

Notes/Educational Pearls

Key Considerations

1. Early, aggressive IV fluid administration is essential in the treatment of suspected septic shock
2. Patients predisposed to shock:
 - a. Immunocompromised (patients undergoing chemotherapy or with a primary or acquired immunodeficiency)
 - b. Adrenal insufficiency (Addison's disease, congenital adrenal hyperplasia, chronic or recent steroid use)
 - c. History of a solid organ or bone marrow transplant
 - d. Infants
 - e. Elderly
3. In most adults, tachycardia is the first sign of compensated shock, and may persist for hours. Tachycardia can be a late sign of shock in children and a tachycardic child may be close to cardiovascular collapse
4. Hypotension indicates uncompensated shock, which may progress to cardiopulmonary failure within minutes. Hypotension is a late and ominous sign in pediatric uncompensated shock
5. Hydrocortisone succinate, if available, is preferred over methylprednisolone and dexamethasone for the patient with adrenal insufficiency because of its dual glucocorticoid and mineralocorticoid effects
 - a. Patients with no reported history of adrenal axis dysfunction may have adrenal suppression due to their acute illness, and hydrocortisone should be considered for any patient showing signs of treatment-resistant shock
 - b. Patients with adrenal insufficiency may have an emergency dose of hydrocortisone available that can be administered IV or IM

Pertinent Assessment Findings

1. Decreased perfusion manifested by altered mental status, or abnormalities in capillary refill or pulses, decreased urine output (1 mL/kg/hr):
 - a. **Cardiogenic, hypovolemic, obstructive shock:** capillary refill greater than 2 seconds, diminished peripheral pulses, mottled cool extremities
 - b. **Distributive shock:** flash capillary refill, bounding peripheral pulses

Quality Improvement

Associated NEMSIS Protocol(s) (eProtocol.01) (for additional information, go to www.nemsis.org)

- 9914127 – Medical - Hypotension/Shock (Non-Trauma)

Key Documentation Elements

- Medications administered
- Full vital signs (pulse, blood pressure, respiratory rate, neurologic status assessment) with reassessment q 15 minutes or more frequently as appropriate
- Lactate level (if available)
- Neurologic status assessment [See [Appendix VII. Neurologic Status Assessment](#)]
- Amount of fluids given