



**Gastroenteritis & Dehydration EBG Algorithm © Jason Levy MD & Michele Morin, RN
Emergency Department Boston Children's Hospital
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**Boston Children's
Hospital**

Inclusion Criteria:

- 6 mos – 6 years
- Vomiting and/or diarrhea
- Presumed gastroenteritis

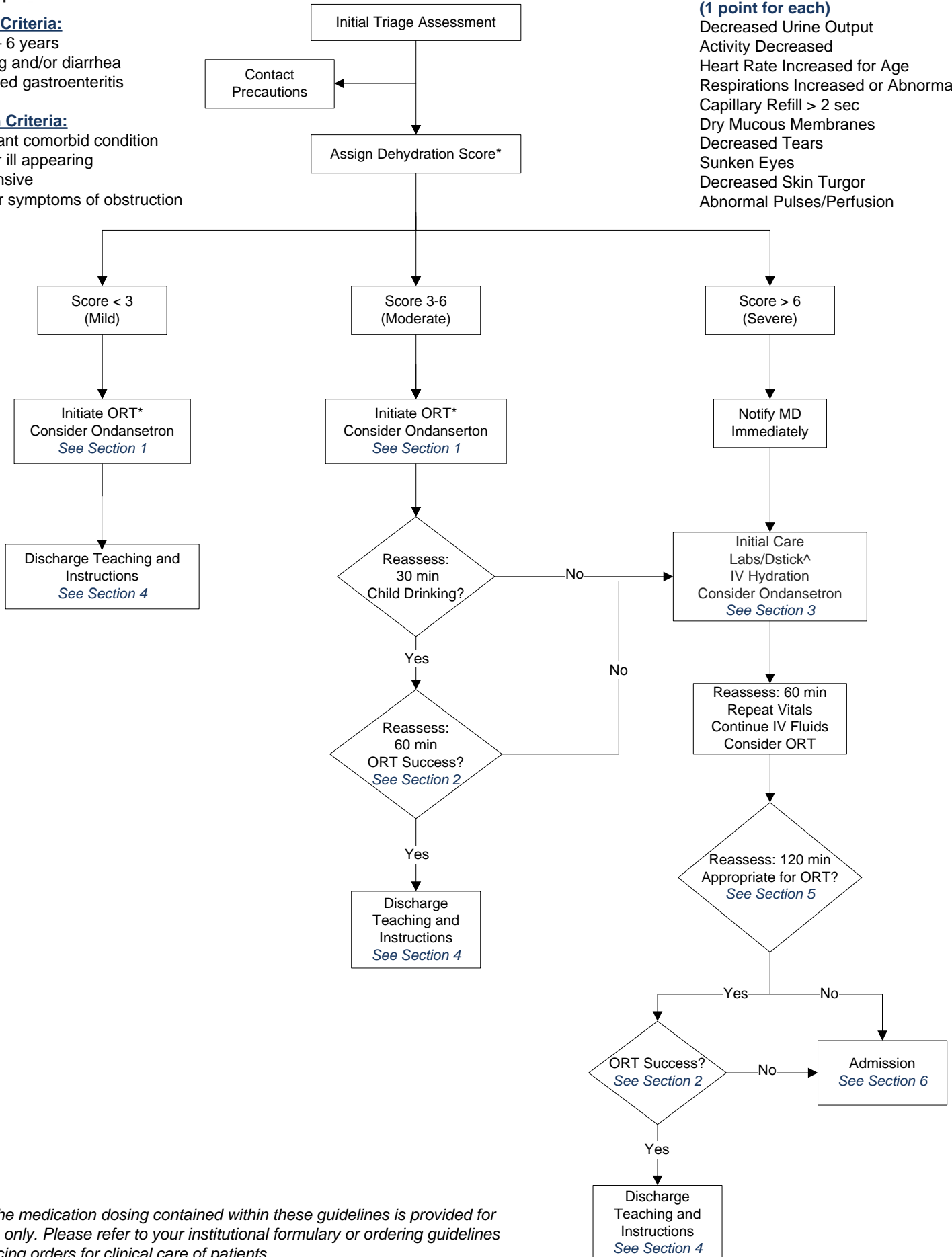
Exclusion Criteria:

