	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

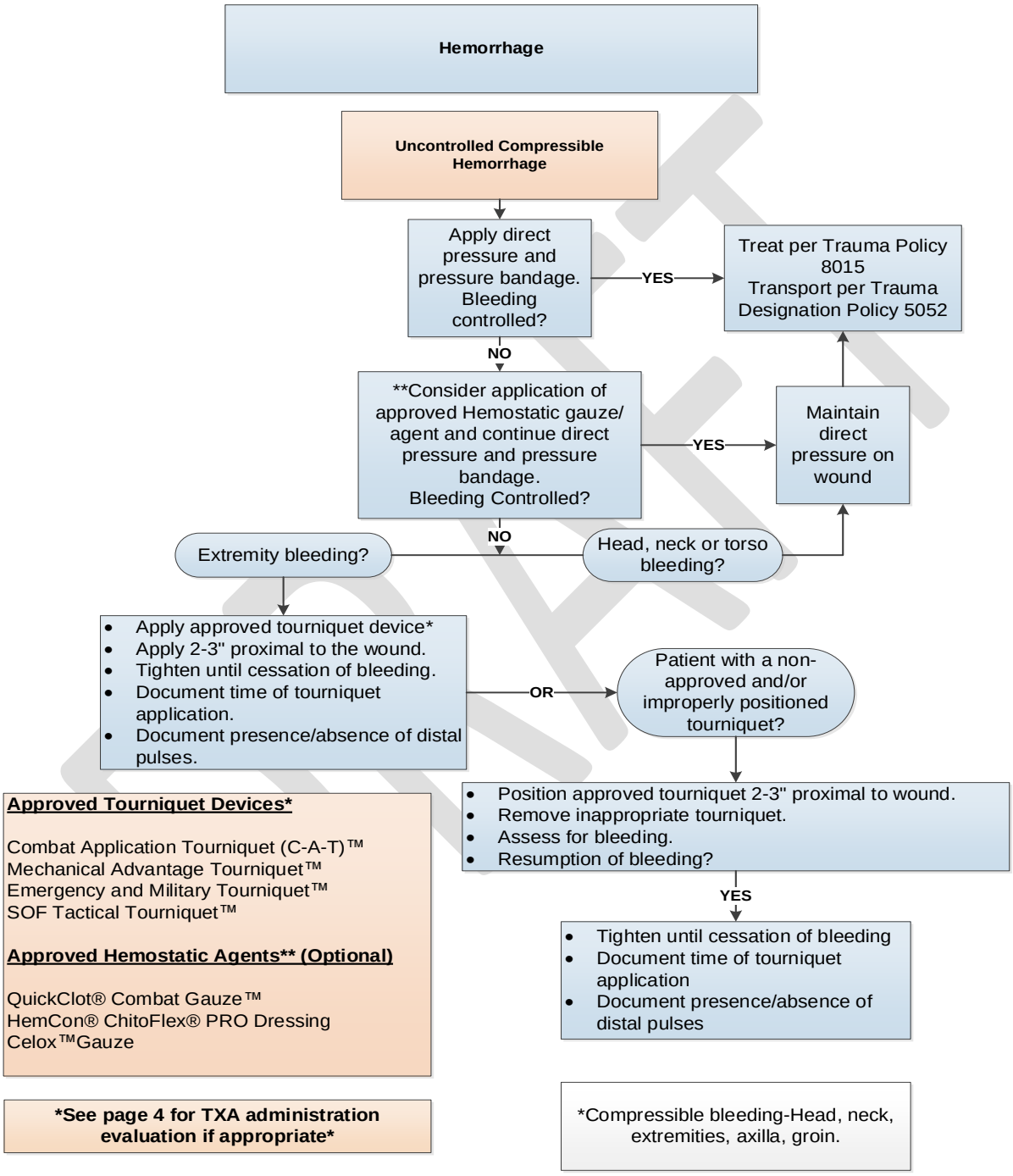
Notes:

