

# Constipation & Fecal Impaction

## Inpatient

Patient ≥ 12 months old with **concerns for constipation & fecal impaction**

- History and Physical exam including perianal exam
- Consider **digital rectal exam (DRE)** (*medical chaperone required for patients > 10 years old*) or AXR as indicated

- Evaluate for **Red Flags** in history/exam

- Verify that patient meets **Diagnostic Criteria** and is appropriate for this pathway
- Determine need for **manual disimpaction** and GI consult

- On Admission: RN reviews plan of care with caregiver/patient and resolves any barriers/concerns by shared decision-making, including **need for Child Life consult or other resources prior to initiation of procedures**
- Place NG for osmotic laxative administration. NG placement on admission may decrease time to successful cleanout. Placement timing may be individualized based on patient tolerance and need for support & resources.
- Clear liquid diet and D5LR at maintenance rate
- Initiate **Disimpaction Phase** with osmotic laxative and enemas Q3H

### Inclusion Criteria

- Age ≥ 12 months
- Patient meets criteria for constipation or constipation with fecal impaction or fecal impaction suspected on prior abdominal x-ray

### Exclusion Criteria

- Presence of Red Flags
- Hirschsprung's Disease, Cystic Fibrosis, IBD, Neurogenic bowel, Spinal dysraphism, anorectal malformation
- GI motility disorder
- Neutropenia or Oncology patient
- Patient in ICU

### Differential Diagnoses

**Do NOT use Fleets phospho-soda-containing enemas or ORAL mineral oil**

Small, medium or large stool output within 48 hrs?

No

Consider **GI consult** to evaluate for **manual disimpaction**

Yes

- **Discontinue enemas**
- Advance osmotic laxative rate via NG per **Cleanout Phase**
- Add daily stimulant laxative (liquid sennosides (Senokot™) via NG)
- **Cleanout goal/endpoint:**
  - 2 sequential "clear stools" (tea colored watery output without flecks/flakes of stool)
- Consider AXR to confirm successful cleanout if recurrent impaction or persistent nearly clear stools
- Monitor for signs of cleanout intolerance

Signs of intolerance?

Yes

- Respiratory distress?
- Vital sign instability?
- Toxic appearance?

No

Yes

### Signs of Cleanout Intolerance

- Respiratory distress
- Vital sign instability
- Toxic appearance
- Nausea, vomiting
- Severe abdominal pain/distension

### For Nausea/Vomiting, Severe Abdominal Pain or Distention

- Pause osmotic laxative for 30 minutes and restart at ½ previous rate for 1 hour before resuming titration
- Add ondansetron IV
- Consider abdominal x-ray
- Consider transition of stimulant laxative from enteral to rectal route

### Discharge when meeting criteria:

- Patient meeting "Cleanout goal"
- **Discharge Planning** and parent/parent education have been completed
- Follow up with managing provider in 2-4 weeks

### Off Pathway

- Consider STAT CXR to assess NG placement
- **STOP NuLYTELY™** and other enteral meds

# Inclusion & Exclusion Criteria

## Inclusion Criteria

- Age  $\geq$  12 months
- Patient meets criteria for constipation with fecal impaction or fecal impaction suspected on prior abdominal x-ray

## Exclusion Criteria

- Presence of Red Flags
- Hirschsprung's Disease, Cystic Fibrosis, IBD, Neurogenic bowel, Spinal dysraphism, anorectal malformation
- GI motility disorder
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[Return to Algorithm](#)

# Diagnostic Criteria

## What is the difference between constipation and fecal impaction?

### Diagnostic Criteria for Fecal Impaction:

- 1 or more of the following:
  - A hard mass in the lower abdomen
  - A dilated rectum filled with a large amount of stool on digital rectal examination (DRE)
  - Excessive stool in the distal colon on abdominal radiography

