University Hospitals
Rainbow Babies & Children's

Evidence Based Practice Guideline:

Date: July 2025

Pediatric Functional Constipation Initial Management & Treatment

Location: Outpatient, Emergency Department, and Inpatient

Rationale & Scope

Constipation is a common pediatric medical complaint with a mean prevalence of 14% of children worldwide. Constipation is a disorder in which the patient has infrequent bowel movements, hard or large caliber stools with straining, or painful defecation. Constipation can be a symptom associated with an underlying disorder, but in children, it is more commonly a primary medical condition, referred to as functional constipation.

In the majority of cases, FC can be managed in an outpatient setting and does not require extensive evaluation. However, it is a common chief complaint encountered in the emergency department (ED) and for inpatient admissions. Studies have demonstrated variability in the diagnostic work up and management of FC. One study from 2017 highlighted the variability in management of constipation in the ED, which included digital rectal exam (27%), bloodwork (22.8%), urinalysis (43%), abdominal radiographs (77.5%), abdominal ultrasounds (23.4%), and CT scans (3.5%). Other studies demonstrate varying percentages of use of abdominal radiographs for diagnostic purposes ranging from 6% to 33%. Functional constipation has a significant impact on our healthcare system as well as patient care and quality of life. An estimated $3.9 billion per year is spent on constipation-related healthcare costs. In addition, unnecessary imaging and laboratory workup may contribute to resource over-utilization and increased healthcare costs.

The purpose of the clinical pathway is to help guide diagnosis of functional constipation and establish a standardized management and treatment plan for patients with functional constipation in the ambulatory, ED, and inpatient service.

Pediatric Functional Constipation - Ambulatory Clinical Pathway v1.0
Pediatric Functional Constipation - Emergency Department Clinical Pathway v2.0
Pediatric Function Constipation - Inpatient Clinical Pathway v1.0

Summary of Key Management Statements

- Children with constipation can present with infrequent stools, straining, hard or pebble-like stooks, withholding and painful defecation. They can also have abdominal pain around the time of defecation. Bloody stools also occur in some children.
- The diagnosis of functional constipation is based on history and physical examination and use made using the Rome criteria
- All children are recommended to be evaluated for red flag signs and symptoms and diagnostic clues to identify an underlying disease responsible for constipation
- The routine use of abdominal radiographs or digital rectal exam (DRE) for diagnosis of functional constipation is discouraged, except when fecal impaction is suspected and the history & physical is unclear, and/or to exclude underlying medical conditions.
- Polyethylene glycol (PEG) is recommended as the first-line maintenance treatment for children ≥ 12 months
- Lactulose is recommended as the first-line maintenance treatment for children ≤12 months or if PEG is not available
- When to admit for clean-out
  - Consider admitting patients **≥ 12 months** of age with fecal impaction when the prescribed rectal treatment is ineffective or patient refused
  - Children ≥ 2 years old may be admitted to pediatric hospitalist service. Consult peds GI for children < 2 years old
- Patients should be referred to pediatric GI if any of the red flags and/or exclusion criteria are met OR when the prescribed treatment was ineffective at the 4-6 week outpatient follow-up OR admitted for an inpatient cleanout

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Inclusion and Exclusion Criteria

- This guideline and clinical pathway is intended for providers and caregivers managing and treating pediatric patients with a likely diagnosis of functional constipation
- Underlying medical conditions that are associated with constipation include:
  - Children with chronic illnesses that may be associated with constipation (thyroid disorders, cystic fibrosis)
- Patients with presence of 1 or more red flag findings from history or exam should be excluded from the clinical pathway, as it may indicate an underlying medical disorder.

INCLUSION CRITERIA

a. All patients < 18 years of age with signs and symptoms constipation for greater than 2 weeks and not fully explained by another medical condition or irritable bowel syndrome.

