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 (≤ 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 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 **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 SpO2 ≥ 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.

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