	COUNTY OF SACRAMENTO EMERGENCY MEDICAL SERVICES AGENCY	Document #	8065.11
	PROGRAM DOCUMENT: **Hemorrhage**	Initial Date:	02/28/13
		Last Approval Date:	06/11/20
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Signature on File	Signature on File
EMS Medical Director	EMS Administrator

Purpose:

A. To establish a guideline 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 progressing 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 (2) to three (3) 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 required a tourniquet shall be transported to University 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. 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 anti-coagulants. Tranexamic Acid (TXA) is only indicated by protocol below for traumatic bleeding.

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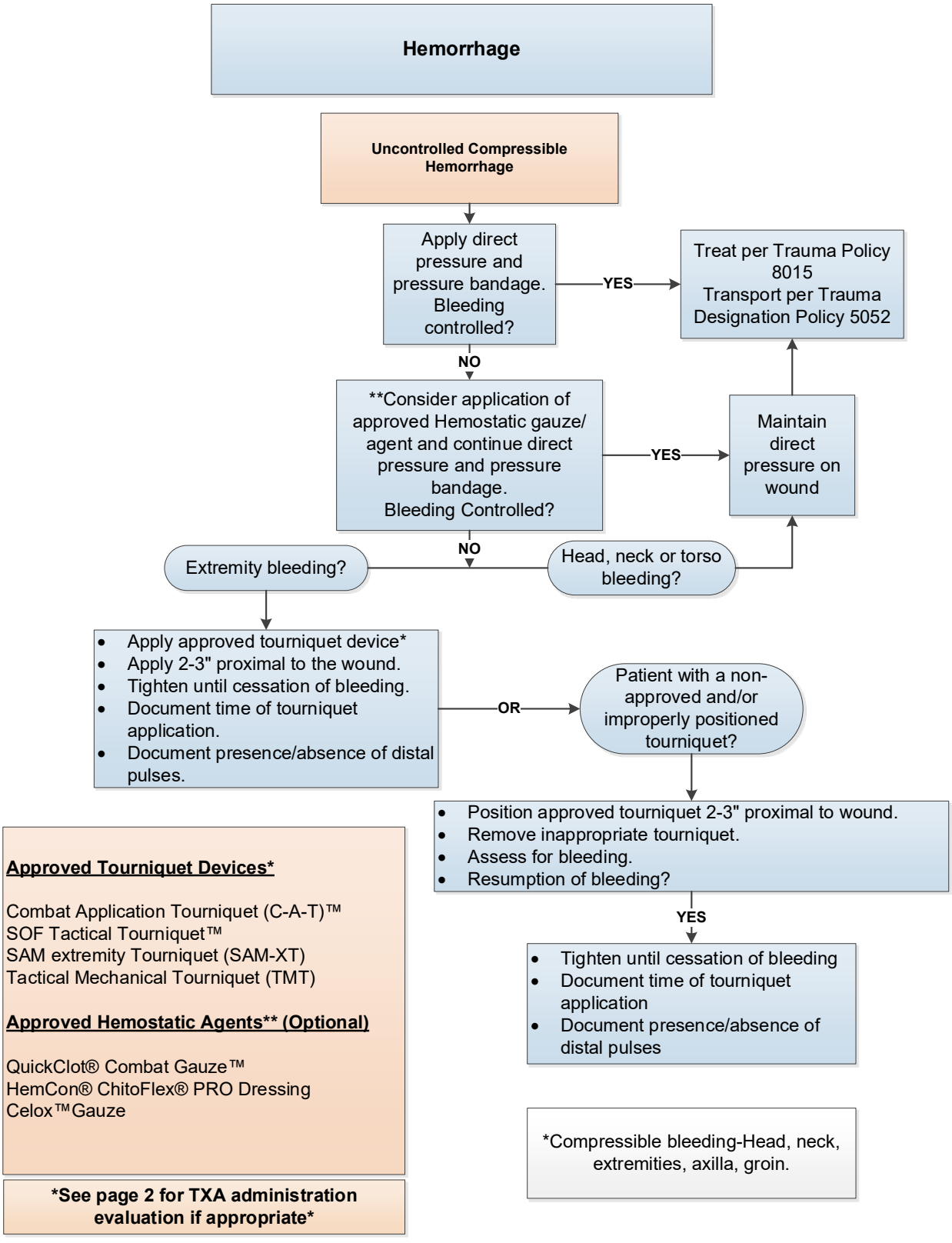
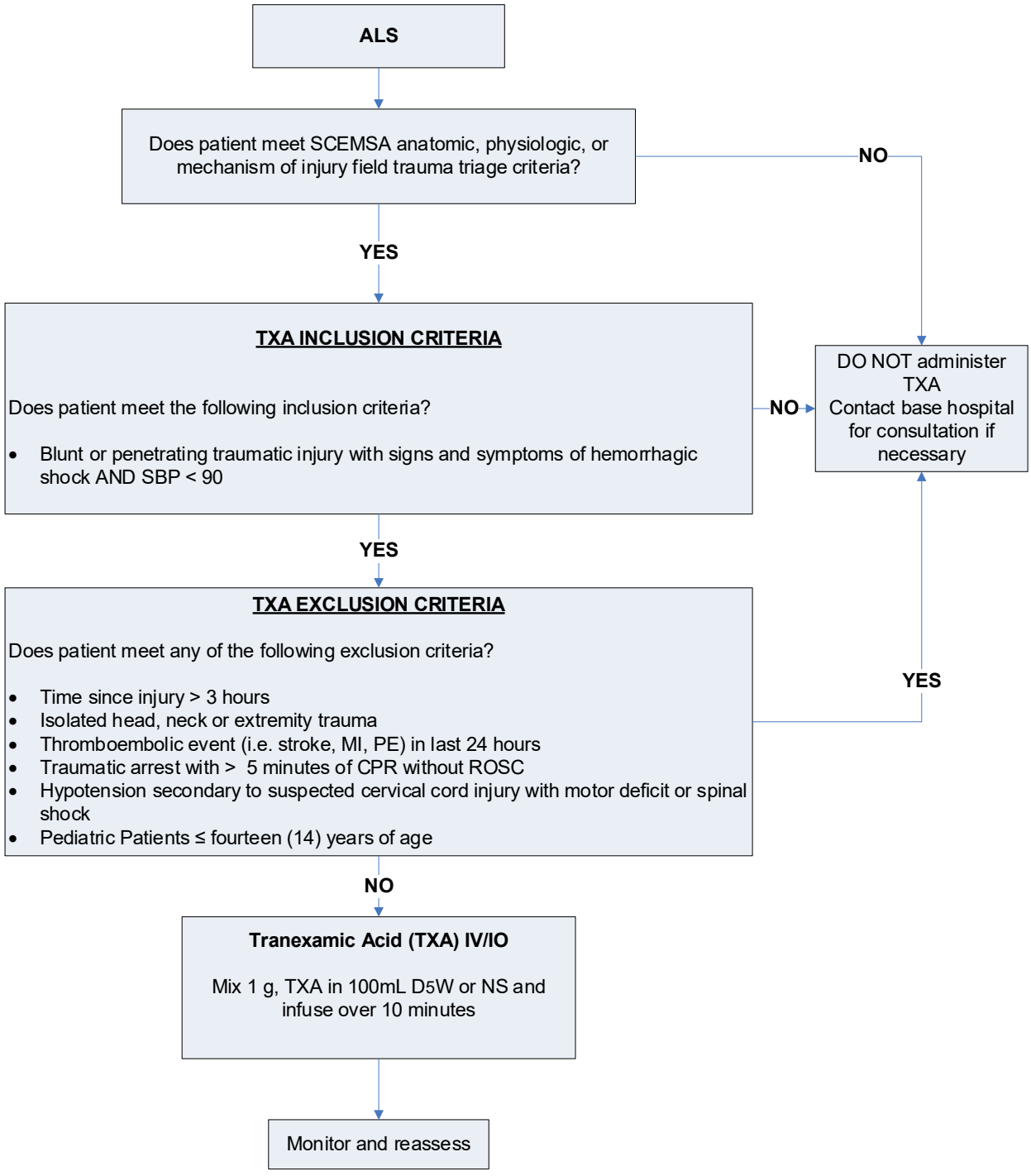

Hemorrhage
Uncontrolled Compressible Hemorrhage
Apply direct pressure and pressure bandage. Bleeding controlled?
YES
Treat per Trauma Policy 8015
Transport per Trauma Designation Policy 5052
NO
**Consider application of approved Hemostatic gauze/ agent and continue direct pressure and pressure bandage.
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)™
SOF Tactical Tourniquet™
SAM extremity Tourniquet (SAM-XT)
Tactical Mechanical Tourniquet (TMT)
Approved Hemostatic Agents** (Optional)
QuickClot® Combat Gauze™
HemCon® ChitoFlex® PRO Dressing
Celox™ Gauze
*Compressible bleeding-Head, neck, extremities, axilla, groin.
See page 2 for TXA administration evaluation if appropriate



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