EXCLUSION CRITERIA

a. Children with history of abdominal surgery or pseudo-obstruction

b. Patients already followed by Pediatric GI for constipation, or admitted for a clean-out in the past year

Definitions

- **Constipation** is defined as infrequent bowel movements, hard or large caliber stools with straining, or painful defecation. The diagnosis of functional constipation uses the Rome IV Criteria
- **Rome IV Criteria**: Patient must have at least two criteria occurring at least once per week for a minimum of one month and symptoms cannot be explained by another medical condition or irritable bowel syndrome.
  - Two or fewer defecations per week
  - At least 1 episode of incontinence per week in toilet trained child
  - History of excessive stool retention or retentive posturing
  - History of painful or hard bowel movements
  - History of large-diameter stools
  - Presence of a large fecal mass in the rectum
- **Fecal Soiling or Incontinence:** repeated passing of stool (usually involuntarily) into clothing

Initial Diagnostic Evaluation and Treatment Recommendations

- Functional constipation can be diagnosed based on history and physical examination alone.
- **The Rome IV criteria** is the recommended definition for all age groups and can be used in the ED to increase index of suspicion for diagnosis of functional constipation.
- Current recommendations **discourage the routine use of abdominal radiographs or digital rectal exam** (DRE) for diagnosis of functional constipation, except when fecal impaction is suspected and the history or physical exam is unclear, and/or to exclude underlying medical conditions.

- **In toilet-trained children**, the following additional criteria may be used:
  - At least 1 episode/week of incontinence after the acquisition of toileting skills
  - History of large-diameter stools that may obstruct the toilet

- **If a DRE is indicated**, consider involving child life if available or the clinician can explain this to the child to obtain consent.
- **Differential Diagnosis includes**:
  - Bowel obstruction
  - Intestinal dysmotility/ileus
  - Intestinal pseudo-obstruction
  - Congenital (ie. Hirschsprung disease)
  - Acquired i. Post-infectious Assessment, Post-operative Drug or medication effect (ie. opioids, vitamin D intoxication, heavy metal ingestion)
- Conduct a detailed history and physical evaluating for Red Flags
  - **Red Flag History:**
    - History of abdominal surgery

- First passage of meconium after 48 hours of life
- Constipation starting < 1 month of life
- Persistent vomiting or bilious emesis
- Family history/personal history of Hirschsprung's disease
- History of anorectal anomalies or anal stenosis
- Failure to thrive or weight loss

- **Red Flag Exam Findings**:
  - Abnormal thyroid gland
  - Severe abdominal distention
  - Midline dimple, tuft or hair over midline back, abnormal location of anus
  - Lower limb weakness, motor delay
  - Signs of systemic illness such as fever or elevated inflammatory markers
  - Perianal fistula or abscess
  - Explosive stool or air on rectal exam upon withdrawal
  - Tight rectum gripping fingers

- History and exam findings suggestive of **fecal impaction**:
  - History of no passage of stool for several days
  - Large amount of stool felt in rectum on digital rectal exam or in the descending colon/rectum on imaging
  - Palpable abdominal stool mass on physical exam

Medications

Medication	**Indication**	**Age**	**Dose and Directions**
Glycerin suppository	Rectal treatment; disimpaction	< 1 year old	½ - 1 infant suppository once daily
Normal saline enema	Rectal treatment; disimpaction	1-2 years old	5-10 mL/kg (max 30 mL)
Fleet (Sodium Phosphate) enema	Rectal treatment; disimpaction	≥ 2 years old	2- 4 yr: ½ PEDS preparation (29.5 mL delivered dose) 5 -11 yr: 1 PEDS preparation (59 mL delivered dose) ≥ 12 yr: 1 Adult preparation (118 mL delivered dose)
Laxative Maintenance Treatment **If impacted, start maintenance regimen after disimpaction**			
Medication	Indication	Patient age	Dose and Directions
PEG 3350 (Miralax)	1st line maintenance treatment for functional constipation	≥ 12 months	Mix each capful in 4-8 ounces of beverage 10 - 20 kg: ½ cap (8.5 g) once daily > 20 kg: 1 cap (17 g) once daily
Lactulose	2nd line option maintenance treatment for functional constipation	< 12 months or family preference	1 - 2 g/kg/day divided once or twice daily (max 40g/day)

