	COUNTY OF SACRAMENTO EMERGENCY MEDICAL SERVICES AGENCY	Document #	8032.02
	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. 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.~~

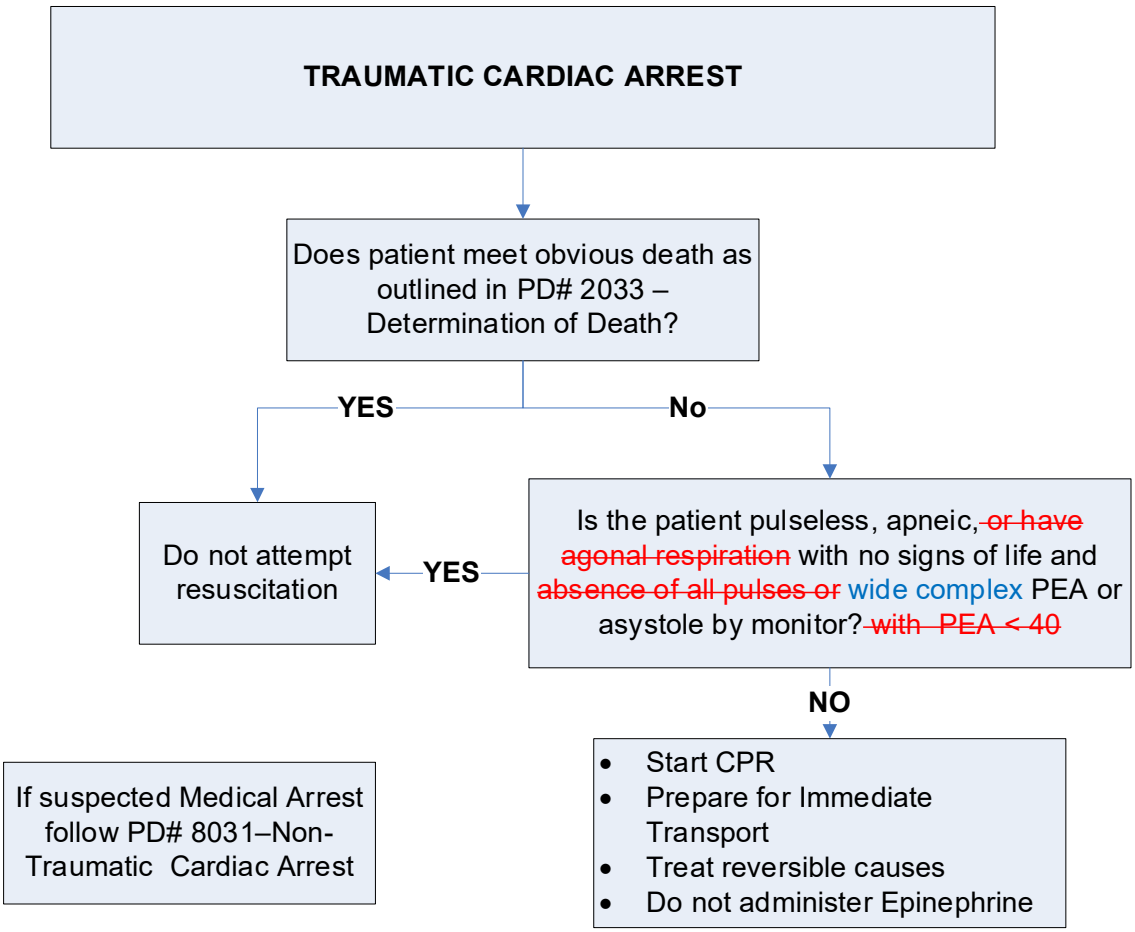
~~4. Treat Cardiovascular Collapse~~
- ~~High-quality CPR.~~
- ~~ECG monitoring and appropriate defibrillation per PD# 8031 – Non-Traumatic Cardiac Arrest.~~

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 $\geq$ 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


TRAUMATIC CARDIAC ARREST
Does patient meet obvious death as outlined in PD# 2033 – Determination of Death?
YES
No
Do not attempt resuscitation
YES
Is the patient pulseless, apneic, ~~or have agonal respiration~~ with no signs of life and ~~absence of all pulses or~~ wide complex PEA or asystole by monitor? ~~with PEA < 40~~
NO
If suspected Medical Arrest follow PD# 8031–Non-Traumatic Cardiac Arrest
• Start CPR
• Prepare for Immediate Transport
• Treat reversible causes
• Do not administer Epinephrine