### Diagnostic Criteria for Functional Constipation.

- Per Rome IV criteria, patients must have 2 or more of the following at least once per week for a minimum of 1 month with insufficient criteria for irritable bowel syndrome:
  - Two or fewer defecations in the toilet per week in a child of a developmental age of at least 4 years
  - At least 1 episode of fecal incontinence per week
  - History of retentive posturing or excessive volitional stool retention
  - History of painful or hard bowel movements
  - Presence of a large fecal ball in the rectum
  - History of large diameter stools that can obstruct the toilet
  - After an appropriate evaluation, the symptoms cannot be fully explained by another medical condition
- [Constipation Severity Assessment](#)
- Functional constipation can progress to fecal impaction, feeding intolerance, vomiting, abdominal pain and dehydration.
- **Consider Other Alternate Diagnoses when:**
  - Diagnostic criteria are not met or patient has symptoms or physical exam findings not typically seen with constipation/fecal impaction including, but not limited to, neurologic deficits, respiratory findings, growth failure
  - Patient has [Red Flags](#) in history/exam

### Hospital Admission Criteria

- Severe constipation or
- Failed ED discharge pathway or
- Manual disimpaction indicated or
- Failed robust home cleanout in last 2 weeks or
- Conditions for safe follow-up and home management are not met

[Return to Algorithm](#)

# Constipation Severity Assessment

	Mild	Moderate	Severe
<b>Signs</b>	<ul style="list-style-type: none"> <li>• Stool frequency 1-3 days</li> <li>• Stool in rectal vault</li> <li>• Hard stools</li> </ul>	<ul style="list-style-type: none"> <li>• Stool frequency 4-7 days</li> <li>• Stool in rectal vault</li> <li>• Hard stools</li> <li>• Left lower quadrant stool mass</li> <li>• Periodic soiling</li> <li>• Feeding intolerance</li> <li>• Loss of appetite</li> </ul>	<ul style="list-style-type: none"> <li>• Stool in rectal vault</li> <li>• Hard stools</li> <li>• Vomiting</li> <li>• Encopresis</li> <li>• Stool frequency <math>\geq 7</math> days</li> <li>• Distended or firm abdomen</li> </ul>
<b>Symptoms</b>	<ul style="list-style-type: none"> <li>• Abdominal discomfort</li> </ul>	<ul style="list-style-type: none"> <li>• Abdominal pain</li> </ul>	<ul style="list-style-type: none"> <li>• Abdominal pain</li> </ul>
<b>Testing Results</b>		<ul style="list-style-type: none"> <li>• Recent abdominal radiograph with impaction</li> </ul>	<ul style="list-style-type: none"> <li>• Recent abdominal radiograph with impaction</li> </ul>
<b>Response to Therapy</b>	<ul style="list-style-type: none"> <li>• Stool output with first or second enema</li> </ul>	<ul style="list-style-type: none"> <li>• Stool output with second or third enema</li> </ul>	

[Return to Diagnostic Criteria](#)

# Differential Diagnoses

## Differential diagnosis of Functional Constipation

- Gastrointestinal
  - Celiac Disease
  - Milk Protein Allergy
  - Hirschsprung's Disease
  - Colonic Inertia
  - Anal Achalasia
  - Anatomic Malformations (Imperforate Anus, Anal Stenosis)
  - Pseudoobstruction
- Endocrine
  - Hypothyroidism,
  - Multiple Endocrine Neoplasia 2B
  - Diabetes Mellitus
  - Hypercalcemia, Hypokalemia
  - Vitamin D Intoxication
- Pulmonology
  - Cystic Fibrosis
- Neurologic
  - Spinal Cord Anomalies or Trauma
  - Tethered Cord
- Musculoskeletal
  - Abnormal abdominal musculature (e.g. prune belly syndrome, gastroschisis, Down Syndrome)
- Oncologic
  - Pelvic mass
- Other
  - Drugs
    - Opiates, anticholinergics
    - Antidepressants
    - Chemotherapy
    - Heavy metal ingestion (lead)
  - Botulism

## Differential diagnosis of Fecal Impaction

- Constipation
- Inflammatory Bowel Disease
- Celiac Disease
- Overactive bladder/urinary incontinence
- Pelvic floor dysfunction/dyssynergia
- Intestinal Obstruction
- Appendicitis
- Gastroenteritis
- Ovarian Neoplasm
- Ruptured Ovarian Cyst
- Pelvic Mass
- Rectal bezoar or foreign body
- Colon neoplasm
- Pregnancy

[Return to Diagnostic Criteria](#)

