Emergency Department Constipation Care Guideline

Inclusion Criteria:
Previously healthy children with symptoms suggestive of constipation including:
- Infrequent and/or painful defection
- Fecal incontinence
- Abdominal Pain

Exclusion Criteria:
Children who have other underlying medical conditions including, but not limited to:
- Septic appearing
- Cystic fibrosis
- Hirschsprung's disease (*refer to the **Hirschsprung's Disease Care Guideline***)
- Short bowel syndrome
- Spinal bifida
- Known dysmotility disorder
- Congenital heart disease
- History of spinal or abdominal tumors
- History of abdominal surgery
- Currently undergoing chemotherapy or radiation
- Meets criteria for irritable bowel syndrome (IBS)
- Recent opioid narcotic, tricyclic anti-depressant or anticholinergic agent use

Red Flags:
- First passage of meconium after 48 hours of life
- Symptom onset < 1 month
- Persistent abdominal distention or vomiting
- Bloody diarrhea
- Bilious emesis
- Family history of Hirschsprung's disease
- Failure to thrive
- Tight rectum gripping finger; explosive stool and air from rectum upon withdrawal of examiner's finger
- Midline dimple, tuft of hair over lower back, gluteal cleft deviation
- Lower limb weakness, motor delay
- Absent anal or cremasteric reflex
- Signs of systemic illness: fever, rash, joint pain, mouth ulcers
- Weight loss
- Anal Scars
- ***Toxic megacolon is rare but serious possibility with severe cases of constipation***

Assessment
- History and Physical
- A rectal exam could be considered, if warranted.
- Assess ***red flags*** and risk of underlying disease
- Review diagnostic criteria for constipation. If ≥ 1 ***red flag*** present, then concern for underlying disease, such as surgical, neurologic, Hirschsprung's or other medical disease.

No Red Flags, Low Concern for Underlying Disease (Functional constipation likely)

No Fecal Impaction

Discharge
- Provide Patient/Family education
- Prescribe discharge medication

Fecal Impaction Present

Follow Guidance for Disimpaction

Guidance for Disimpaction

Age	Medication	Dose	Comments
< 1 year	Glycerin	1 suppository if no stool in previous 24 hours	
≥ 1 year to < 2 years	Sodium chloride (0.9%) enema	10 mL/kg, max 120 mL	
≥ 2 years	Sodium chloride (0.9%) enema	10 mL/kg, max 500 mL	• Consider mineral oil enema before sodium phosphate enema to soften stool • *Do not* repeat sodium phosphate enema without bowel movement in between doses due to increased risk of toxicity and death • *Do not* use sodium phosphate enema if severe renal imparement
	Sodium phosphate (Fleet)	• **2 - 12 years:** Pediatric preparation - 66mL • **≥ 12 years:** Adult preparation - 133 mL	
	Mineral oil enema	• **2 - 12 years:** 60 mL • **12 years:** 133 mL	

Treatment failure of any of the following:
- Inadequate stooling despite ≥ 2 enema
- ≥ 1 enema and failed in-home clean out attempt

Radiology Imaging
- Consider plain radiograph or cross-sectional imaging with treatment failure or symptom exacerbation

Admit
(consider additional testing)

Recommendations/Considerations:
- Normal fluid intake, regular toileting, use of diaries to track stooling, reward systems for successful evacuation, and high-fiber diet (increased fruits and vegetables) are key to managing constipation.
- Mineral oil enema before Fleet to soften stool.
- Do not repeat Fleet (sodium phosphate) enema without bowel movements in between doses. There is an increased risk of toxicity and death in patients who receive more than 1 dose without a bowel movement in between doses.
- Consider surgical etiologies (abdominal mass, obstruction, acute abdomen): NPO IV access, labs, 2 view abdominal x-ray, and surgery consult.
- Suspect functional constipation does not require a KUB. Image only if concerned for surgical etiology.
- Consider surgical etiologies and the rare possibility of toxic megacolon. If toxic megacolon is suspected either clinically or radiographically, consider cross sectional imaging and a surgical consult.

Diagnostic Criteria for Constipation
2 or more of the following present for at least 1 month
- ≤ 2 spontaneous defecations/week
- 1+ episode of incontinence/week
- History of stool retention or retentive posturing
- History of painful or hard stool
- Presence of large fecal mass in rectum (fecal impaction)
- History of large diameter stool that may obstruct the toilet

Diagnostic Criteria for Fecal Impaction
At least one of the following
- No stool for past several days
- Presence of large supra-pubic fecal mass on abdominal exam
- Hard stool in rectum on digital rectal exam
- History of fecal encopresis

Patient Education
- Constipation: Kids Health Handout, Parent version
- How to administer enema/suppository, CHOC outpatient clean out instructions

Approved Evidence Based Medicine Committee
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Discharge

Discharge Medications

First-line Medications – Miralax, Lactulose, Milk of Magnesia
Second-line Medications – Senna, Bisacodyl

- Discharge all patients on a first-line medication, such as Miralax (polyethylene glycol 3350/PEG 3350).
  - Lactulose may be used if preferred by the caregiver or if the patient did not respond well to Miralax..

