

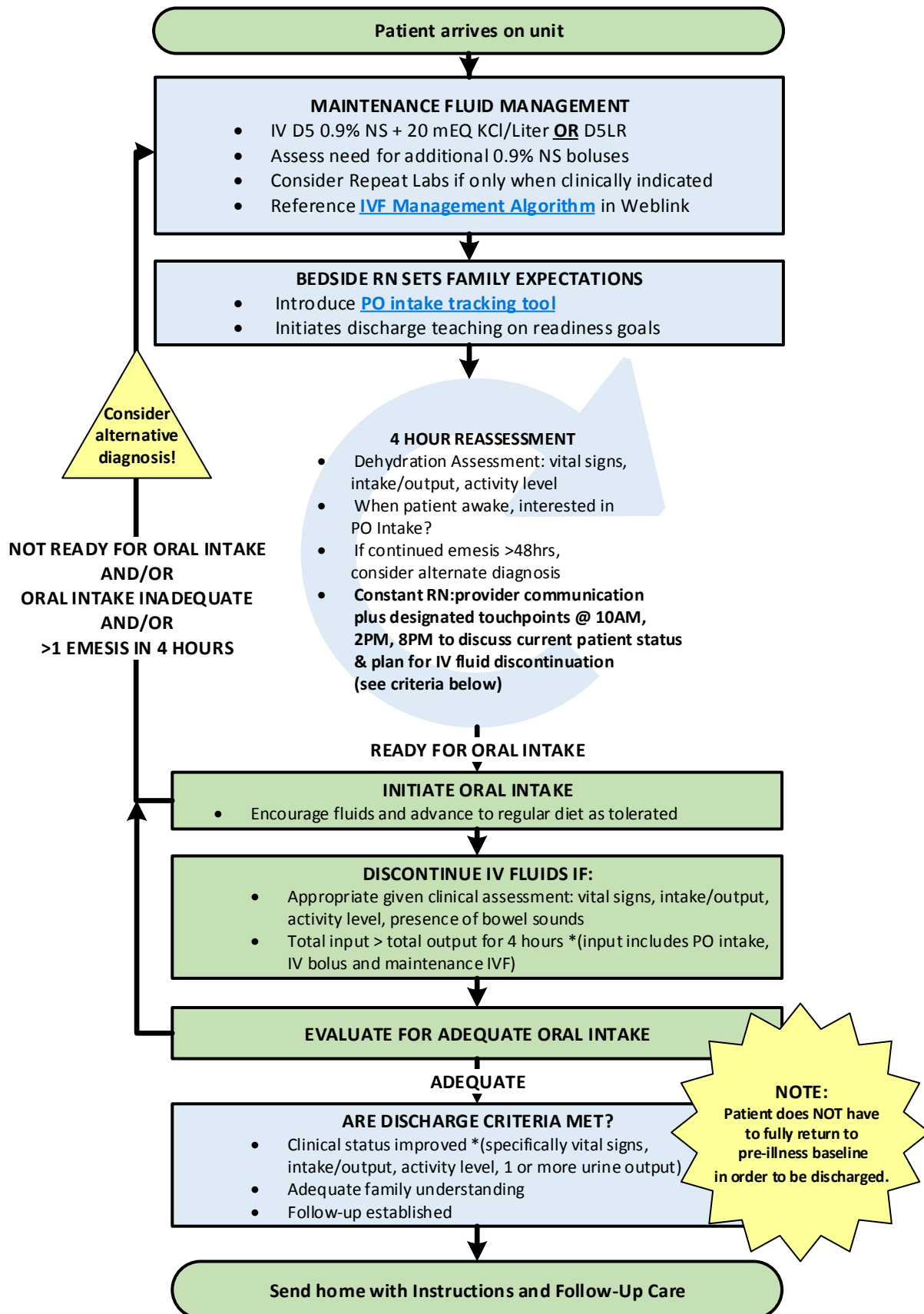


INCLUSION

Vomiting and/or diarrhea of recent onset not due to chronic disease, with or without fever, nausea, abdominal pain

