










Initial Date: 5/31/2012  
Revised Date: 06/01/2023

Section 1-5

## Shock

1. Assessment: Consider etiologies of shock and refer to specific types of shock/injury first if known: **Anaphylaxis/Allergic Reaction-Treatment Protocol, Hemorrhagic Shock-Treatment Protocol, Pulmonary Edema/Cardiogenic Shock-Treatment Protocol**
2. Follow **General Pre-hospital Care-Treatment Protocol**.
3. Pediatric patients ( $\leq 14$  years of age) utilize MI MEDIC cards for appropriate medication dosage. When unavailable utilize pediatric dosing listed within protocol.
4. Control major bleeding per **Bleeding Control (BCON)-Procedure Protocol**.
5. Remove all transdermal patches using gloves.
6. Prompt transport per MCA Transport Protocol.
7. Special consideration
  - a. If 3<sup>rd</sup> 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 **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 **12 Lead ECG-Procedure Protocol**.
12. If accompanying head injury, refer to **Head Injury-Treatment Protocol**.
  - a. Maintain SpO<sub>2</sub>  $\geq 90\%$
  - 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.

*Michigan*  
**GENERAL TREATMENT**  
**SHOCK**

Initial Date: 5/31/2012

Revised Date: 06/01/2023

Section 1-5



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 Protocols

Epinephrine