Medications & Formulations	**Time of Day**	**Age 2 - <3 years**	**Age 3- <6 years**	**Age 6 - <12 years**	**Age 12+ years**
PEG 3350 (Miralax) - 1 capful = 17 g	Throughout the Day	Mix 2.5 capfuls (42.5 g) of PEG3350 powder in 16 ounces of fluid Drink it all over 4-8 hours	Mix 4 capfuls (68 g) of PEG3350 powder in 20 ounces of fluid Drink it all over 4-8 hours	Mix 7 capfuls (119 g) of PEG3350 powder in 32 ounces of fluid Drink it all over 4-8 hours	Mix 14 capfuls (238 g) of PEG3350 powder in 64 ounces of fluid Drink it all over 4-8 hours

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Choose 1 of the following: Senna Available in: -8.8 mg/5 mL liquid by prescription -8.6 mg tablet by prescription or OTC -15 mg chocolate chewable tablet OTC Bisacodyl 5 mg tablet Prescription or OTC	Evening	Senna liquid: 4.4 mg (2.5mL)	Senna Chew: 1/2 chew (7.5mg) *OR* Senna liquid: 8.8 mg (5 mL)	Senna Chew: 1 chews (15mg) *OR* Senna liquid: 13.2 mg (7.5mL) *OR* Senna tab: 12.9 mg (1.5 tabs) *OR* Bisacodyl tab: 5 mg (1 tab)	Senna Chew: 1.5 chews (22.5 mg) *OR* Senna liquid: 17.6 mg (10mL) *OR* Senna tab: 17.2 mg (2 tabs) *OR* Bisacodyl tab: 10 mg (2 tabs)

Discharge Criteria and Discharge Education

- Discharge Education:
  - **Follow-up**:
    - Consider follow up with primary care provider after 8 weeks to assess treatment effectiveness and compliance
    - If seen by GI, follow-up per GI recommendations
  - Patients should be counseled that symptoms may take at least 3-4 months to resolve. Sensation of needing to pass stool may be altered so behavior modification is important. Maintenance therapy should continue for at least 3-6 months and wean slowly.
  - **Behavior modification**:
    - Educate parents that the child should sit on the toilet for 5-10 minutes 2x per day
    - Small children should use a step stool when sitting on the toilet
    - Reward system (ignore soiling, no punishment)
  - Encourage families to "**eat the rainbow**" and **avoid ultra processed foods**
  - Encourage families to watch **"The Poo in You"** educational video on gikids.org/constipation
  - Pediatric GI number for families as needed - Phone: **(216) 844-1765**

Major References

1. Tabbers MM, DiLorenzo C, Berger MY, et al. Evaluation and treatment of functional constipation in infants and children: evidence-based recommendations from ESPGHAN and NASPGHAN. Journal of Pediatric Gastroenterology and Nutrition 2014;58:258-274.
2. Hyams, J.S et al. "Functional Disorders: Children and Adolescents." Gastroenterology, S0016-5085(16)00181-5. 15 Feb. 2016
3. Nutter, A., et al. Constipation and paediatric emergency department utilization. Paediatric Child Health 2017;22(3):139-142.
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8. Reck-Burneo, C. A., et al. A structured bowl management program for patients with severe functional constipation can help decrease emergency department visits, hospital admission, and healthcare costs. Journal of Pediatric Surgery. 2018;53(9):1737-1741.
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10. Zeevenhooven, J., The new Rome IV criteria for functional gastrointestinal disorders of infants and toddlers. Pediatric Gastroenterology, Hepatology, and Nutrition 2017;20(1):1-13.
11. Kane, E, Mittal M, Wagenman, K et al. Constipation Clinical Pathway - Emergency Department. https://www.chop.edu/clinical-pathway/constipation-functional-emergent-care-clinical-pathway. Published December 16, 2014. Accessed September 25, 2020.

How was this Guideline Developed?

- This guideline was developed by a multi-disciplinary group of caregivers and subject matter experts experienced in the diagnosis, treatment and management of functional constipation in the outpatient, emergency, and inpatient settings.
- The local guideline team used the Grading of Recommendations Assessment, Development, and Evaluation (GRADE) framework to assign evidence levels and recommendation strengths when evidence was sufficient. Local consensus statements that are not graded should be interpreted as low-level evidence.
- The ESPGHAN and NASPGHAN functional constipation guidelines were appraised using the AGREE II by members of this guideline development team. ESPGHAN and NASPGHAN scored highly under the domains of scope and purpose, stakeholder development, rigor of development, and clarity of presentation. They did not score high in the domains of applicability in that limited information was provided on how the recommendations could be put into practice as well as resources or barriers for applying the guidelines. There was not an explicit statement regarding any presence or lack of competing interests of the committee members who developed the guidelines.
- The local guideline team completed a small focused literature search to supplement the ESPGHAN and NASPGHAN guidelines and referenced the Children's Hospital of Philadelphia constipation pathway as a guide