The pharmacologic approach comprises 2 steps: Rectal or oral disimpaction, for those who present with impaction, followed by maintenance therapy to prevent re-accumulation of feces.

Home Clean-out Steps

Step 1: Disimpaction

- **Patients < 12 mo. or < 10 kg**
  - Start with rectal disimpaction prior to giving oral medications.
  - Lactulose: If persistent symptoms, consider 1 – 2 g/kg/day, 1 - 2x daily.
- **Patients > 12 mo. or > 10 kg**
  - Miralax: follow Bowel Clean Out Program dosing in the ***"Medications and Dosing" box*** with detailed instructions also located on CHOC.org ⇨ Programs and Services ⇨ Gastroenterology ⇨ Bowel Clean Out With Miralax: https://choc.org/programs-services/gastroenterology/bowel-clean-out-with-miralax/

Step 2: Maintenance Treatment (None or Treated Fecal Impaction)

- Discharge *ALL* patients > 1 year on Miralax
  - For patients < 1 year, start Lactulose.
  - May use Milk of Magnesia or Lactulose instead of Miralax for children > 1 years ***if*** the patient has not done well with Miralax, or the caregivers prefer.
- Second-line medications are prescribed ***in addition*** to first line medications, prescribe if:
  - Cleanout is not complete.
  - Patient required significant clean out.
  - Patient is already on a first-line medication, but symptoms persisting.
- Choice of second-line medications are made by the provider and family together, consider the following:
  - Senna: Available as liquid or pills, may cause cramping.
  - Bisacodyl: Only available as pills, but smaller in size than Senna, may cause cramping.

Duration of Maintenance Therapy

- Prescribe a 1-month supply of first-line oral medications, with the directive to continue the medications for at least 2 months.
- Prescribe a 2-week supply for second-line medications, but ***do not*** continue unless instructed at follow-up visit.
- Highlight the importance of maintaining maintenance therapy and titrating the dosage to achieve optimal effects. Ensure that the patient/caregiver understand that discontinuing the therapy too soon may hinder the success of the treatment.
- Emphasize that treatment should be decreased gradually, ensuring that symptoms of constipation are resolved for at least 1 month before considering the weaning or discontinuation of treatment.

Step 3: Follow up

- Recommended follow up with PCP in 1 - 2 weeks.
- Consider Pediatric GI referral for multiple ED visits, refractory symptoms.

Differential Diagnosis of Constipation and Defecation Disorders	
Neurologic	**Endocrine/Metabolic**
• Hirschsprung Disease	• Hypothyroidism
• Neuronal Dysplasia	• Celiac Disease
• Anal Achalasia	• Diabetes
• Disorders of the spinal cord	• Cystic Fibrosis
Medications	**Dietary/Allergy**
• Opioid narcotics	• Cow milk protein allergy
• Anticholinergic agents	• Low-fiber diet
•Tricyclic anti-depressants	• Decreased fluid intake for age
Obstructive	**Functional**
• Anal Stenosis	• Infant dyschezia
• Anterior displacement of anus	• Functional constipation
• Small left colon syndrome	• Non-retentive fecal soiling
• Meconium ileus	**Other**
• Colonic stricture	• Sexual abuse
	• Chronic intestinal pseudo-obstruction

Medications and Dosing

Bowel Clean Out Program	
Weight	**Miralax Dosing**
< 10 kg	Give 1/3 capful, 3 times each day for 2 days. Give at 8am, noon and 4pm.
10.5 - 20 kg	Give 1/2 capful, 3 times each day for 2 days. Give at 8am, noon and 4pm.
20.5 - 25 kg	Give 3/4 capful, 3 times each day for 2 days. Give at 8am, noon and 4pm.
25.5 - 45 kg	Give 1 capful, 3 times each day for 2 days. Give at 8am, noon and 4pm.
45.5 - 50 kg	Give 1 1/2 capfuls, 3 times each day for 2 days. Give at 8am, noon and 4pm.

Lactulose
May be used in children under 1 year of age
1 g/kg/day - divided once or twice daily, not to exceed the adult maximum of 40 g/day (60 mL/day)

Milk of Magnesia	
Age Range (Years)	**Dose Range (g/day, once or divided)**
2 - 5	0.4 - 1.2 g/day
6 - 11	1.2 - 2.4 g/day
12 - 18	2.4 - 4.8 g/day

Senna			
Age Range (years)	**Dose Range (mg daily)**	**Tablet Dose (1 tablet = 8.6 mg)**	**Liquid Dose (5 ml = 8.8 mg)**
2 - 6	2.5 - 5 mg	1/2 tablet	2.5 mL
7 - 12	7.5 - 10 mg	1 tablet	5 mL
> 12	15 - 20 mg	2 tablets	10 mL

Bisacodyl	
Age Range (years)	**Dose Range (mg daily)**
3 - 12	5 mg
> 12	5 - 15 mg

Emergency Department Constipation Care Guideline References

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