	COUNTY OF SACRAMENTO EMERGENCY MEDICAL SERVICES AGENCY	Document #	8065.12
	PROGRAM DOCUMENT: **Hemorrhage**	Initial Date:	02/28/13
		Last Approval Date:	12/14/23
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Signature on File	Signature on File
EMS Medical Director	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

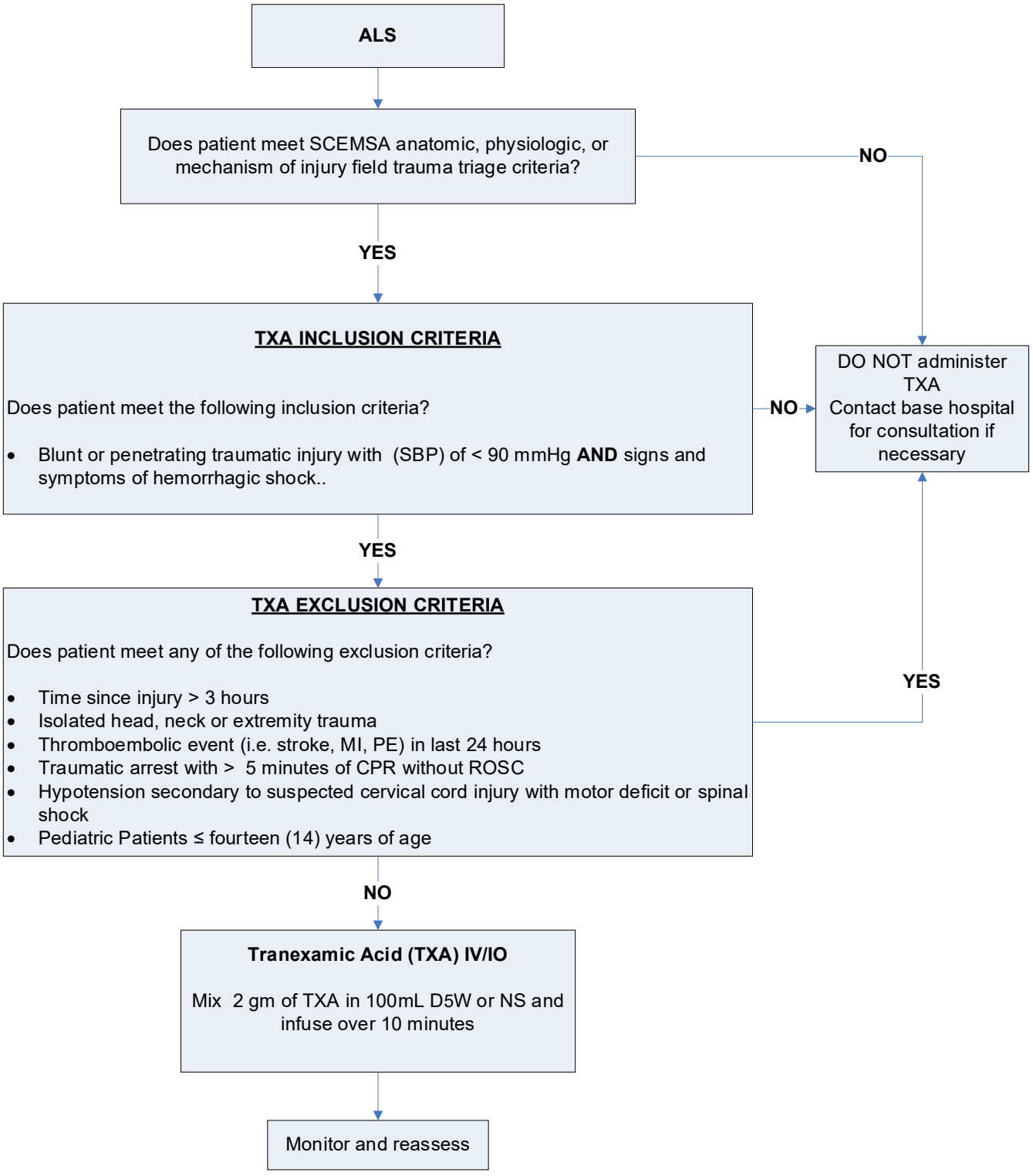
Notes:

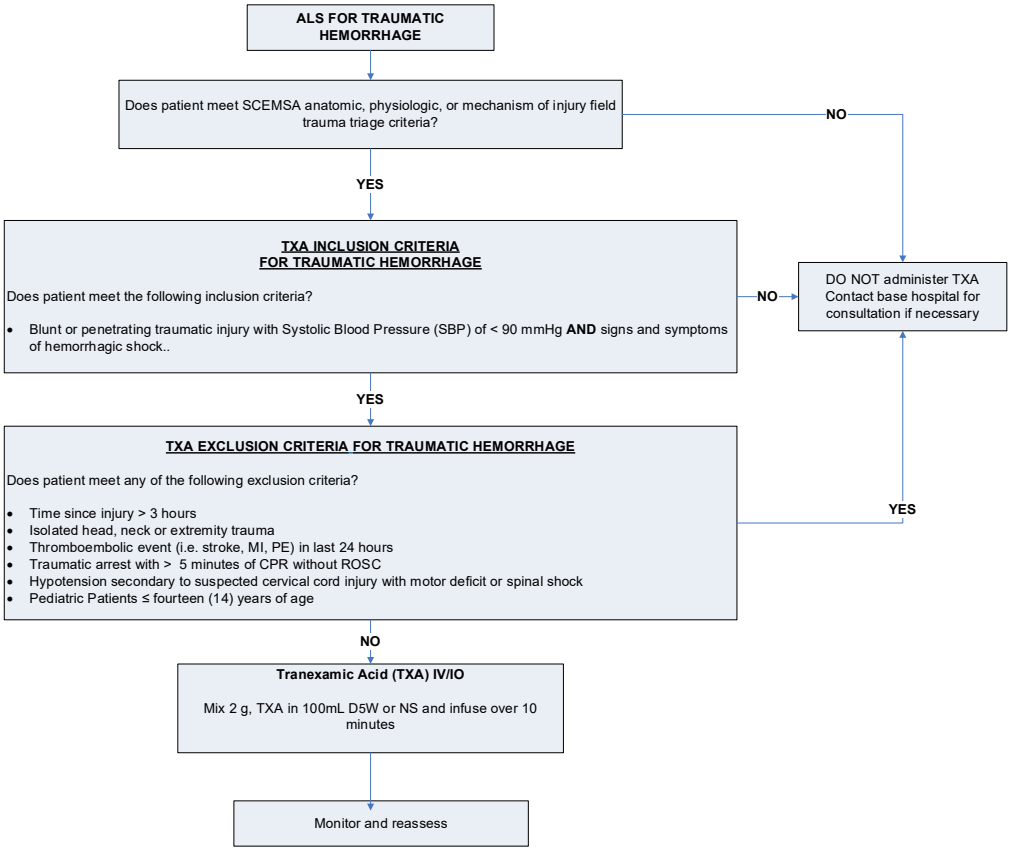
A. Life-threatening hemorrhage to a limb is best managed with splinting or stabilization of the limb to reduce movement and progress rapidly through the hemorrhage control algorithm below until bleeding is controlled.
B. Patients with major arterial bleeding can bleed to death in as little as two to 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 ≤ 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.

NOTE: Consider base hospital consult for TXA use in the control of head and neck 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 O_2 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. Prepare for intubation for significant hypoxia, dyspnea, or impending airway loss. 4. For stable patients with epistaxis, encourage vigorous nose blowing to remove clotted blood. 5. ~~Soak 500 mg of TXA on a cotton pledget and insert into the bleeding nostril. Make base hospital contact for TXA orders for management or epistaxis or oral bleeding.~~


ALS
Does patient meet SCEMSA anatomic, physiologic, or mechanism of injury field trauma triage criteria?
NO
YES
TXA INCLUSION CRITERIA
Does patient meet the following inclusion criteria?
• Blunt or penetrating traumatic injury with (SBP) of < 90 mmHg AND signs and symptoms of hemorrhagic shock..
NO
DO NOT administer TXA
Contact base hospital for consultation if necessary
YES
TXA EXCLUSION CRITERIA
Does patient meet any of the following exclusion criteria?
• Time since injury > 3 hours
• Isolated head, neck or extremity trauma
• Thromboembolic event (i.e. stroke, MI, PE) in last 24 hours
• Traumatic arrest with > 5 minutes of CPR without ROSC
• Hypotension secondary to suspected cervical cord injury with motor deficit or spinal shock
• Pediatric Patients ≤ fourteen (14) years of age
YES
NO
Tranexamic Acid (TXA) IV/IO
Mix 2 gm of TXA in 100mL D5W or NS and infuse over 10 minutes
Monitor and reassess



Cross References: PD# 5052 –Trauma Destination Policy
PD# 5053 –Trauma Triage Criteria Policy
PD# 8015 – Trauma Policy
PD# 9017 – Pediatric Trauma,