Acronyms and Abbreviations

DRE	Digital Rectum Exam
ESPGHAN	European Society for Paediatric Gastroenterology Hepatology and Nutrition
NASPGHAN	North American Society for Pediatric Gastroenterology, Hepatology and Nutrition
PEG	Polyethylene glycol

Initial Approval Novemnber 2022
Revised July 2025

Ambulatory Pediatric Management and Treatment of Children with Functional Constipation

Inclusion: pediatric patients > 6 months of age with signs and symptoms ≥1 month suggestive of constipation AND well appearing. See Box 1

Assess for **Red Flags** and **Exclusion Criteria** for functional constipation (see Box 2 and Box 3)

Red Flag present or meets exclusion criteria?

Yes
- Off pathway
- Consider ped GI consult or outpatient referral/workup as indicated

No

Impaction or fecal incontinence present? (See Box 4)

No
Prescribe maintenance therapy (Box 7), provide patient education (Box 8), and schedule follow-up within 4-6 weeks

Yes
Prescribe oral disimpaction regimen (Box 6), provide patient education (Box 8), and consider prescribing rectal treatment (Box 5)

Improvement in impaction/fecal incontinence symptoms?

Yes

No
Repeat oral disimpaction regimen, start/continue maintenance therapy, and refer to pediatric GI

Was treatment effective at time of follow-up?

Yes
Continue maintenance for at least 3-4 months

No

Does soiling persist at time of follow-up?

Yes

No

Were medication regimen & lifestyle recs followed?

No

Yes
Refer to pediatric GI and consider increasing dose of maintenance therapy

BOX 1: Definition and Diagnosis

Constipation defined as infrequent bowel movements, hard or large caliber stools with straining, or painful defecation

Functional constipation is a clinical diagnosis. Abdominal radiograph can be considered if clinical exam is not reliable

Diagnostic Criteria for Functional Constipation (Rome IV criteria). At least 2 criteria occurring at least once per week for at least 1 month

1. ≤ 2 defecations per week
2. At least 1 episode of any amount of stool or streaks in underwear in toilet trained child
3. History of excessive stool retention or retentive posturing
4. History of painful or hard bowel movements
5. History of large-diameter stools
6. Presence of large fecal mass in rectum

Box 2: EXCLUSION CRITERIA

- Children with history of abdominal surgery or pseudo-obstruction
- Patients already followed by Pediatric GI for constipation, or admitted for a clean-out in the past year

Box 3: RED FLAGS

History:
- History of abdominal surgery
- First passage of meconium after 48 HOL
- Constipation starting <1 month of life
- Persistent vomiting or bilious emesis
- Blood in stool in absence of anal fissure
- Family history/personal history of Hirschsprung's disease
- History of anorectal anomalies or anal stenosis
- Failure to thrive or weight loss

Exam Findings:
- Abnormal thyroid gland
- Severe abdominal distension
- Midline dimple, tuft of hair over midline back, abnormal location of anus
- Lower limb weakness, motor delay
- Signs of systemic illness such as fever or elevated inflammatory markers
- Perianal fistula or abscess
- Explosive stool or air on rectal exam upon withdrawal
- Tight rectum gripping finger

Box 4: H&P Suggestive of Fecal Impaction

- History of no passage of stool for several days; OR
- Palpable abdominal stool mass on physical exam; OR
- Large amount of stool in the descending colon/rectum on imaging or felt in rectum on digital rectal exam

Box 5: Medication Treatment for Functional Constipation

Medication	Indication	Age	Dose and Directions
Glycerin suppository	Rectal treatment; disimpaction	< 1 year old	½ - 1 infant suppository once daily
Normal saline enema	Rectal treatment; disimpaction	1-2 years old	5-10 mL/kg (max 30 mL)
Fleet (Sodium Phosphate) enema	Rectal treatment; disimpaction	≥ 2 years old	2- 4 yr: ½ PEDS preparation (29.5 mL delivered dose) 5 -11 yr: 1 PEDS preparation (59 mL delivered dose) ≥ 12 yr: 1 Adult preparation (118 mL delivered dose)

