



Clinical Guidelines for Management of Pediatric Acute Gastroenteritis (AGE)

Children have a higher total body water content than adults, and therefore are more susceptible to dehydration. They also can lose electrolytes such as sodium and potassium. In most cases, dehydration is mild and isotonic. Oral rehydration therapy contains water, electrolytes, and a small carbohydrate component to effectively treat dehydration (e.g. Pedialyte, Gatorade, or the World Health Organization's Oral Rehydration Solution). ORT can even be made from common items found in the house.

Children who have AGE, can often be successfully treated with a combination of antiemetics and oral hydration. The use of intravenous hydration should be limited to circumstances when severe dehydration is present, and the child cannot tolerate oral rehydration or has a compromise to functioning of their gastrointestinal system.

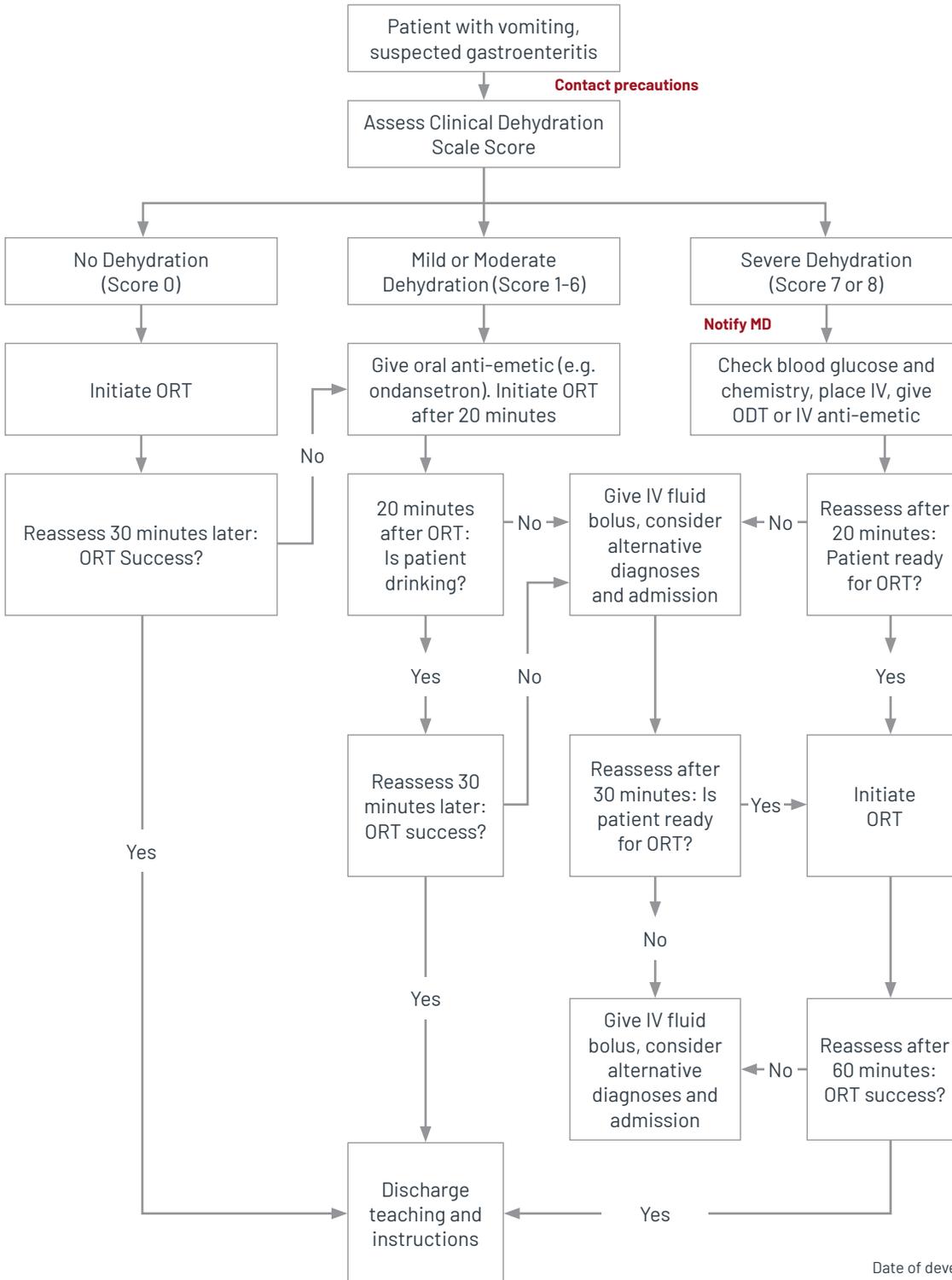
Important considerations for management of a child with acute gastroenteritis.

