

Acute Gastroenteritis Care Guideline



Inclusion Criteria:

- Diarrhea and dehydration with or without vomiting
- All children aged 1 month to 5 years old
- Med/Surg acuity level

Exclusion Criteria:

- PICU status
- Complex/chronic/comorbid medical condition
- Children > 5 yrs old
- Suspected bacterial enterocolitis, dysenteric stools, toxic appearance, frank bloody stools, bandemia

Assess for degree of dehydration

Minimal or No Dehydration

(HR, skin turgor, cap refill, mental status normal, slightly dry mucus membranes and slight decrease in urine output)

Observation Status if criteria met

1 or more of the following:

- Adequate care not available at home
- Clinical response to outpatient therapy uncertain
- Outpatient supervision uncertain

Treatment

- No IV
- Diet Therapy for Babies:
 - Breastfeeding should be continued during both the rehydration and maintenance phases.
 - Formula fed infants should resume their usual formula.
 - Switching to a lactose-free or soy based formula is usually not necessary, unless stool output significantly increases with a milk-based formula.
- Diet Therapy for Children:
 - Children should be refed early after rapid oral rehydration therapy (4-6 hours) and should be offered an unrestricted diet.
 - Only avoid dairy products if they make symptoms worse.
 - Avoid sugary beverages such as sodas, juice, sports drinks etc.
 - Food high in simple sugars may increase osmotic load and worsen diarrhea.

Mild/Moderate Dehydration

(HR increased, delayed cap refill, mucus membranes dry, listless and decreased urine output)

Assessment and Treatment

- Basic metabolic panel if not done in ED
- IV bolus with NS or LR as needed
- Daily weights
- IV rehydration
- When tolerating clear liquids without emesis, advance to either formula, breast milk, Diet for Age (no fruit juices/sports drinks/sodas)
- Saline Lock IV when tolerating adequate oral fluids

Discharge Criteria

- Rehydration is accomplished
- Electrolyte/glucose abnormalities improved (if labs repeated)
- Tolerating diet

Severe Dehydration

(HR increased, extremities cool/mottled, mucus membranes dry, minimal urine output)

Recommendations/ Considerations

- No need for NPO status unless the patient is unable to tolerate liquids
- Stool cultures **should not** be ordered for patients who have watery diarrhea. Stool for O&P, *Giardia* antigen, and *C. difficile* not indicated in routine cases of AGE. Stool for Gram stain (WBCs) of no value in AGE.
- A BMP is indicated in all patients with moderate- severe dehydration to detect electrolyte or glucose abnormalities
- Antidiarrheal agents & antibiotics are **not indicated** for AGE.
- Use of antiemetics (single dose of Ondansetron) has been shown to reduce episodes of vomiting in selected cases; however it may increase risk of diarrhea (BMJ Clinical Evidence 2007).
- Probiotics have been shown to be effective in the treatment of gastroenteritis. They can be consumed from food sources (yogurt or kefir) or as supplements. Parents should talk with their healthcare provider before starting supplements.

Parent Education

- Gastroenteritis Diet – Cerner Education
- Diarrhea – Cerner Education
- Vomiting – Cerner Education

References

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- Centers for Disease Control and Prevention. Managing Acute Gastroenteritis Among Children: Oral Rehydration, Maintenance, and Nutritional Therapy. *MMWR* 2003; 52 (RR-16): 1-16. <http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5216a1.htm> (Level I)
- Carter B, Fedorowicz Z. Antiemetic treatment for acute gastroenteritis in children: An updated Cochrane systematic review with meta-analysis and mixed treatment comparison in a bayesian framework. *BMJ Open*. 2012;2(4). <http://bmjopen.bmj.com/content/2/4/e000622.long> (Level I)
- Cheng A. Acute Care Committee, Canadian Paediatric Society. Emergency department use of oral ondansetron for acute gastroenteritis related vomiting in infants and children. *Pediatric Child Health* 2011; 16(3): 177-9. <http://www.cps.ca/en/documents/position/oral-ondansetron> (Level I)
- Fedorowicz Z, Jagannath VA, Carter B. Antiemetics for reducing vomiting related to acute gastroenteritis in children and adolescents. *Cochrane Database of Systematic Reviews*. 2011;9. doi: 10.1002/14651858.CD005506.pub5 (Level I)
- Granado-Villar, D., Cunill-DeSautu, B., & Granados, A. (2012). Acute Gastroenteritis. *Pediatrics in Review*, 33, 487-495. DOI: 10.1542/pir.33-11-487 (Level I)
- Guarino A. Albano F. Ashkenazi S. Gendrel D. Hoekstra JH. Shamir R. Szajewska H. European Society for Paediatric Gastroenterology, Hepatology, and Nutrition. European Society for Paediatric Infectious Diseases. European society for paediatric gastroenterology, hepatology, and Nutrition/European society for paediatric infectious diseases evidence-based guidelines for the management of acute gastroenteritis in children in Europe. *J Pediatr Gastroenterol Nutr*. 2008;46(Suppl 2):S81-122. http://journals.lww.com/jpgn/Fulltext/2008/05002/European_Society_for_Paediatric_Gastroenterology,.9.aspx (Level I)
- Guarino, A., Lo Vecchio, A., Amil Dias, J., Berkley, J. A., Boey, C., Bruzzese, D., . . . Shimizu, T. (Published ahead of print). Universal recommendations for the management of acute diarrhea in non-malnourished children. *Journal of Pediatric Gastroenterology and Nutrition*. doi:10.1097/MPG.0000000000002053 (Level III)
- Lo Vecchio, A., Amil Dias, J., Berkley, J. A., Boey, C., Cohen, M. B., Cruchet, S., . . . Guarino, A. (2016). Comparison of recommendations in clinical practice guidelines for acute gastroenteritis in children. *Journal of Pediatric Gastroenterology and Nutrition*, 63(2), 226-235. doi:10.1097/MPG.0000000000001133 (Level II)
- MacGillivray S, Fahey T, McGuire W. Lactose avoidance for young children with acute diarrhea. *Cochrane Database of Systematic Reviews*. 2013;10. DOI: 10.1002/14651858.CD005433.pub2 (Level I)
- Sandhu BK. Practical Guidelines for the Management of Gastroenteritis in Children. European Society of Pediatric Gastroenterology, Hepatology and Nutrition Working Group on Acute Diarrhoea. *Journal of Pediatric Gastroenterology and Nutrition*, October 2001; 33: S36-S39. http://journals.lww.com/jpgn/Fulltext/2001/10002/Practical_Guidelines_for_the_Management_of.7.aspx (Level II)