

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

 Signature on File
 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 Arrest 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
<ol style="list-style-type: none"> 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
<ol style="list-style-type: none"> 1. Optimize Oxygenation/Ventilation <ul style="list-style-type: none"> • 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 PD# 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 PD# 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 \geq 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
 PD# 8044 – Spinal Motion Restrictions
 PD# 2033 – Determination of Death
 PD# 2085 – Do Not Resuscitate