









## ***Hemorrhagic Shock***

Purpose: To provide treatment for patients displaying signs and symptoms of shock attributed to hemorrhage including trauma and **severe postpartum hemorrhage**.

1. Follow **General Pre-hospital Care-Treatment Protocol** control bleeding according to **Bleeding Control (BCON)-Treatment Protocol** when applicable.
-  2. Transport according to **Adult and Pediatric Trauma Triage-Treatment Protocol** and MCA Transport Protocol.
3. No intervention should delay transport.
-  4. Obtain vascular access.
-  5. For signs of hypotension unaccompanied by moderate to severe head trauma administer NS or LR IV/IO fluid bolus IV/IO (refer to **Vascular Access and IV Fluid Therapy-Procedure Protocol**).
  - a. Adults ( $\geq 14$  years of age): up to 1 liter
  - b. Pediatrics ( $< 14$  years of age): up to 20 mL/kg
-  6. For signs of hypotension accompanied by moderate to severe head trauma refer to **Head Injury-Treatment Protocol** for fluid administration guidelines.
7. Consider other causes of traumatic hypotension and treat accordingly. (Tension pneumothorax see **Pleural Decompression-Procedure Protocol**, neurogenic shock see **Shock-Treatment Protocol**)
-  8. Hypotensive patients unaccompanied by moderate to severe head trauma should receive additional IV/IO fluid boluses, as indicated by hemodynamic state.
  - a. Adults ( $\geq 14$  years of age): repeat IV/IO fluid bolus to a maximum of 2 liters.
  -  b. Pediatrics ( $< 14$  years of age): 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.
-  9. Per MCA Selection, if bleeding is uncontrolled and non-compressible, administer Tranexamic Acid (**TXA**)

### **Tranexamic Acid (TXA) Included**

Yes

No

Age greater than 18 years old AND  $> 50$  kg

1. Destination must be capable of administering 2<sup>nd</sup> dose.
2. Draw up and mix 1 gram of **TXA** into a 100 ml bag of **normal saline** solution (0.9% Sodium Chloride Solution).
  - a. Use a filter needle if the medication is supplied in an ampule.
  - b. Apply pre-printed "**TXA** added" fluorescent-colored label to IV bag.
3. Administer mixed medication via piggyback into IV/IO line over 10 minutes.

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Section: 2-14

a. Hospital Notification and Documentation



- i. Contact Medical Control - the receiving hospital must be verbally notified that **TXA** has been given, prior to arrival.
- ii. A verbal report that **TXA** was administered must be provided to hospital ED staff (receiving physician preferred) upon hand-off of the patient from EMS.
- iii. The administration of **TXA** MUST be clearly documented on the EMS patient care record.



- b. Contact Medical Control-Medical Control may order **TXA** for selected patients with suspected compensated shock not meeting the above criteria.

Medication Protocols

Tranexamic Acid (TXA)