Pediatric Oncall Journal
Volume : 23, Issue 1: 1-3
DOI: https://doi.org/10.7199/ped.oncall.2026.58

PEDIATRIC ONCALL
CHILD HEALTH CARE

REVIEW ARTICLE

FROM THE EMERGENCY DEPARTMENT ONWARD: A PRACTICAL OVERVIEW OF PEDIATRIC CONSTIPATION MANAGEMENT

Hajar Al Hoqani.

Department of Pediatrics Emergency Medicine, Sultan Qaboos university hospital – university medical city, Muscat, Oman.

ABSTRACT

Context: Constipation is a prevalent complaint among pediatric patients in emergency settings, often leading to significant discomfort and anxiety for both children and caregivers.

Objective: To provide a comprehensive, evidence-based approach for the assessment and management of pediatric constipation in emergency medicine and outpatient clinics, emphasizing the differentiation between functional and organic causes.

Data Sources: A review of current literature, including guidelines from the North American Society for Pediatric Gastroenterology, Hepatology and Nutrition (NASPGHAN) and relevant clinical studies.

Study Selection: Articles and guidelines focusing on pediatric constipation evaluation and management starting from emergency settings.

Data Extraction: Key recommendations and findings were extracted and synthesized to formulate a practical approach.

Results: A thorough assessment, including detailed history-taking and physical examination, is essential. Most cases are functional and can be managed with oral disimpaction using PEG, followed by maintenance therapy and education. Red flags require further investigation. Long-term follow-up is vital for complete recovery.

Conclusions: Adopting a systematic approach allows for effective management of pediatric constipation in emergency settings, decreasing unnecessary interventions and enhancing patient outcomes. Lifestyle changes and follow-up care are crucial for complete recovery.

ARTICLE HISTORY

Received 10 July 2025

Accepted 14 October 2025

KEYWORDS

Pediatric constipation, Emergency medicine, Functional constipation, Disimpaction, Bowel management.

ABBREVIATIONS

ED – Emergency Department,
PEG – Polyethylene Glycol,
DRE – Digital Rectal Examination

Introduction

Functional constipation accounts for approximately 95% of cases in children over one year of age, with organic causes such as Hirschsprung disease, hypothyroidism, spinal cord anomalies and celiac disease comprising the remaining minority. The prevalence of constipation in children varies widely, from 0.7% to 29.6%, depending on the diagnostic criteria and population studied. Children often present to emergency departments due to abdominal pain, nausea and sometimes fecal incontinence, making a comprehensive evaluation vital. Delayed diagnosis and inadequate treatment can result in chronic symptoms, psychosocial distress and reduced quality of life for both the child and family.[1,2]

Constipation is a common yet often misunderstood problem in pediatric emergency care, accounting for up to 3% of ED visits and 10–25% of referrals to pediatric gastroenterologists. In emergency departments (EDs), it is a frequent cause of abdominal pain and discomfort.

Address for Correspondance: Hajar Al Hoqani, Department of Pediatrics Emergency Medicine, Sultan Qaboos University Hospital (SQUH) – University Medical City (UMC), Muscat, Oman. **Email:** hajar.alhoqani@squ.edu.om

While most cases are functional, it is imperative to distinguish these from organic causes that may require immediate intervention. A structured, evidence-based approach facilitates accurate diagnosis and effective management.

A standardized diagnostic approach helps distinguish functional constipation from organic causes. Rome IV criteria are essential in diagnosing functional constipation, requiring at least two specific symptoms (such as ≤2 defecations/week, fecal incontinence or retentive posturing) lasting at least one month in children under four years or two months in older children.[3,4] Evaluation should include assessment of stool consistency using the Bristol Stool Chart, severity scoring (e.g., the Constipation Scoring System) and impact on daily functioning.[5]

Assessment and Diagnosis

A thorough history and physical examination are central to the evaluation of pediatric constipation. Use of the Rome IV criteria helps in identifying functional constipation. Key red flags such as delayed meconium, failure to thrive or neurological signs should prompt further investigation. Also, acute abdominal pain with constipation can be the initial sign of appendicitis, intussusception, bowel obstruction, pancreatitis and other urgent abdominal conditions. Labeling such

a patient with functional constipation is risky and an emergency doctor should perform the necessary diagnostics and treatment before attributing the symptoms to functional constipation. Once life-threatening conditions have been ruled out, the health care provider should delve deeper into the patient's history of constipation and adjust the physical exam accordingly.