Box 6: Home Disimpaction Protocol

Medications & Formulations	Time of Day	Age 2 - <3 years	Age 3- <6 years	Age 6 - <12 years	Age 12+ years
PEG 3350 (Miralax) - 1 capful = 17 g	Throughout the Day	Mix 2.5 capfuls (42.5 g) of PEG3350 powder in 16 ounces of fluid Drink it all over 4-8 hours	Mix 4 capfuls (68 g) of PEG3350 powder in 20 ounces of fluid Drink it all over 4-8 hours	Mix 7 capfuls (119 g) of PEG3350 powder in 32 ounces of fluid Drink it all over 4-8 hours	Mix 14 capfuls (238 g) of PEG3350 powder in 64 ounces of fluid Drink it all over 4-8 hours
Senna Available in: -8.8 mg/5 mL liquid by prescription -8.6 mg tablet by prescription or OTC -15 mg chocolate chewable tablet OTC **Bisacodyl** 5 mg tablet Prescription or OTC	Evening (**Choose 1 option**)	Senna liquid: 4.4 mg (2.5mL)	Senna Chew: 1/2 chew (7.5mg) ***OR*** Senna liquid: 8.8 mg (5 mL)	Senna Chew: 1 chews (15mg) ***OR*** Senna liquid: 13.2 mg (7.5mL) ***OR*** Senna tab: 12.9 mg (1.5 tabs) ***OR*** Bisacodyl tab: 5 mg (1 tab)	Senna Chew: 1.5 chews (22.5 mg) ***OR*** Senna liquid: 17.6 mg (10mL) ***OR*** Senna tab: 17.2 mg (2 tabs) ***OR*** Bisacodyl tab: 10 mg (2 tabs)

Box 7: Laxative Maintenance Treatment
If impacted, start maintenance regimen after disimpaction

Medication	Indication	Patient age	Dose and Directions
PEG 3350 (Miralax)	1st line maintenance treatment for functional constipation	≥ 12 months	Mix each capful in 4-8 ounces of beverage 10 - 20 kg: ½ cap (8.5 g) once daily > 20 kg: 1 cap (17 g) once daily
Lactulose	2nd line option maintenance treatment for functional constipation	< 12 months or family preference	1 - 2 g/kg/day divided once or twice daily (max 40g/day)

Box 8: Patient Education

- Behavior modification
  - Educate parents that the child should sit on the toilet for 5-10 mins 2 times a day and try to pass stool
  - All children should use a step stool under feet when sitting on the toilet
  - Reward system for sitting attempts and passing stool in the toilet (no punishment)
- Patients should be counseled that symptoms may take 3-6months to resolve. Sensation of needing to pass stool may be altered so behavior modification is important. Maintenance therapy should continue for at least 3-4 months and wean slowly
- Follow-up:
  - Consider follow up with primary care provider after 8 weeks to assess treatment effectiveness and compliance
  - If seen by GI, follow-up per GI recommendations
- **Encourage families to "eat the rainbow" and avoid ultra processed foods**

- Encourage families to watch **"The Poo in You"** educational video and constipation handouts on gikids.org/constipation
- To contact GI for appointments or further guidance call **(216) 844-1765**

Emergency Department Pediatric Management and Treatment of Children with Functional Constipation

Inclusion: pediatric patients >6 months of age with signs and symptoms >2 weeks suggestive of constipation AND Well Appearing: See Box 1

Assess for **Red Flags** and **Exclusion Criteria** for functional constipation (see Box 2 and Box 3)

≥ 1 Red Flag present or has ≥1 exclusion criteria?

Yes

- Off pathway
- Consider ped GI consult or outpatient referral/workup as indicated

No

Functional Constipation likely?

No

- Off pathway
- Consider ped GI consult or outpatient referral/workup as indicated

Yes

Child **< 12 months** of age

Child **≥ 12 months** of age

Does H&P suggest fecal impaction (Box 4)

No

No fecal impaction

Yes

Fecal impaction likely, order and administer Rectal treatment (Box 5)

Rectal treatment ineffective or patient refused?

