Shock

Assessment: Consider etiologies of shock

1. Follow **General Pre-hospital Care Protocol.**
2. Control major bleeding per **Soft Tissue and Orthopedic Injuries Protocol.**
3. Remove all transdermal patches using gloves.
4. Prompt transport following local MCA protocol.
5. Special consideration
    A. If 3rd trimester pregnancy, position patient left lateral recumbent.

(S) 6. Obtain vascular access (in a manner that will not delay transport).
    A. The standard NS IV/IO fluid bolus volume will be up to 1 liter, wide open, repeated as necessary, unless otherwise noted by protocol. IV/IO fluid bolus is contraindicated with pulmonary edema.
    B. Fluid should be slowed to TKO when SBP greater than 90 mm/Hg.
    C. For pediatrics, fluid bolus should be 20 mL/kg, and based on signs/symptoms of shock.
7. Consider establishing a second large bore IV of Normal Saline en route to
8. Obtain 12-lead ECG, if suspected cardiac etiology.
9. If anaphylactic shock, refer to the **Anaphylaxis/Allergic Reaction Protocol.**
10. For possible hemorrhagic shock, per MCA selection, refer to **Tranexamic Acid Protocol.**

MCA Adoption of Tranexamic Acid Protocol	
☑ YES	☐ NO

(S) 11. Additional IV/IO fluid bolus
    A. Up to 2L total for adult
    B. Up to 40mL per kg total for pediatric.

12. If hypotension persists after IV/IO fluid bolus, administer Epinephrine by push dose (dilute boluses).
    a. Prepare (10 mcg/mL) by adding 1mL of 1mg/10mL Epinephrine in 9mL NS, then
    b. Adults:
        i. Administer 1-2 mL
        ii. Repeat every 3 to 5 minutes
        iii. Titrate SBP greater than 90 mm/Hg.
    c. Pediatric
        i. Administer 0.1 mL/kg (0.01 mg/kg)
        ii. Maximum dose 10 mcg (1 mL)
        iii. Repeat every 3-5 minutes

Follow **General Prehospital Care Protocol**

Control major bleeding per **Soft Tissue and Orthopedic Injuries Protocol**

- Remove all transdermal patches using gloves
- Position patient appropriately (3rd trimester pregnancy, left lateral recumbent)

Transport following **MCA Protocol**

Obtain vascular access (without delaying transport)
- IV bolus NS, up to 1 liter (may repeat as noted)
- Pediatrics up to 20 mL/kg
- Titrate to Normotensive BP and signs/symptoms of shock

Obtain 12 Lead, if Cardiac Etiology Suspected

If anaphylactic shock, refer to **Anaphylaxis/ Allergic Reaction Protocol**

MCA Adoption of Tranexamic Acid Protocol?

☑ Yes ☐ No

If possible hemorrhagic shock, per MCA selection, refer to **Tranexamic Acid Protocol**

Additional IV/IO fluid bolus
- Up to 2 L total for adult
- Up to 40 mL/kg total for pediatric

If hypotension persists after fluid bolus, administer Epinephrine by push dose

- Prepare (10mcg/ml by adding 1 mL of 1mg/10mL Epinephrine in 9mL NS then

Adult
- Administer 1-2 mL every 3 to 5 minutes, titrating to SBP >90 mm/Hg

Pediatric
- Administer 0.1 mL/kg (0.01 mg/kg), maximum dose 10 mcg (1 mL), repeat every 3-5 minutes titrating to signs/symptoms of shock

Shock – Supplemental Protocol

This protocol is a supplement to the **Shock Protocol** (1-5) and contains direction for the consideration for the administration of Tranexamic Acid to patients with signs of hemorrhagic shock from traumatic injury.

Pre-Medical Control

MFR/EMT/SPECIALIST/PARAMEDIC

1. Follow **Shock Protocol.**

PARAMEDIC

2. Consideration for the administration of Tranexamic Acid should be given to any patient meeting the following criteria:
   a. Presumed hemorrhagic shock from a traumatic cause or evidence of severe uncontrolled bleeding.

   -or -

   b. Hypotension (evidenced by systolic blood pressure < 90 mmHg) and/or tachycardia (>110 beats per minute), or declining blood pressure and sustained tachycardia in the presence of a traumatic injury.
3. Tranexamic Acid not indicated in the following:
   a. Age less than 18 years
   b. Spinal, cardiogenic or septic shock
   c. Hemorrhagic shock from a non-traumatic cause (massive GI or gynecological bleeding).
   d. Peripheral hemorrhage that can be controlled through compression (amputations).
4. Dosing
   a. Mix 1 gram of Tranexamic Acid in 100 ml of normal saline.
   b. Administer via IV over 10 minutes.
5. Notes
   a. In order to maximize the effectiveness of Tranexamic Acid, a second dose must be administered at the destination facility.
   b. Transport of the patient should be to a designated trauma facility capable of continuing the subsequent Tranexamic Acid dose.
   c. Advise the receiving hospital of the administration of Tranexamic Acid when giving an in-bound and bedside report.