History Taking
Clinicians should assess bowel frequency, stool character, presence of pain, withholding behaviors, dietary patterns, toilet training status and psychosocial stressors.

Red Flags
These include onset before one month of age, delayed meconium passage, failure to thrive, bilious vomiting, abdominal distension, blood in stools without anal fissures, weight loss, B symptoms, neurological deficits and family history of Hirschsprung disease.

Physical Examination
Includes growth assessment, abdominal palpation for fecal masses, perianal inspection for fissures or anomalies, lymphadenopathy and neurologic examination of lower limbs and spine.

Investigations
Infants with constipation should be evaluated thoroughly for organic causes, particularly if symptoms begin in the neonatal period. Hypothyroidism, cystic fibrosis and spinal dysraphism must be excluded.[4,7] In children with autism or developmental delay, constipation may present atypically and require multidisciplinary management. Emotional and psychological factors—especially stool withholding behavior-play a significant role and necessitate coordinated care with psychology or social services.[5,9]

Most cases require no investigation. The utility of abdominal radiographs remains controversial; however, they may aid decision-making in non-verbal, neurologically impaired, uncooperative children where rectal examination is not feasible or in cases of foreign body suspicion.[6] Contrast enemas can delineate anatomy in cases of suspected Hirschsprung disease or anorectal malformations, while anorectal manometry and rectal biopsy confirm the diagnosis of aganglionosis.[4,7]

Management
Management of pediatric constipation in emergency settings should be organized and responsive to the child's clinical presentation and symptom severity. Explain to the caregiver that constipation is functional and usually requires long-term care. Written instructions help retain the information and make it easier for caregivers to follow the management plan.

It typically encompasses four main phases: disimpaction, maintenance therapy, behavioral interventions and long-term, family-centered care.[1,2,3]

1. Disimpaction
Oral polyethylene glycol (PEG) is the recommended first-line treatment because it is more effective than enemas and other laxatives. The dosage is 1–1.5 g/kg/day for 3–6 days.[4,5]

If oral therapy is ineffective or poorly tolerated, rectal options such as normal saline enemas may be used. Phosphate enemas are contraindicated in children under two years due to the risk of electrolyte imbalances.[2,6] For infants, glycerin suppositories may be a safe alternative.[2]

2. Maintenance Therapy
Once disimpaction is achieved, a lower daily dose of PEG (0.4-0.8 g/kg/day) helps maintain regular bowel movements and prevent recurrence.[3,4] lactulose and milk of magnesia are alternatives, though PEG is generally more effective and better tolerated.[4]

Nutritional management is essential: fiber intake should match the child's age plus 5-10 grams daily, focusing on fruits (e.g., pears, apples, prunes), vegetables, whole grains and proper hydration.[3,7]

3. Behavioral Interventions
This should be explained well to the caregiver during the emergency visit and should be reinforced during the patient's outpatient clinic visit. Establishing consistent toilet routines can improve colonic motility and prevent stool withholding. Children should sit on the toilet for 5–10 minutes after meals, especially breakfast, to leverage the gastrocolic reflex.[1,7]

Using footstools encourages proper posture, while positive reinforcement techniques—such as reward charts—promote adherence and reduce anxiety. Punitive measures should be avoided.[7,8]

4. Education and Long-Term Follow-Up
Families need to understand the chronic and relapsing nature of functional constipation and the importance of ongoing treatment.[1]

Maintenance therapy often lasts for several months and stopping suddenly can lead to a relapse. Regular follow-up visits help ensure adherence, allow for adjustments to treatment and reinforce educational messages.[2,5]

5. Family Education and Support Tools
Successful long-term management depends on providing families with clear, practical tools that improve understanding, engagement and consistency.

A. Constipation Action Plans
These structured guides provide step-by-step instructions for daily routines, medication use and criteria for when to seek additional medical help. Action plans enhance parental confidence and decrease emergency department visits.[1]

- Daily routines: Include toilet times, meals and activities.
- Medication tracking: Clarifies dosages and administration.
- Escalation: Flags symptoms like abdominal pain or stool retention.