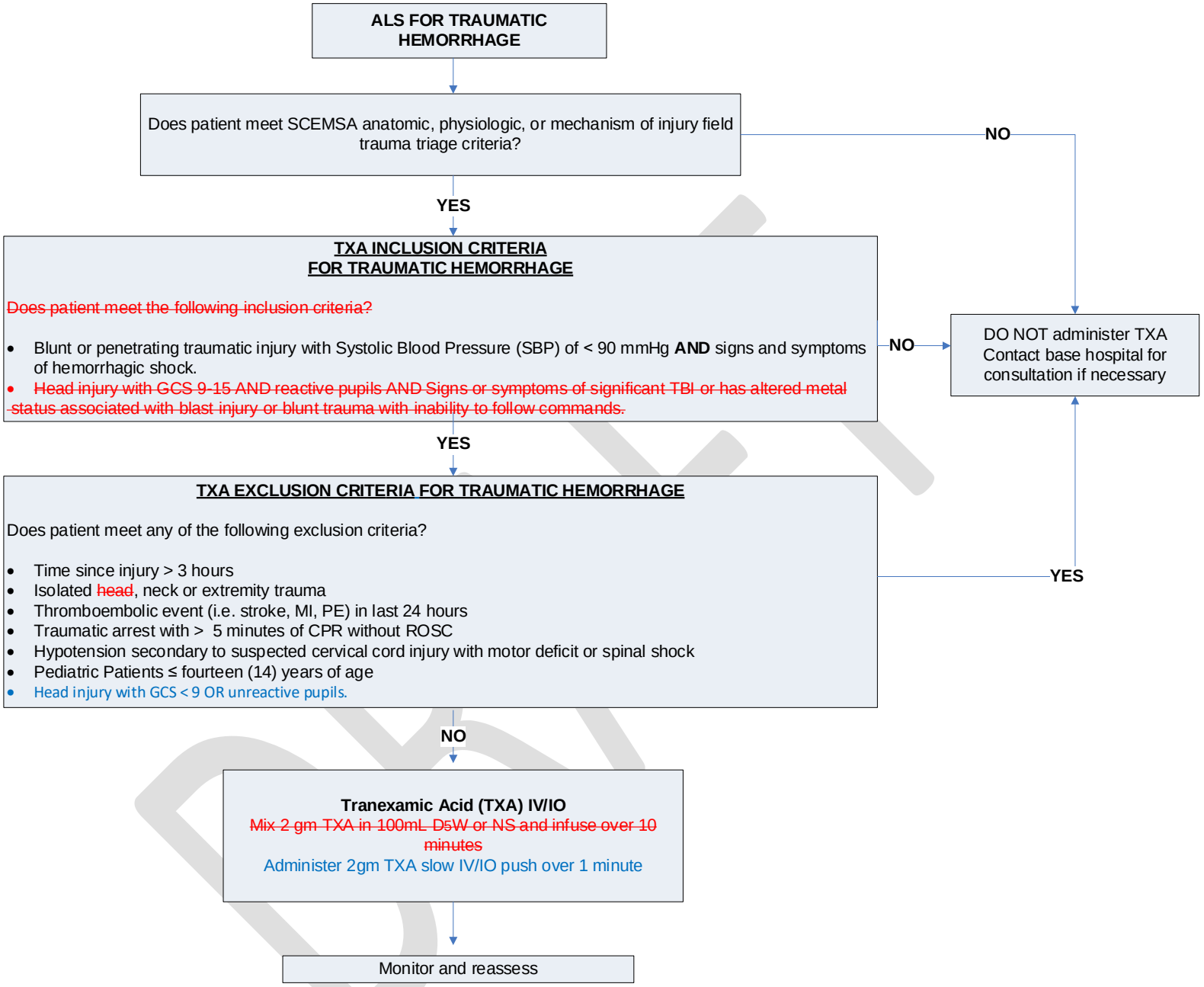
A. Life-threatening hemorrhage to a limb is best managed with splinting or stabilization of the limb to reduce movement and progress rapidly through the hemorrhage control algorithm below until bleeding is controlled.
B. Patients with major arterial bleeding can bleed to death in as little as two to 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 physician base 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. Consider intubation for significant hypoxia, dyspnea, or impending airway loss. 4. For stable patients with epistaxis, encourage vigorous nose blowing to remove clotted blood. **NOTE:** For additional TXA use (topical and nebulized) to control head, neck and oral bleeding, base hospital orders are required.


Hemorrhage
Uncontrolled Compressible Hemorrhage
Apply direct pressure and pressure bandage. Bleeding controlled?
YES
Treat per Trauma Policy 8015
Transport per Trauma Designation Policy 5052
NO
**Consider application of approved Hemostatic gauze/ agent and continue direct pressure and pressure bandage.
Bleeding Controlled?
YES
Maintain direct pressure on wound
NO
Extremity bleeding?
Head, neck or torso bleeding?
Apply approved tourniquet device*
Apply 2-3" proximal to the wound.
Tighten until cessation of bleeding.
Document time of tourniquet application.
Document presence/absence of distal pulses.
OR
Patient with a non-approved and/or improperly positioned tourniquet?
Position approved tourniquet 2-3" proximal to wound.
Remove inappropriate tourniquet.
Assess for bleeding.
Resumption of bleeding?
YES
Tighten until cessation of bleeding
Document time of tourniquet application
Document presence/absence of distal pulses
Approved Tourniquet Devices*
Combat Application Tourniquet (C-A-T)™
Mechanical Advantage Tourniquet™
Emergency and Military Tourniquet™
SOF Tactical Tourniquet™
Approved Hemostatic Agents** (Optional)
QuickClot® Combat Gauze™
HemCon® ChitoFlex® PRO Dressing
Celox™Gauze
See page 4 for TXA administration evaluation if appropriate
*Compressible bleeding-Head, neck, extremities, axilla, groin.



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