	COUNTY OF SACRAMENTO EMERGENCY MEDICAL SERVICES AGENCY	Document #	8032.01
	PROGRAM DOCUMENT: **Traumatic Cardiac Arrest**	Initial Date:	06/22/21
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Signature on File	Signature on File
EMS Medical Director	EMS Administrator

Purpose:

A. To serve as the treatment standard for treating traumatic cardiac arrest patients.

Authority:

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

Protocol:

A. Patients with trauma in cardiac arrest who by prehospital presentation may have suffered a medical event before trauma shall undergo medical cardiac arrest resuscitation per policy document (PD) #8031, with attention and appropriate management to emergent trauma needs (hemorrhage control, pneumothorax decompression as indicated, and orthopedic immobilization as indicated)
B. The pathophysiology of Traumatic Cardiac Attest differs from medical Cardiac Arrest and is primarily due to one of or a combination of factors: hypovolemia, obstruction of blood flow, and hypoxia.
C. The initial cardiac rhythm for most patients in survivable traumatic cardiac arrest is pulseless electrical activity (PEA), and traumatic cardiac arrest PEA is most often a very low output state.
D. Because the etiology of traumatic cardiac arrest is different from medical cardiac arrest, traumatic cardiac arrest patients undergoing resuscitation shall be transported as quickly as possible to the hospital.

Policy:

BLS
1. Treat immediate threats to life 2. External hemorrhage control per Policy 8065 3. Airway and Breathing: Clear airway when indicated, place OPA, BVM ventilations 4. Chest Compressions: Chest compressions should be performed when possible without delaying transport or other treatments
ALS
1. Optimize Oxygenation/Ventilation • Advanced airway per policy • Advanced airway placement shall be confirmed with ETCO2 detection device or waveform Capnography 2. Correct potential obstructive shock - Maintain high Index of suspicion for tension

pneumothorax, Bilateral needle thoracotomy per policy 8015

3. Treat potential exsanguination
   - Obtain bilateral large-bore IV or IO access
   - 1 L normal saline bolus simultaneously via each IV/IO
   - Utilize pressure bag for rapid fluid administration
   - Repeat IVF during arrest until SBP>90
4. Treat Cardiovascular Collapse
   - High-quality CPR
   - ECG monitoring and appropriate defibrillation per Policy 8031
   - There is no role for Epinephrine or vasoactive medications in TCA
5. If palpable pulse becomes present:
   - Re-assess for and control external hemorrhage
   - Administer TXA as indicated per Policy 8065
   - Titrate normal saline to SBP ≥ 90 mmHg or palpable peripheral pulses

Post Resuscitation Considerations:

A. Any traumatic cardiac arrest patient who has a Return of Spontaneous Circulation (ROSC) during any part of the resuscitation, and who is transported, shall be transported to a Trauma Center.
   1. Any other Cardiac Arrest patient who is transported shall be transported to the time closest hospital.

B. Intravenous (IV) or Intraosseous (IO) fluids should be placed wide open with pressure bags.

Termination of Resuscitation Considerations:

A. If transportation has not yet been started, consider termination of resuscitation efforts after twenty (20) minutes of Advanced Life Support (ALS) care if BOTH of the following are present:
   1. Pulseless, apneic, or agonal, or apneustic respirations with no signs of life (non-reactive pupils, no response to pain, no spontaneous movement).
   2. Asystole, or wide complex PEA with HR < 40 bpm.

Cross Reference:

PD# 8024 - Cardiac Dysrhythmias
PD# 8026 - Respiratory Distress
PD# 8031 - Cardiac Arrest
PD# 8065 - Hemorrhage Control
PD# 8015 - Trauma