

	COUNTY OF SACRAMENTO EMERGENCY MEDICAL SERVICES AGENCY	Document #	8032.02
	<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. The pathophysiology of traumatic cardiac arrest differs from medical cardiac arrest and is primarily due to one or a combination of factors: hypovolemia, obstruction of blood flow, and hypoxia.
- B. The initial cardiac rhythm for most patients in survivable traumatic cardiac arrest is pulseless electrical activity (PEA). Traumatic cardiac arrest PEA is most often a very low output state due to hypovolemia.
- C. Traumatic cardiac arrest patients undergoing resuscitation shall be transported as quickly as possible to the hospital.
- D. 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# 8031 - Cardiac Arrest, with attention and appropriate management to emergent trauma needs (hemorrhage control, pneumothorax decompression as indicated, and orthopedic immobilization as indicated)
- E. There is no evidence-based medical support for the use of medications in traumatic cardiac arrest. In traumatic arrest, Epinephrine and Amiodarone are **NOT** indicated in traumatic cardiac arrest. ~~Epinephrine will not correct arrest caused by a tension pneumothorax, cardiac tamponade, or hemorrhagic shock.~~ If there is any doubt as to the cause of the arrest, treat it as a non-traumatic arrest.

Policy:

BLS
1. Treat immediate threats to life 2. External hemorrhage control per PD# 8065 - Hemorrhage Control. Apply tourniquets as necessary. 3. Airway and Breathing: Clear airway when indicated; place OPA and BVM ventilation. 4. Chest Compressions: Chest compressions should be performed, when possible, without delaying transport or other treatments. Chest compressions/high-quality CPR for any rhythm other than Wide Complex PEA < 40 bpm or Asystole.

5. The use of a Mechanical CPR Device should be omitted if it will cause a delay in transport.
6. Expedite transport to the closest Trauma Center.

ALS

- ~~1. Optimize Oxygenation/Ventilation~~
 - ~~• Advanced airway as needed per policy.~~
 - ~~• Advanced airway placement shall be confirmed with an ETCO₂ detection device or waveform Capnography.~~
 - ~~2. Correct potential obstructive shock – Maintain high Index of suspicion for tension pneumothorax, Bilateral needle thoracostomy per PD# 8015 – Trauma~~
 - ~~3. Treat potential exsanguination~~
 - ~~• Obtain two (2) large-bore IV or IO access.~~
 - ~~• 1 Liter normal saline bolus simultaneously via each IV/IO.~~
 - ~~• Utilize a pressure bag for rapid fluid administration.~~
 - ~~• Reassess lung sounds after each Liter.~~
 - ~~• Repeat IV fluid during arrest until SBP > 90 or a maximum of 4 liters is administered.~~
 - ~~4. Treat Cardiovascular Collapse~~
 - ~~• High-quality CPR.~~
 - ~~• ECG monitoring and appropriate defibrillation per PD# 8031 – Non-Traumatic Cardiac Arrest.~~
1. Continue transport with BLS airway if adequate ventilation/chest rise is achieved. Advanced airway as needed per policy.
 2. Correct potential obstructive shock – maintain a high index of suspicion for tension pneumothorax. Bilateral needle thoracostomy per PD# 8015 – Trauma.
 3. Obtain large-bore IV or IO access. Give 1 liter of Normal Saline bolus by pressure bag infusion.
 4. Cardiac monitoring – defibrillate shockable rhythms.

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.
- B. Intravenous (IV) or Intraosseous (IO) fluids should be placed wide open with pressure bags.
- C. If a palpable pulse becomes present:
 1. Re-assess for and control external hemorrhage.
 2. Administer TXA as indicated per PD# 8065 – Hemorrhage Control.
 3. Titrate normal saline to SBP ≥ 90 mmHg or palpable peripheral pulses.

Cross Reference:

PD# 2033 – Determination of Death
 PD# 2085 – Do Not Resuscitate
 PD# 8015 – Trauma
 PD# 8020 – Respiratory Distress - Airway Management
 PD# 8024 – Cardiac Dysrhythmias
 PD# 8026 – Respiratory Distress
 PD# 8031 – Non-Traumatic Cardiac Arrest
 PD# 8044 – Spinal Motion Restrictions
 PD# 8065 – Hemorrhage Control

