












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 **1.1 General Pre-hospital Care-Treatment Protocol** control bleeding according to **2.13 Bleeding Control (BCON)-Treatment Protocol** when applicable.
-  2. Transport according to **8.3 Transportation 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 **7.23 Vascular Access and IV Fluid Therapy-Procedure Protocol**).
 -  a. Adults (≥ 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 **2.12 Head Injury–Treatment Protocol** for fluid administration guidelines.
7. Consider other causes of traumatic hypotension and treat accordingly. (Tension pneumothorax see **7.18 Pleural Decompression-Procedure Protocol**, neurogenic shock see **1.5 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 (≥ 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 2nd 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.



Oakland County Medical Control Authority
Trauma and Environmental
HEMORRHAGIC SHOCK

Initial Date: 8/31/2023

Revised Date:

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 Reference

Tranexamic Acid (TXA)

Protocol Source/Reference: Michigan 2.14 Hemorrhagic Shock; Version 5/23/23.

MCA Name: Oakland County
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MCA Implementation: February 1, 2024
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