without any feeds/fluids?
- Do they take any feedings via G-port or orally?

Balloon status

- Did the feeding tube come out? If so, how far?
- Is there leaking around the tube that is causing skin breakdown?

Clogged tube

- What have you tried to get it unclogged?
- What have you been putting through the J-port/tube? Meds… granulated, or otherwise? Feedings?

Broken port

- Is it the G- or J-port that is broken?
- Is the port actively leaking?
- Did you try to push the plastic connecter piece back in?

Geography/Obligations

- How far away do you live?
- Do you have any work/time off constraints?

Emergent Feeding Plan for Patients with Clogged, Malfunctioning, or Dislodged GJ-tubes Outside of Hours of Standard Operation of HDVCH Fluoroscopy (1700-0700 hours)

Disclaimer *– This Emergent Feeding Plan is a guideline. Each patient should have their own individualized care plan. Parents should be familiar with this plan.*

<u>Clinical Scenarios</u>

Refer to the decision flowchart (Appendix B) and decision-making questionnaire (Appendix C) for additional guidance

The patient can tolerate gastric feedings

- The patient may be given slow continuous gastric feedings until the tube can be replaced if the family has a replacement GT at home.
- The tube can be non-emergently replaced in HDVCH Fluoroscopy the next morning. The family should be instructed to call HDVCH Fluoroscopy (616-267-1638) that morning to schedule an appointment for tube exchange

- The Fluoroscopy APP or clinical service will direct caregivers:
    - Start gastric feeding with formula or Pedialyte/Enfalyte at maintenance fluid rate (continuous drip is preferred)
    - Discontinues feedings at 4 am and clear liquids at 8 am

The patient cannot tolerate gastric feedings but can go without fluids or medications overnight

- The tube can be non-emergently replaced in HDVCH Fluoroscopy the next morning. The family should be instructed to call HDVCH Fluoroscopy (616-267-1638) that morning to schedule an appointment for tube exchange

The patient cannot tolerate gastric feedings and cannot go without fluids or medications overnight

The GJ-tube will be replaced urgently/emergently after-hours in HDVCH Fluoroscopy depending on the clinical requirements for a functioning GJ-tube

Patient/ Family GJ Tube Discharge Teaching Instructions

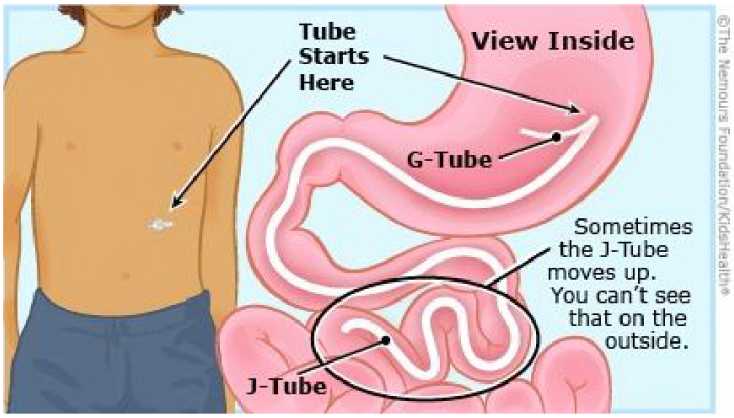
Attached Information

_Gastrojejunal (G-J) Tube Dislodgement, KidsHealth (English)

Spectrum Health Helen DeVos children's hospital

Gastrojejunal (G-J) Tube Dislodgement: How to Care for Your Child

Even with all of the right care, a gastrojejunal tube (G-J tube) sometimes gets dislodged (comes out of place).



Your Child's Diagnosis

A G-J tube goes through the skin of the belly, into the stomach, then into the jejunum, the second part of the small intestine. When a G-J tube comes out of place, it might be because either the G-tube portion is no longer correctly located in the stomach, or the J-tube portion is no longer in the jejunum. If the tube is out completely, it is important to replace it quickly so the hole in the skin does not begin to close. If the tube is out part of the way or has moved on the inside so that it is no longer in the jejunum, it must be adjusted so that feeds go to the correct place safely. Children can dislodge a G-J tube by pulling on it, rolling over during sleep, or getting it caught on something.

Your child's G-J tube has been replaced and has been checked by the health care provider. The G-J tube is now working normally and is safe to use.

Home Care Instructions

- Wash your hands before touching or caring for the G-J tube.
- Keep the area around the stoma (hole) clean and dry.
- Apply prescription creams or ointments as directed.
- You may want to put mittens on your child's hands before bed to keep your child from pulling on the tube while sleeping.
- Prepare your child's feeds and medicines as directed by your health care provider. Medicines should generally be given through the G-tube part. Check with your health care provider to make sure you know what to give through the G-tube and J-tube parts.

- If the health care provider prescribed antibiotics, make sure your child takes all of the medicine as directed.
- Do not rotate or turn the tube — this can cause the tube to twist or the stoma to get too big.

Call Your Health Care Provider if...

- The G-J tube comes out or the length of the tube has changed.
- The G-J tube is clogged and you cannot clear it with gentle flushing.
- Your child has a fever or signs of infection, such as redness, swelling, warmth, pus, or foul-smelling discharge.
- There is leakage of fluid on the skin around the stoma or a rash around the stoma.
- There is bleeding from the stoma.
- There is soft, moist, pink-red tissue (called granulation tissue) coming out from around the tube site.
- Your child develops diarrhea.
- Your child has coughing or choking with feeds.

Go to the ER if...

Your child:

- Develops abdominal pain or has a bloated or hard stomach.
- Has no bowel movements and can't pass gas.
- Is vomiting.
- Has trouble breathing.

KidsHealth
Educational Partner

References:

Morse J, Baird R, Muchantef K, Levesque D, Morinville V, Puligandla PS. Gastrojejunostomy tube complications - A single center experience and systematic review. J Pediatric Surg. 2017 May;52(5):726-733. doi: 10.1016/j.jpedsurg.2017.01.026. Epub 2017 Jan 29. PMID: 28162764.