



Oakland County Medical Control Authority
GENERAL TREATMENT
SHOCK

Initial Date: 8/31/2023

Revised Date:

Section 1-5

Shock

1. Assessment: Consider etiologies of shock and refer to specific types of shock/injury first if known: **1.6 Anaphylaxis/Allergic Reaction-Treatment Protocol, 2.14 Hemorrhagic Shock-Treatment Protocol, 5.4 Pulmonary Edema/Cardiogenic Shock-Treatment Protocol**
2. Follow **1.1 General Pre-hospital Care-Treatment Protocol**.
3. Pediatric patients (≤ 14 years of age) utilize MI MEDIC cards for appropriate medication dosage. When unavailable utilize pediatric dosing listed within protocol.
4. Control major bleeding per **2.13 Bleeding Control (BCON)-Procedure Protocol**.
5. Remove all transdermal patches using gloves.
6. Prompt transport per MCA Transport Protocol.
7. Special consideration
 - a. If 3rd trimester pregnancy, position patient left lateral recumbent.
- Ⓢ 8. Obtain vascular access (in a manner that will not delay transport).
- Ⓢ 9. Administer **NS** or **LR** fluid bolus IV/IO (refer to **7.23 Vascular Access and IV Fluid Therapy-Procedure Protocol**).
 - a. Adults: up to 1 liter wide open,
 - 🧸 b. Pediatrics: up to 20 ml/kg based on signs and symptoms of shock
 - c. Fluid should be slowed to TKO when SBP greater than 90 mmHg.
- Ⓢ 10. Consider establishing a second large bore IV of **NS** or **LR** enroute to the hospital.
- 📶 11. Obtain 12-lead ECG, if suspected cardiac etiology. (Per MCA selection, may be a BLS or Specialist procedure) follow **7.1 12 Lead ECG-Procedure Protocol**.
12. If accompanying head injury, refer to **2.12 Head Injury-Treatment Protocol**.
 - a. Maintain SpO₂ $\geq 90\%$
 - b. Maintain SBP > 90 mmHg < 140 mmHg
 - c. Do NOT hyperventilate.
- Ⓢ 13. Hypotensive patients should receive additional IV/IO fluid boluses, as indicated by hemodynamic state (consider preparing **epi** push dose while administering second bolus)
 - a. Adults: repeat IV/IO fluid bolus to a maximum of 2 liters.
 - 🧸 b. Pediatrics: repeat dose of 20 ml/kg to a maximum of 40 ml/kg
 - c. Monitor for pulmonary edema.
 - 📞 d. If pulmonary edema presents, stop fluids and contact Medical Control for direction.
- 📶 14. If hypotension persists after IV/IO fluid bolus, administer **epinephrine** IV/IO by push dose (dilute boluses) while administering second fluid bolus.
 - a. Prepare (**epinephrine 10 mcg/mL**) by combining 1mL of 1mg/10mL **epinephrine** in 9mL **NS**, then
 - a. Adults:
 - i. Administer 10-20 mcg (1-2 mL **epinephrine 10 mcg/mL**) IV/IO
 - ii. Repeat every 3 to 5 minutes
 - iii. Titrate SBP greater than 90 mm/Hg.



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b. Pediatrics:

- i. Administer 1 mcg/kg (0.1 mL **epinephrine** 10 mcg/mL) IV/IO
- ii. Maximum dose 10 mcg (1 mL)
- iii. Repeat every 3-5 minutes

Medication Reference

Epinephrine

Protocol Source/Reference: Michigan 1-5 Shock; Version 6/1/23.