No

Prescribe maintenance regimen (Box 7) and discharge with patient education (Box 8)

Yes

- Discharge with oral disimpaction regimen (Box 6), maintenance medication (Box 7) and home education (Box 8)
  OR
- Consider admission nasogastric (NG) disimpaction. Children ≥ 2 years old may be admitted to PCRS. Consult peds GI for children < 2 years old

BOX 1: Definition and Diagnosis

Constipation defined as infrequent bowel movements, hard or large caliber stools with straining, or painful defecation

Functional constipation is a clinical diagnosis. Abdominal radiograph can be considered if clinical exam is not reliable

Diagnostic Criteria for Functional Constipation (Rome IV criteria). At least 2 criteria occurring at least once per week for at least 1 month

1. ≤ 2 defecations per week
2. At least 1 episode of any amount of stool or streaks in underwear in toilet trained child
3. History of excessive stool retention or retentive posturing
4. History of painful or hard bowel movements
5. History of large-diameter stools
6. Presence of large fecal mass in rectum

Box 2: EXCLUSION CRITERIA

- Children with history of abdominal surgery or pseudo-obstruction
- Patients already followed by Pediatric GI for constipation, or admitted for a clean-out in the past year

Box 3: RED FLAGS

History:

- History of abdominal surgery
- First passage of meconium after 48 HOL
- Constipation starting <1 months of life
- Persistent vomiting or bilious emesis
- Blood in stool in absence of anal fissure
- Family history/personal history of Hirschsprung's disease
- History of anorectal anomalies or anal stenosis
- Failure to thrive or weight loss

Exam Findings:

- Abnormal thyroid gland
- Severe abdominal distension
- Midline dimple, tuft of hair over midline back, abnormal location of anus
- Lower limb weakness, motor delay
- Signs of systemic illness such as fever or elevated inflammatory markers
- Perianal fistula or abscess
- Explosive stool or air on rectal exam upon withdrawal
- Tight rectum gripping finger

Box 4: H&P Suggestive of Fecal Impaction

- History of no passage of stool for several days;
  OR
- Palpable abdominal stool mass on physical exam;
  OR
- Large amount of stool in the descending colon/rectum on imaging or felt in rectum on digital rectal exam

Box 5: Rectal Treatments for Functional Constipation

Medication	Indication	Age	Dose and Directions
Glycerin suppository	Rectal treatment; disimpaction	< 1 year old	½ - 1 infant suppository once daily
Normal saline enema	Rectal treatment; disimpaction	1-2 years old	5-10 mL/kg (max 30 mL)
Fleet (Sodium Phosphate) enema	Rectal treatment; disimpaction	≥ 2 years old	2- 4 yr: ½ PEDS preparation (29.5 mL delivered dose) 5 -11 yr: 1 PEDS preparation (59 mL delivered dose) ≥ 12 yr: 1 Adult preparation (118 mL delivered dose)

Box 6: Home Disimpaction Protocol

Medications & Formulations	Time of Day	Age 2 - <3 years	Age 3- <6 years	Age 6 - <12 years	Age 12+ years
PEG 3350 (Miralax) - 1 capful = 17 g	Throughout the Day	Mix 2.5 capfuls (42.5 g) of PEG3350 powder in 16 ounces of fluid Drink it all over 4-8 hours	Mix 4 capfuls (68 g) of PEG3350 powder in 20 ounces of fluid Drink it all over 4-8 hours	Mix 7 capfuls (119 g) of PEG3350 powder in 32 ounces of fluid Drink it all over 4-8 hours	Mix 14 capfuls (238 g) of PEG3350 powder in 64 ounces of fluid Drink it all over 4-8 hours
Senna Available in: -8.8 mg/5 mL liquid by prescription -8.6 mg tablet by prescription or OTC -15 mg chocolate chewable tablet OTC **Bisacodyl** 5 mg tablet Prescription or OTC	Evening (**Choose 1 option**)	Senna liquid: 4.4 mg (2.5mL)	Senna Chew: 1/2 chew (7.5mg) ***OR*** Senna liquid: 8.8 mg (5 mL)	Senna Chew: 1 chews (15mg) ***OR*** Senna liquid: 13.2 mg (7.5mL) ***OR*** Senna tab: 12.9 mg (1.5 tabs) ***OR*** Bisacodyl tab: 5 mg (1 tab)	Senna Chew: 1.5 chews (22.5 mg) ***OR*** Senna liquid: 17.6 mg (10mL) ***OR*** Senna tab: 17.2 mg (2 tabs) ***OR*** Bisacodyl tab: 10 mg (2 tabs)