# Red Flags

## History Red Flags

- Constipation in the first month of life
- Delayed passage of meconium (> 48 hours)
- Family history of Hirschsprung Disease or celiac disease
- Ribbon/thin stools
- Blood in stools in the absence of anal fissures
- Failure to thrive, poor feeding
- Fever
- Bilious vomiting

## Physical Exam Red Flags

- Abnormal thyroid gland
- Severe abdominal distension
- Abnormal perianal inspection
  - Perianal fistula or anal scar
  - Abnormal position of anus
  - Absent anal or cremasteric reflex
  - Gluteal cleft deviation
- Decreased lower extremity strength/tone/reflexes
- Tuft of hair on spine or sacral dimple
- Evidence of bowel obstruction
- Extreme fear during anal inspection

[Return to Algorithm](#)

# Diagnostic Exam & Testing

- **Digital rectal examination (DRE)**
  - Is recommended to diagnose fecal impaction.
  - Can be helpful to establish the diagnosis of functional constipation when one Rome criterion is met but diagnostic uncertainty remains.
- **Abdominal radiography (AXR)** is NOT recommended to diagnose functional constipation
  - AXR *may* be used to diagnosis fecal impaction in a patient whose physical exam is unreliable or not possible.
- **Laboratory testing** is NOT recommended in the routine evaluation of functional constipation or fecal impaction.

[Return to Algorithm](#)

# Disimpaction Phase

- Place NG for osmotic laxative administration
  - NG placement on admission may decrease time to successful cleanout and LOS
  - Placement may be individualized based on patient tolerance and need for support and resources
- Place IV and start maintenance D5LR
- Clear liquid diet

## Labs:

- Chem7 Q48H

## Laxatives:

- Osmotic laxative (NuLYTELY™)
  - Administration via NG at “start rate” preferred
- Enemas Q3H:
  - Mineral oil enema Q6H (Fleet™)  
*alternating with*
  - Normal saline enema Q6H

Disimpaction Phase Medications	< 20 kg	≥ 20 kg
Mineral oil enema	67mL	133mL
Normal saline enema	5mL/kg (max 1 L)	
NuLYTELY™ – start rate	10 mL/hr	20 mL/hr

[Return to Algorithm](#)

# Cleanout Phase

- **Discontinue enemas**
- Continue maintenance IVF and chem7 Q48H
- **Add** daily stimulant laxative (liquid sennosides (Senokot™) via NG)
- **Advance** rate of osmotic laxative (NuLYTELY™) via NG:
  - < 20 kg – advance by 5 mL/kg/hr Q2H to goal
  - ≥ 20 kg – advance by 100 mL/hr Q2H to goal
- Monitor for signs of intolerance

Cleanout Phase Medications	< 20 kg	≥ 20 kg
NuLYTELY™ – start rate	10 mL/hr	20 mL/hr
NuLYTELY™ – goal rate	20 mL/kg/hr	400 mL/hr
Liquid sennosides (Senokot™)	8.8 mg (5mL)	17.6 mg (10mL)

[Return to Algorithm](#)

