

**COUNTY OF SACRAMENTO
EMERGENCY MEDICAL SERVICES AGENCY**



Program Document: **Hemorrhage**

Policy Number: 8065.14

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Signature on File

EMS Medical Director

Signature on File

EMS Administrator

Purpose:

- A. To establish guidelines for basic and advanced life support personnel in managing hemorrhage.

Authority:

- A. California Health and Safety Code, Division 2.5
- B. California Code of Regulations, Title 22, Division 9

Notes:

- A. Life-threatening hemorrhage to a limb is best managed with splinting or stabilization of the limb to reduce movement and progress rapidly through the hemorrhage control algorithm below until bleeding is controlled.
- B. Patients with major arterial bleeding can bleed to death in as little as two to three minutes. It is important to control external bleeding before the patient is in shock.
- C. Any patient who requires a tourniquet is considered to have a time-dependent injury and should be transported immediately to an appropriate trauma center per Trauma Destination Policy, PD# 5052.
 - 1. Pediatric patients $\leq$ fourteen (14) years of age who require a tourniquet shall be transported to the University of California Davis Medical Center (UCDMC), with the following exceptions:
 - a. Pediatric patients without an effective airway may be transported to the nearest available facility for emergent airway establishment.
 - b. Pediatric trauma patients under Cardiopulmonary Resuscitation (CPR) shall be transported to the time closest trauma facility.

- D. It is critical that the time of tourniquet application be documented in the PCR, on the tourniquet when possible, and communicated to all providers.
- E. The use of approved Hemostatic Agents shall be documented in the PCR and communicated to all providers.
- F. While most life-threatening bleeding is a result of trauma, hemorrhage control strategies and sections of this policy also apply to non-traumatic hemorrhage, including but not limited to bleeding AV-shunts and non-traumatic bleeding in patients on anticoagulants. TXA is only indicated by the protocol below for traumatic bleeding, epistaxis, and oral bleeding.

Epistaxis/~~Oral Hemorrhage:~~

BLS:

1. Assess C-A-B.
2. Secure airway.
3. Position of Comfort, reduce anxiety.
4. Suction as needed.
5. Apply ice and direct pressure across the bridge of the nose.
6. SpO2 with supplemental O2 as needed.

ALS:

1. Cardiac monitoring and ETCO2 measurement as available.
2. Vascular access, but do not delay airway management for suspected posterior hemorrhage.
3. Consider intubation for significant hypoxia, dyspnea, or impending airway loss.
4. For stable patients with epistaxis, encourage vigorous nose blowing to remove clotted blood.
5. **Additional TXA use:**
 - a. **Contraindication:** Known Allergy, severe local tissue injury or patient unstable.
 - b. **Preparation:** 500mg of TXA in 5mL. Soak a cotton pledget in the solution.
 - c. **Application:** Insert the TXA-soaked pledget into the bleeding nostril. Leave in place for 10-15 minutes. Do not remove pledget once placed.