EXCLUSION

- Patient < 2 months of age
- Vomiting with no diarrhea for >48 hrs
- Severe dehydration, toxic appearance or meets sepsis criteria
- Comorbid conditions (medically complex children, renal failure, cardiac disease, IBD, liver disease, VP shunt, short gut syndrome, myocarditis)
- ICU admission for similar symptoms
- Bilious emesis (consider bowel obstruction)
- Acute surgical abdomen
- Head injury within 72 hours





Evidence

General

Guarino A, Albano F, Ashkenazi S, Gendrel D, Hoekstra J. H, Shamir R, Szajewska H. The ESPGHAN/ESPID Guidelines for the Management of Acute Gastroenteritis in Children in Europe: J Pediatr Gastroenterol Nutr 2008; 6:619-21.[5a]

Harris C, Wilkinson F, Mazza D et al. Evidence-based guidelines for the management of diarrhea with or without vomiting in children. Aust Fam Physician. 2008;37:22-9. Full text at <http://www.mihsr.monash.org/hfk/pdf/diarrhoea-sh-infect-cont-20051122.pdf> [5a]

Hydration Assessment

Freedman SB1, Vandermeer B2, Milne A2, Hartling L2; Pediatric Emergency Research Canada Gastroenteritis Study Group. Diagnosing clinically significant dehydration in children with acute gastroenteritis using noninvasive methods: a meta-analysis. J Pediatr. 2015 Apr;166(4):908-16.e1-6. doi: 10.1016/j.jpeds.2014.12.029. Epub 2015 Jan 29.

Falszewska A, Szajewska H, Dziechciarz P. Diagnostic accuracy of three clinical dehydration scales: a systematic review. Archives of Disease in Childhood, 2018;103:383-388.

Jauregui J1, Nelson D2, Choo E2, Stearns B3, Levine AC2, Liebmann O2, Shah SP. External validation and comparison of three pediatric clinical dehydration scales. PloS One. 2014. May 2;9(5):e95739. doi: 10.1371/journal.pone.0095739. eCollection 2014.

Steiner MJ1, DeWalt DA, Byerley JS. Is this child dehydrated? JAMA. 2004 Jun 9;291(22):2746-54

Maintenance IV Fluid

Alves JT1, Troster EJ, Oliveira CA. Isotonic saline solution as maintenance intravenous fluid therapy to prevent acquired hyponatremia in hospitalized children. J Pediatr (Rio J). 2011 Nov-Dec;87(6):478-86.doi:10.2223/JPED.2133.

Friedman JN1, Beck CE1, DeGroot J1, Geary DF2, Sklansky DJ3, Freedman SB4. Comparison of isotonic and hypotonic intravenous maintenance fluids: a randomized clinical trial. JAMA Pediatr. 2015 May;169(5):445-51. doi: 10.1001/jamapediatrics.2014.3809

Wang J1, Xu E, Xiao Y. Isotonic versus hypotonic maintenance IV fluids in hospitalized children: a meta-analysis. Pediatrics. 2014 Jan;133(1):105-13. doi: 10.1542/peds.2013-2041. Epub 2013 Dec 30.

Padua AP1, Macaraya JR, Dans LF, Anacleto FE Jr. Isotonic versus hypotonic maintenance IV fluids in hospitalized children: a meta-analysis. Pediatr Nephrol. 2015 Jul;30(7):1163-72. doi: 10.1007/s00467-014-3033-y. Epub 2015 Jan 11.

Probiotic

Freedman SB, Williamson-Urquhart S, Farion KJ, et al. Multicenter Trial of a Combination Probiotic for Children with Gastroenteritis. N Engl J Med 2018; 379:2015-2026. doi: 10.1056/NEJMoal802597

Schnadower D, Tarr PI, Charles CT, et al. Randomised controlled trial of *Lactobacillus rhamnosus* (LGG) versus placebo in children presenting to the emergency department with acute gastroenteritis: the PECARN probiotic study protocol. BMJ Open 2017;7:e018115. doi:10.1136/bmjopen-2017-018115

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