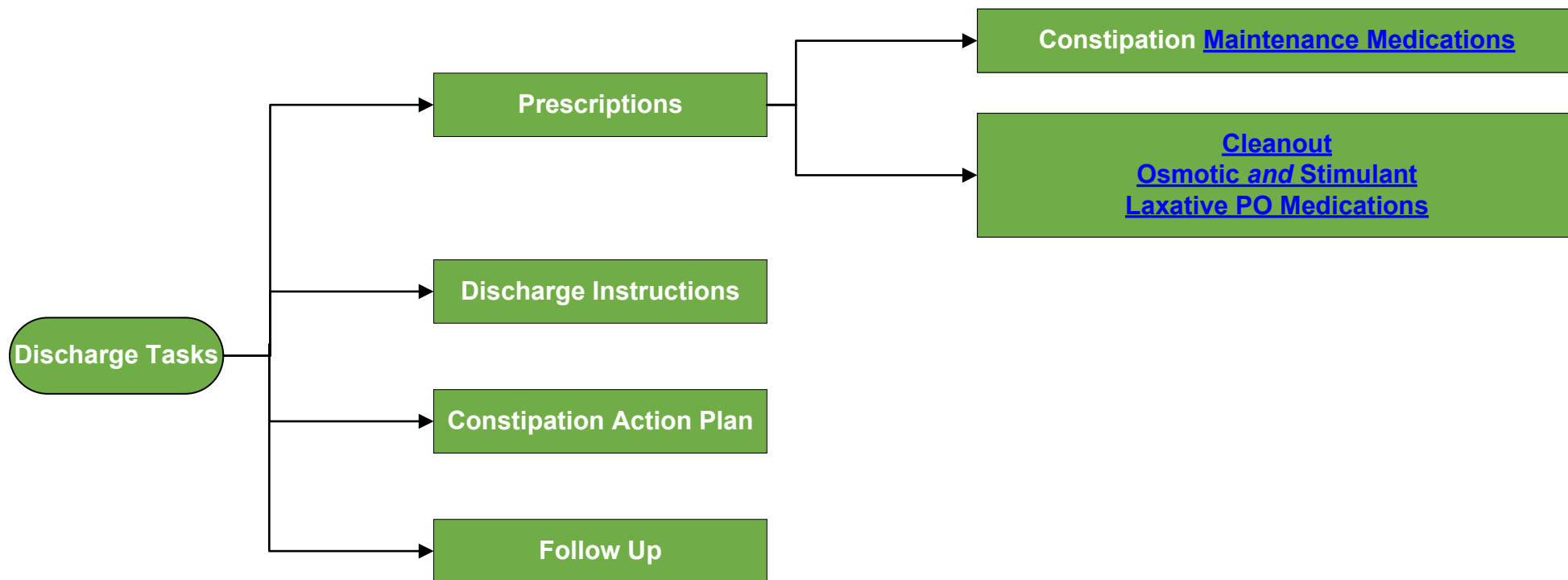
# Manual Disimpaction

## Criteria to discuss sedated manual disimpaction with GI consult

- Demonstration of hard stool in the rectal vault *plus one or more of the following*:
  - Inability or strong unwillingness for patient to receive enemas
  - Risk of rectal enemas outweighs risk of sedated procedure
  - Failure of output/progress in admitted patient after 2 days of adherence to this pathway

[Return to Algorithm](#)

# Discharge Planning



[Return to Algorithm](#)

# What to Tell Families

- The child should sit on the toilet two to three times daily, five to 10 minutes each time, for “protected time to have a bowel movement.”
- Ensure that smaller children have a footstool or other object so that they have a solid base to push off.
- Parents should use positive reinforcement, not punishment.
- Explain encopresis to the parent and child.
- Although the role of cow’s milk after age 1 is controversial, a trial of stopping milk for two to four weeks might be considered in children not responding to bowel therapy.
- Explain the importance of a balanced diet with five servings of fruits and vegetables per day and age-appropriate amounts of fluids.
- Set a follow-up appointment within several weeks to assess progress and provide encouragement and guidance. Encourage follow-up phone calls to remain on track.
- Do not stop medications without contacting your child’s provider.
- Caregivers and patient to watch [‘Constipation in Kids’](#) series on YouTube

[Return to Algorithm](#)

# Maintenance Therapy

## Daily Maintenance Therapy

### Tips:

- Daily maintenance therapy is a 3-pronged approach involving medications, behavioral modifications, and diet modifications.
- If not improving despite following clean-out and maintenance recommendations, consider referral to pediatric GI.
- If stopping stimulant laxatives that have been given consistently, the dose needs to be slowly weaned off to prevent re-impaction.

### Medications

- Adjust until the patient is having daily oatmeal consistency bowel movements!
- Osmotic Laxatives (aka “*smushers*”)
  - PEG 3350 (MiraLAX) 0.2-0.8g/kg/day mixed with clear liquid.
    - 1 capful (17g) should be mixed in 8 oz clear liquid.
    - Adjust dose to ensure one to two soft bowel movements per day.
  - OR
  - Lactulose (10g packets or 10g/15mL syrup) 1-2g (1.5-3mL)/kg/day divided into one to two doses. Up to 60mL per day for initial dose.
- Stimulant Laxatives (aka “*pushers*”) – add if daily osmotic laxative alone is not effective.