- Assess the child for the degree of dehydration based on signs and symptoms.
 - Tachycardia
 - Irritability and agitation
 - Decreased urine output (e.g. no wet diaper or urination for 12 hours)
 - Dry oral mucosa and tongue
 - Few or no tears when crying
 - Signs for shock (significantly delayed capillary refill)
 - Poor skin turgor
 - Sunken eyes
 - For infants, sunken fontanelle
 - Altered mental status
- Check electrolytes including glucose and sodium to help with determining cause and type of dehydration.
- Always encourage oral hydration if no contraindication is present.
- Assess whether a child can tolerate oral hydration. If vomiting is present, use an antiemetic medication. If vomiting results in difficulty with oral hydration, consider smaller volume at a time for hydration.
 - For infants, use a teaspoon and feed 1-2 teaspoons (5-10 mL) at a time. Toddlers can be given 1-2 tablespoons (15-30 mL) at a time as tolerated. The key is to rehydrate slowly as the child tolerates.
- In cases where pharyngitis is limiting oral intake, consider an analgesic or other medicine to soothe the pain and discomfort.
- Reserve intravenous hydration for a severely dehydrated child without ability to be orally hydrated.
- If a child requires intravenous hydration, consider timing for switching to oral hydration, when possible, to avoid access reliance on IV fluids.

Acute Gastroenteritis and Dehydration Pathway

Clinical Dehydration Scale				
	0	1	2	SCORE
Appearance	Normal	Thirsty, restless, lethargic but irritable	Drowsy, limp, cold or sweaty	
Eyes	Normal	Slightly sunken	Very sunken	
Mucous Membranes	Moist	Sticky	Dry	
Tears	Present	Decreased	Absent	
			Total Score	

This scale was developed from <https://pubmed.ncbi.nlm.nih.gov/18762524>, (R Goldman, *Pediatrics*, 2008).



Inclusion Criteria

- Age 6 mo-18 years
- Non-bloody, non-bilious vomiting and/or diarrhea
- Onset < 5 days

Exclusion Criteria

- Toxic or ill-appearing
- Hypotension
- Surgical abdomen on exam
- History of renal disease, diuretic therapy, diabetes, heart failure, inflammatory bowel disease, or contributory comorbid condition

Key measures

- Monitor and document intake/output
- Repeat vital signs
- Ensure discharge teaching and discussion of oral rehydration technique

Medication and fluid dosing

Ondansetron ODT
 • 8-15 kg: 2 mg PO
 • >15 kg: 4 mg PO

Ondansetron IV
 • 0.1 mg/kg IV (max 4 mg)

IV fluid bolus
 • Normal saline, plasymalyte, or lactated ringers 20 ml/kg IV (max 1 liter per bolus)

Oral Rehydration Therapy (ORT)
 • 5 ml every 5 minutes if < 10 kg
 • 10 ml every 5 minutes if ≥ 10 kg
 • Higher initial volumes can be used for adult-sized patients

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Disclaimer: This algorithm functions as a guideline for clinical care under the direction of pediatric emergency medicine attendings.

The following additional practice pathways for managing acute gastroenteritis in children may also be very useful.

-  [PPN Hub site: Lurie Children's Hospital AGE pathway](#)
-  [PPN Hub Site: Seattle Children's Hospital AGE pathway](#)



In addition to the resources below, please visit PPN's Resource Central for more resources.

Resources

-  [ACEP](#)
-  [Alberta Health: How to make ORT from common ingredients at home:](#)
-  [ORT video](#)
-  [Family resource](#)

Selected Articles

-  [Oral Rehydration, Emergency Physicians, and Practice Parameters: A National Survey - AAP.org](#)
-  [Managing Acute Gastroenteritis Among Children](#)
-  [The Use of a Triage-based Protocol for Oral Rehydration in a Pediatric Emergency Department](#)
-  [Pediatric Dehydration](#)
-  [Universal Recommendations for the Management of Acute Diarrhea in Nonmalnourished Children](#)
-  [Emergency department oral rehydration of children: The best solution?](#)
-  [Facing the Shortage of IV Fluids — A Hospital-Based Oral Rehydration Strategy](#)
-  [Dehydration | Pediatric Care Online](#)
-  [Oral Rehydration Solutions versus Drink of Choice in Children with Dehydration: A Review of Clinical Effectiveness - NCBI Bookshelf](#)

LIVE WEB LINKS



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