Oral Hemorrhage

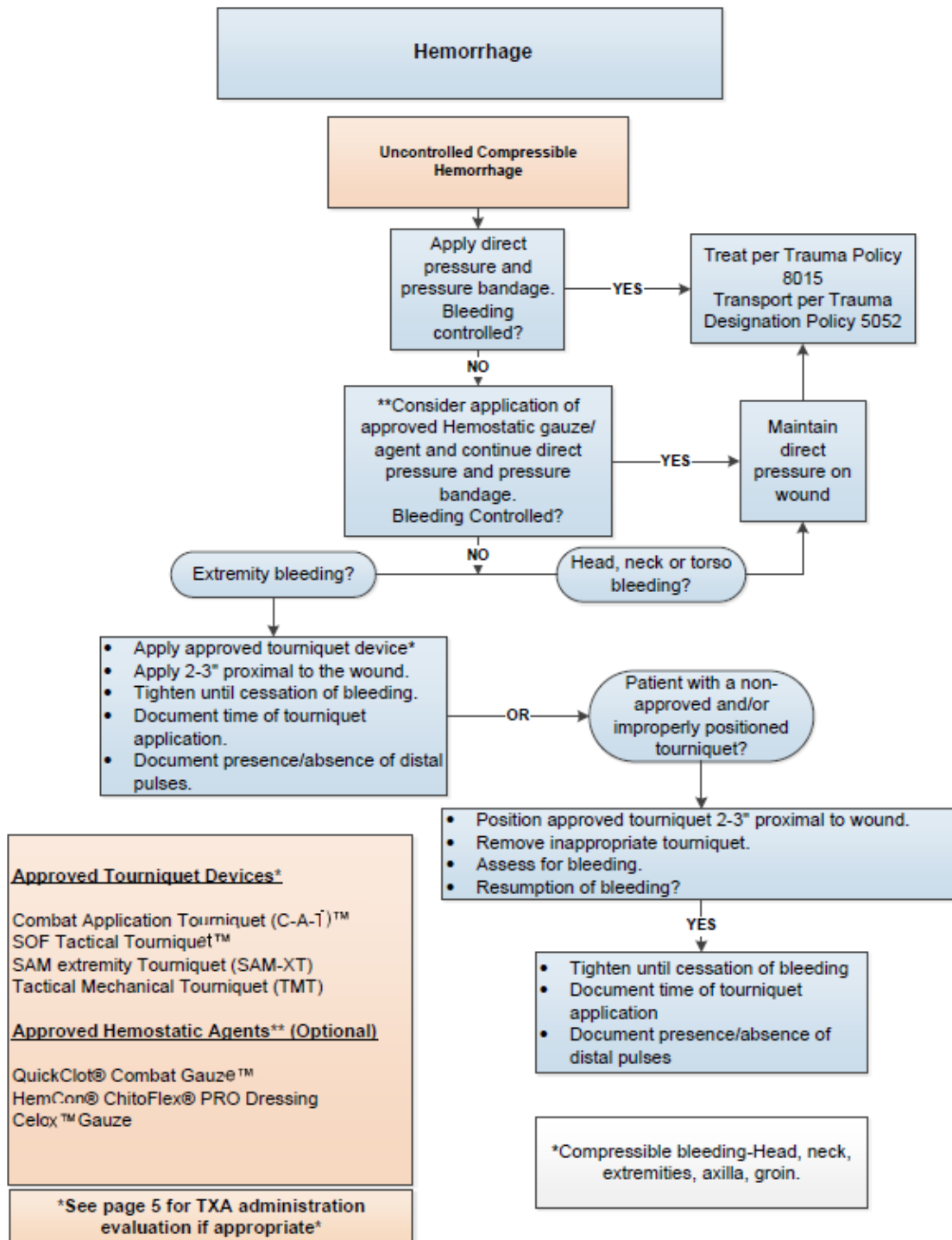
BLS:

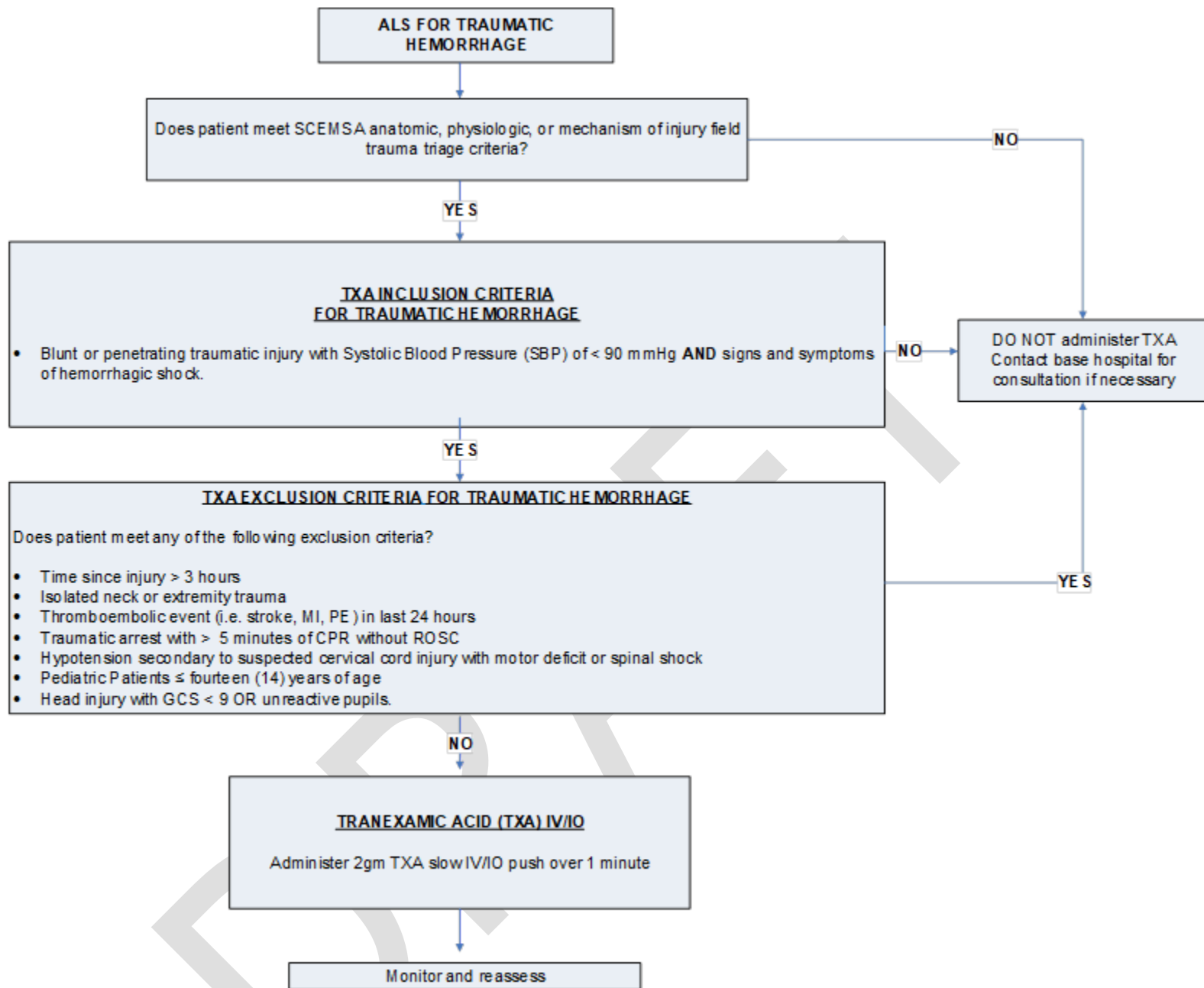
7. Assess C-A-B.
8. Secure airway.
9. Position of Comfort, reduce anxiety.
10. Suction as needed.
11. Apply ice and direct pressure across the bridge of the nose.
12. SpO2 with supplemental O2 as needed.

ALS:

6. Cardiac monitoring and ETCO2 measurement as available.
7. Vascular access, but do not delay airway management for suspected posterior hemorrhage.
8. Consider intubation for significant hypoxia, dyspnea, or impending airway loss.
9. For stable patients with epistaxis, encourage vigorous nose blowing to remove clotted blood.
10. Additional TXA use:
 - a. **Contraindication:** Known Allergy, severe local tissue injury or patient unstable.
 - b. **Preparation:** 500mg of TXA in 5mL via standard nebulizer.
 - c. **Application:** Deliver via face mask nebulizer with patient sitting upright.
 - d. **Adjuncts:** Combine with direct pressure via gauze to discrete bleeding site. Alternatively, a TXA soaked cotton pledget can be used for this purpose – prepared as in epistaxis protocol.

NOTE: ~~For additional TXA use (topical and nebulized) to control head, neck and oral bleeding, base hospital orders are required.~~





Cross References:

PD# 5052 –Trauma Destination Policy
PD# 5053 –Trauma Triage Criteria Policy
PD# 8015 – Trauma Policy
PD# 9017 – Pediatric Trauma