B. Stool Diaries and Habit Trackers
Documenting bowel movements, stool consistency (e.g., using the Bristol Stool Chart), diet and episodes of discomfort helps identify patterns and monitor the response to treatment.[2] These tools also promote child awareness and support tailored adjustments during

follow-up visits.

C. Toilet Training Schedules
Scheduled toilet sitting post-meals enhances colonic reflexes. [2,3]

- Visual timers make sessions more predictable and less threatening.
- Footstools optimize defecation posture.
- Reward systems (e.g., sticker charts) promote participation and consistency.

D. Educational Handouts and Toolkits
Providing printed or digital materials that explain constipation, treatment options (e.g., how to mix PEG), dietary goals and behavioral strategies supports adherence and empowers families.[4,5] Toolkits with checklists and FAQs enhance understanding and confidence.

E. Behavioral and Lifestyle Guidance
Non-punitive, supportive approaches are essential in addressing stool withholding.[2,6]

Encourage:

- Emotional reassurance
- High-fiber, high-fluid diets
- Structured routines (especially effective in children with neurodevelopmental conditions).

F. Follow-Up and Community Support
Ongoing care improves outcomes and reduces the likelihood of relapse.[7]

- Regular follow-ups reassess and tailor therapy. This can be done at a general practitioner's office or a family doctor's clinic.
- Helplines offer immediate guidance.
- Community pediatric services and online support groups provide sustained encouragement and shared experience.

Special Considerations
In infants, functional constipation is rare. In such cases, glycerin suppositories may be used. Red flags warrant further investigation. Psychosocial stressors must be addressed.

Conclusion
A structured approach to pediatric constipation in emergency settings enables accurate diagnosis, minimizes unnecessary interventions and improves outcomes through evidence-based care and education for parents. Treatment should not stop at the emergency level but needs to be carried out through regular follow-up in the OPD or family medicine clinic. Empowering caregivers with enough education improves outcomes and reduces relapse.

Compliance with Ethical Standards
Funding: None
Conflict of Interest: None

References:

1. Mulhem E, Khondoker F, Kandiah S. Constipation in children and adolescents: Evaluation and treatment. Am Fam Physician. 2022 May 1;105(5):469-478. PMID: 35484712.
2. Machado NC, Dias JT, Hercos GN, Weber TK, de Assis Carvalho M. Pediatric Functional Constipation in Clinical Practice: The Continuous Search for the Light at the End of the Tunnel. Arch Gastroenterol Res. 2023;4(1):43-51. doi:10.33696/Gastroenterology.4.047.
3. Lipshaw MJ, Zamor RL, Carson R, et al. Evidence-based standardization of constipation management in the emergency department: a quality improvement study. Pediatr Qual Saf. 2021;6:e395. doi:10.1097/PQ9.0000000000000395.
4. Tabbers MM, Di Lorenzo C, Berger MY, et al; ESPGHAN/NASPGHAN Guideline Committee. Evaluation and treatment of functional constipation in infants and children: evidence-based recommendations from ESPGHAN and NASPGHAN. J Pediatr Gastroenterol Nutr. 2014 Feb;58(2):258-74. doi:10.1097/MPG.0000000000000266.
5. EB Medicine Editorial Board. Emergency department evaluation and management of constipation. Points & Pearls. EB Medicine; 2023.
6. AAFP Expert Panel. Constipation in children and adolescents: evaluation and treatment. Am Fam Physician. 2022;105(5):469-478.
7. Pediatrics Nationwide QI Team. QI initiative reduces emergency room visits for functional constipation. Pediatrics Nationwide. 2023 Oct 6. Available from: https://pediatricsnationwide.org
8. George B. Evaluating high-dose laxatives via nasogastric tube versus enemas in pediatric severe constipation. BMC Pediatr. 2025;25:322. doi:10.1186/s12887-025-05667-9.
9. AAFP QI Report. Rapid access bladder and bowel nursing pathway reduces hospital admissions for chronic constipation in ED. Arch Dis Child. 2025 Jun.