Box 7: Laxative Maintenance Treatment
If disimpacted, start maintenance regimen after disimpaction

PEG 3350 (Miralax)	1st line maintenance treatment for functional constipation	≥ 12 months	Mix each capful in 4-8 ounces of beverage 10 - 20 kg: ½ cap (8.5 g) once daily > 20 kg: 1 cap (17 g) once daily
Lactulose	2nd line option maintenance treatment for functional constipation	< 12 months or family preference	1 - 2 g/kg/day divided once or twice daily (max 40g/day)

Box 8: Patient Education & Discharge Information

- Follow up with pediatrician in **2-4 weeks** (refer to outpatient care path)
- Follow up with pediatric GI as scheduled
- Patients should be counseled that symptoms may take at least 3-6 months to resolve
- Behavior modification
  - Educate parents that the child should sit on the toilet for 5-10 mins 2 times a day
  - Small children should use a step stool when sitting on the toilet
  - Reward system (ignore soiling, no punishment)
- Encourage families to "**eat the rainbow**" and avoid ultra processed foods
- Encourage families to watch **"The Poo in You"** educational video on gikids.org/constipation
- Pediatric GI number for families as needed OR for questions about home disimpaction – Phone: **(216) 844-1765**

Pediatric Management and Treatment of Children with Functional Constipation

Inclusion: pediatric patients ≥ 24 months of age with signs and symptoms >2 weeks suggestive of constipation AND well appearing; See Box 1

Assess for **Red Flags** and **Exclusion Criteria** for functional constipation (see Box 2 and Box 3)

≥ 1 Red Flag present or has ≥ 1 exclusion criteria

Yes

- Off pathway
- Consider other differentials and/or ped GI non-urgent consult (between 8am-3pm)

No

Functional Constipation Likely?

No

- Off pathway
- Consider other differentials and/or ped GI non-urgent consult (between 8am-3pm)

Yes

Begin Nasogastric (NG) Cleanout and Monitoring Protocol (Box 8)

NG Gastrointestinal Clean Out and Monitoring Protocol:

- Start a potassium containing IV fluid (Ex: D5NS + 20 KCL)
- Consider obtaining baseline RFP and Mag and repeat every 24-48 hours
- Place NG
- Order abdominal x-ray (KUB) to verify NG placement

KUB reveals large rectal burden?

Yes

Consider adding rectal disimpaction to NG cleanout (Box 5)

No

Daily:

- Assess for GI symptoms and tolerance of NG clean-out. If vomiting, abdominal distension, or severe abdominal pain present or unable to tolerate, stop Golytely and get KUB. Consult (place non-urgent consult) pediatric GI (between 8a-3p).
- Monitor for bowel movement

Bowel movement at 24 hours?

Yes

- Add daily stimulant (Bisacodyl or Senna, see Box 6)
- Continue cleanout at same max tolerated rate
- Monitor electrolytes

No

- Consult pediatric GI (non-urgent – between 8a-3p)
- Get KUB
- OK to continue cleanout in the absence of GI symptoms

- Assess for discharge readiness. Indicators include: clear stool output, improved pain, and tolerating PO
- Contact inpatient GI nurse (send staff message) to schedule a follow-up with pediatric GI
- Prescribe maintenance home regimen (Box 7)
- Provide patient education & discharge information (Box 9)

BOX 1: Definition and Diagnosis

Constipation defined as infrequent bowel movements, hard or large caliber stools with straining, or painful defecation

Functional constipation is a clinical diagnosis. Abdominal radiograph can be considered if clinical exam is not reliable

Diagnostic Criteria for Functional Constipation (Rome IV criteria). At least 2 criteria occurring at least once per week for at least 1 month