### Behavioral Modifications:

- Toilet sitting 5-10 minutes after meals
- Ensure that smaller children have a footstool or other object so that they have a solid base to push off
- Use positive reinforcement, not punishment

### Diet Modifications:

- Balanced diet: whole grains, and 5 servings of fruits and vegetables per day
- Fluids - Consider prune juice and age-appropriate water intake.
  - Ages 1 to 2: Three to four cups of water per day
  - Ages 2 to 4: Four cups of water per day
  - Ages 5 to 10: Six cups of water per day
  - Ages 10+: Eight cups of water per day
- Although the role of cow’s milk after age 1 is controversial, a trial of stopping milk for two to four weeks might be considered in children not responding to bowel therapy.

[Return to Algorithm](#)

# Home Disimpaction Protocols

## Tips for Disimpaction

- For school-aged children, start bowel clean-out on Friday after school.
- If unsatisfactory results, repeat up to three days. Parents should call their provider if still not clear.
- Make sure the child is on a clear liquid diet for the duration of the clean-out; otherwise, the clean-out will take too long.

## Disimpaction Protocols

Time of day	Age 1-2 (15 to 22 pounds)	Age 2-4 (22 to 44 pounds)	Age 5-10 (45 to 88 pounds)	Age 10+ (over 88 pounds)
Morning	Take 0.5 chocolate senna laxative square (7.5mg)	Take 1 chocolate senna laxative square (15mg)	Take 1.5 chocolate senna laxative squares (22.5mg)	Take 2 chocolate senna laxative squares (30mg)
Throughout the day	Mix 2.5 capfuls (42.5g) of PEG3350 powder in 16 ounces of fluid  Drink it all over 4-8 hours	Mix 4 capfuls (68g) of PEG3350 powder in 20 ounces of fluid  Drink it all over 4-8 hours	Mix 7 capfuls (119g) of PEG3350 powder in 32 ounces of fluid  Drink it all over 4-8 hours	Mix 14 capfuls (238g) of PEG3350 powder in 64 ounces of fluid  Drink it all over 4-8 hours
Evening	Take 0.5 more senna chocolate laxative square (7.5mg)	Take 1 more senna chocolate laxative square (15mg)	Take 1.5 more senna chocolate laxative squares (22.5mg)	Take 2 more senna chocolate laxative squares (30mg)

**Keep on clear liquids the day of the clean-out.**

**Note:** An enema may be needed to start if there is a large stool mass.

Bisacodyl is available over the counter but may be covered under insurance plans.

**< 20 kg/44 lb:** 5mg or 15mL Bisacodyl

**≥ 20 kg/44 lb:** 10mg or 30mL Bisacodyl

Maximum two enemas per clean-out. Can be given eight hours apart.

[Return to Algorithm](#)

# References

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[Return to Algorithm](#)

# Metrics

## Goal:

- To promote safe and efficient treatment for fecal impaction associated with functional constipation and prevention of recurrence.

## Quality Measures

### Process Measures

- Order set use
- NG placed within 4 hours of admission
- Initiation of low rate polyethylene glycol-electrolyte solution (NuLYLELY™) within 6 hours of admission

### Outcome Measure

- Inpatient LOS
- Total inpatient encounters

### Balancing Measures

- 30 day return to ED/UC rate
- 30 day readmission rate

[Return to Algorithm](#)

# Team & Process

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Next Revision Date: *February, 2031*

## Clinical Pathway Development

This clinical pathway was developed using the process described in the NCH Clinical Pathway Development Manual Version 6, 2022. Clinical Pathways at Nationwide Children's Hospital (NCH) are standards which provide general guidance to clinicians. Patient choice, clinician judgment, and other relevant factors in diagnosing and treating patients remain central to the selection of diagnostic tests and therapy. The ordering provider assumes all risks associated with care decisions. NCH assumes no responsibility for any adverse consequences, errors, or omissions that may arise from the use or reliance on these guidelines. NCH's clinical pathways are reviewed periodically for consistency with new evidence; however, new developments may not be represented, and NCH makes no guarantees, representations, or warranties with respect to the information provided in this clinical pathway.

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[Return to Algorithm](#)