- Significant comorbid condition
- Toxic or ill appearing
- Hypotensive
- Signs or symptoms of obstruction

Dehydration 10-Point Score

(1 point for each)

- Decreased Urine Output
- Activity Decreased
- Heart Rate Increased for Age
- Respirations Increased or Abnormal
- Capillary Refill > 2 sec
- Dry Mucous Membranes
- Decreased Tears
- Sunken Eyes
- Decreased Skin Turgor
- Abnormal Pulses/Perfusion



NOTE: The medication dosing contained within these guidelines is provided for reference only. Please refer to your institutional formulary or ordering guidelines when placing orders for clinical care of patients.

Gastroenteritis and Dehydration Evidence Based Guideline Algorithm

Child With Presumed Gastroenteritis and Dehydration

This evidence based guideline is intended for use in the treatment of children 6 months to 6 years of age with presumed gastroenteritis and dehydration. The majority of children greater than 6 years of age should also receive oral rehydration therapy (ORT). It is important to consider and assess for other surgical, neurologic and metabolic processes before using this treatment pathway. ORT may also be used for other causes of dehydration. Patients who have vomiting and diarrhea without dehydration or with only mild dehydration should be educated about ORT, but do not necessarily need to be rehydrated in the Emergency Department.

Section 1 – Initiate ORT

- Provide rehydration solution
- Instruct on use of syringe, medicine cup, or 5-10 mL in bottle/child's cup every 3-5 minutes
- Provide and review written instructions
- Advise slow increase in intake as tolerated
- Monitor intake and output

Section 2 – Reassessment after Oral Rehydration

Bedside Care

- Repeat vital signs
- Document intake and output
- Reassign Dehydration Score

ORT Success

- Abnormal vital signs improved
- Patient drinking consistently
- No persistent emesis
- Oral intake keeps up with diarrheal losses
- Improvement in Dehydration Score

Section 3 – Severe Dehydration Initial Care

Bedside Care

- Vital signs
- Monitor intake and output

Laboratory Evaluations

- Point-of-care blood glucose and serum electrolytes
- Notify MD/NP if blood glucose < 70
- Other labs not routinely recommended

Intravenous Fluids

- Goal of 40 mL/kg in one hour
 - 40 mL/kg of NS or
 - 20 mL/kg of D5NS followed by 20 mL/kg of NS if D-Stick < 70 or suspect acidosis
- Start D5NS or D5 ½ NS at 2x maintenance immediately after bolus

Section 4 – Discharge Criteria and Teaching/Instructions

Discharge Criteria

- Clinical signs of dehydration improved or minimal
- Caregivers understand ORT instructions and able to perform at home
- Caregivers understand reasons for return

Discharge Instructions

Verbal discharge instructions should emphasize the following:

- Oral rehydration should be continued at home
- Diarrhea may appear (or continue) and is expected
- Breast feeding should be continued
- Do not administer anti-diarrheal medications
- Fever may occur, give antipyretics
- Return to normal diet as soon as can tolerate
- Signs and symptoms of dehydration and reasons to seek further care

Section 5 – Reassessment after Rapid Intravenous Fluid Therapy

Bedside Care

- Repeat vitals
- Document intake and output
- Reassign Dehydration Score

Appropriate for ORT

- Awake and alert
- Dehydration Score improved and ≤ 6
- No persistent vomiting

Section 6 – Criteria for Admission

- No improvement in Dehydration Score or repeat Dehydration Score > 6
- Ongoing losses greater than oral intake
- Persistent vomiting or unwilling to take oral liquids
- Clinically concerning derangement in serum electrolytes
- Serum bicarbonate level should not be used as a sole indicator for admission