1. ≤ 2 defecations per week
2. At least 1 episode of any amount of stool or streaks in underwear in toilet trained child
3. History of excessive stool retention or retentive posturing
4. History of painful or hard bowel movements
5. History of large-diameter stools
6. Presence of large fecal mass in rectum

Box 2: EXCLUSION CRITERIA:

- Children with history of abdominal surgery or pseudo-obstruction
- Patients already followed by Pediatric GI for constipation, or who were admitted for a clean-out in the past year

Box 3: RED FLAGS

History:

- History of abdominal surgery
- First passage of meconium after 48 HOL
- Constipation starting <1 month of life
- Persistent vomiting or bilious emesis
- Blood in stool in absence of anal fissure
- Family history/personal history of Hirschsprung's disease
- History of anorectal anomalies or anal stenosis
- Failure to thrive or weight loss

Exam Findings:

- Abnormal thyroid gland
- Severe abdominal distension
- Midline dimple, tuft of hair over midline back, abnormal location of anus
- Lower limb weakness, motor delay
- Signs of systemic illness such as fever or elevated inflammatory markers
- Perianal fistula or abscess
- Explosive stool or air on rectal exam upon withdrawal
- Tight rectum gripping finger

Box 5: Rectal Medication Treatment for Functional Constipation

Medication	Indication	Age	Dose and Directions
Normal saline enema	Rectal treatment; disimpaction	≥ 2 years old	5-10 mL/kg Max Dose 2- 4 yr: 30 mL 5 -11 yr: 60 mL ≥ 12 yr: 120mL
Fleet (Sodium Phosphate) enema	Rectal treatment; disimpaction	≥ 2 years old	2- 4 yr: ½ PEDS preparation (29.5 mL delivered dose) 5 -11 yr: 1 PEDS preparation (59 mL delivered dose) ≥ 12 yr: 1 Adult preparation (118 mL delivered dose)
Mineral Oil Enema	Rectal treatment; disimpaction	> 2 years old	2 - <12 yr: ½ preparation (59 mL delivered dose) ≥12 yr: 1 preparation (118 mL delivered dose

Box 6: Daily Stimulant Medications for Functional Constipation

Medication	Indication	Age	Dose and Directions
Bisacodyl	Oral stimulant laxative; disimpaction	≥ 3 years old; must be able to swallow tablet whole	3 - 9 yr: 5 mg/day ≥ 10 yr: 5 - 10 mg/day
Senna	Oral stimulant laxative; disimpaction	≥ 2 years old	2 - 5 yr: 2.2 - 6.6 mg/day 6 - 11 yr: 8.8 - 13.2 mg/day ≥ 12 yr: 17.6 - 26.4 mg/day

Box 7: Laxative Maintenance Treatment If disimpacted, start maintenance regimen after disimpaction			
PEG 3350 (Miralax)	1st line maintenance treatment for functional constipation	≥ 12 months	Mix each capful in 4-8 ounces of beverage 10 - 20 kg: ½ cap (8.5 g) once daily > 20 kg: 1 cap (17 g) once daily

Box 8: Laxative Clean-Out Regimen (NG or PO)			
PEG (Golytely)	Inpatient – NG cleanout May be given orally after NG failure (i.e. not able to tolerate)	≥ 2 years old	2 - 4 yrs old: Start at 50ml/hr, increase as tolerated by 50ml/hr every 3 hours to max tolerated rate or 200 ml/hr. Continue until stool burden is clear. ≥ 5 yrs old: Start at 100ml/hr, increase as tolerated by 100ml/hr every 3 hours to max tolerated rate or 400cc/hr. Continue until stool burden is clear.

Box 9: Patient Education & Discharge Information

- Follow up with pediatrician in **2-4 weeks** (refer to outpatient care path)
- Follow up with pediatric GI as scheduled
- Patients should be counseled that symptoms may take at least 3-6 months to resolve
- Behavior modification
  - Educate parents that the child should sit on the toilet for 5-10 mins 2 times a day
  - Small children should use a step stool when sitting on the toilet
  - Reward system (ignore soiling, no punishment)
- Encourage families to "eat the rainbow" and avoid ultra processed foods
- Encourage families to watch **"The Poo in You"** educational video on gikids.org/constipation
- Pediatric GI number for families as needed OR for questions about home disimpaction – Phone: **(216) 844-1765**