



- i. Physiologic targets: Systolic blood pressure at least fifth percentile for age, strong distal pulses, warm skin perfusion, capillary refill less than 2 seconds and improving mental status.
 - ii. Fluid goal of up to a total of 60 mL/kg or 1 liter of isotonic fluid by giving 20 mL/kg of isotonic fluid by administering rapid boluses (for cardiogenic shock give 10 mL/kg boluses)
 - iii. If available, the administration of packed red blood cells or whole blood may be indicated for hemorrhagic shock
10. If there is a history of adrenal insufficiency, long-term steroid dependence, or fluid-refractory shock requiring vasopressors give:
 - a. Hydrocortisone succinate, 2 mg/kg (maximum 100 mg) IV/IM (preferred)
OR
 - b. Methylprednisolone 2 mg/kg IV (maximum 125 mg)
OR
 - c. Dexamethasone 0.6 mg/kg IV/IM (maximum dose of 16 mg)
11. Vasopressors (shock unresponsive to IV fluids) titrated to physiologic targets
 - a. Cardiogenic, hypovolemic, obstructive shock and distributive shock:
 - i. Norepinephrine 0.05–0.5 mcg/kg/minute
 1. Preference in both neurogenic and infectious (sepsis) causes of distributive shock
 - ii. Epinephrine, 0.05–0.3 mcg/kg/minute
 1. Alternative to a drip, push dose epinephrine may be administered:
 - a. Prepare 10 mcg/mL by diluting 1 mL of epinephrine 0.1 mg/mL (1:10,000) in 9 mL of normal saline
 - b. Administer 0.01 mg/kg (0.1 mL/kg) up to a maximum single dose of 10 mcg (1 mL) q 3–5 minutes titrated to maintain goal MAP. An example is shown below:
 - 10 kg child receives 1 mL of the diluted epinephrine
 - 20 kg child receives 2 mL of the diluted epinephrine
 - 30 kg child receives 3 mL of the diluted epinephrine
 - iii. Dopamine, 2–20 mcg/kg/minute if norepinephrine or epinephrine is not available or for other specific causes of shock.
12. For anaphylactic shock, treat per the [Anaphylaxis and Allergic Reaction Guideline](#)
13. Provide advanced notification to the hospital
14. Consider empiric antibiotics for suspected septic shock if transport time is anticipated to be prolonged, if blood cultures can be obtained in advance, and/or EMS has coordinated with regional receiving hospitals about choice of antibiotic therapy
15. Antipyretics for fever – nonsteroidal anti-inflammatory agents are contraindicated in infants less than 6 months of age
 - a. Acetaminophen (15 mg/kg; maximum dose of 1000 mg)
 - b. Ibuprofen (10 mg/kg; maximum dose of 800 mg)

Patient Safety Considerations

Recognition of cardiogenic shock - If the patient condition deteriorates after fluid administration, rales or hepatomegaly develop, then consider cardiogenic shock and withholding further fluid administration