	COUNTY OF SACRAMENTO EMERGENCY MEDICAL SERVICES AGENCY	Document #	8032.01
	PROGRAM DOCUMENT: **Traumatic Cardiac Arrest**	Initial Date:	06/22/21
		Last Approval Date:	03/10/22
		Effective Date:	07/01/22
		Next Review Date:	03/01/22

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 of 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 arrest, treat as a non-traumatic arrest.

Policy:

BLS
1. Treat immediate threats to life 2. External hemorrhage control per PD# 8065 - Hemorrhage Control 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 as needed 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 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 pressure bag for rapid fluid administration • Reassess lung sounds after each Liter • Repeat IV fluid during arrest until SBP>90 ~~or 4 liters~~ or maximum of 4 liters administered 4. Treat Cardiovascular Collapse • High-quality CPR • ECG monitoring and appropriate defibrillation per PD# 8031 – Cardiac Arrest

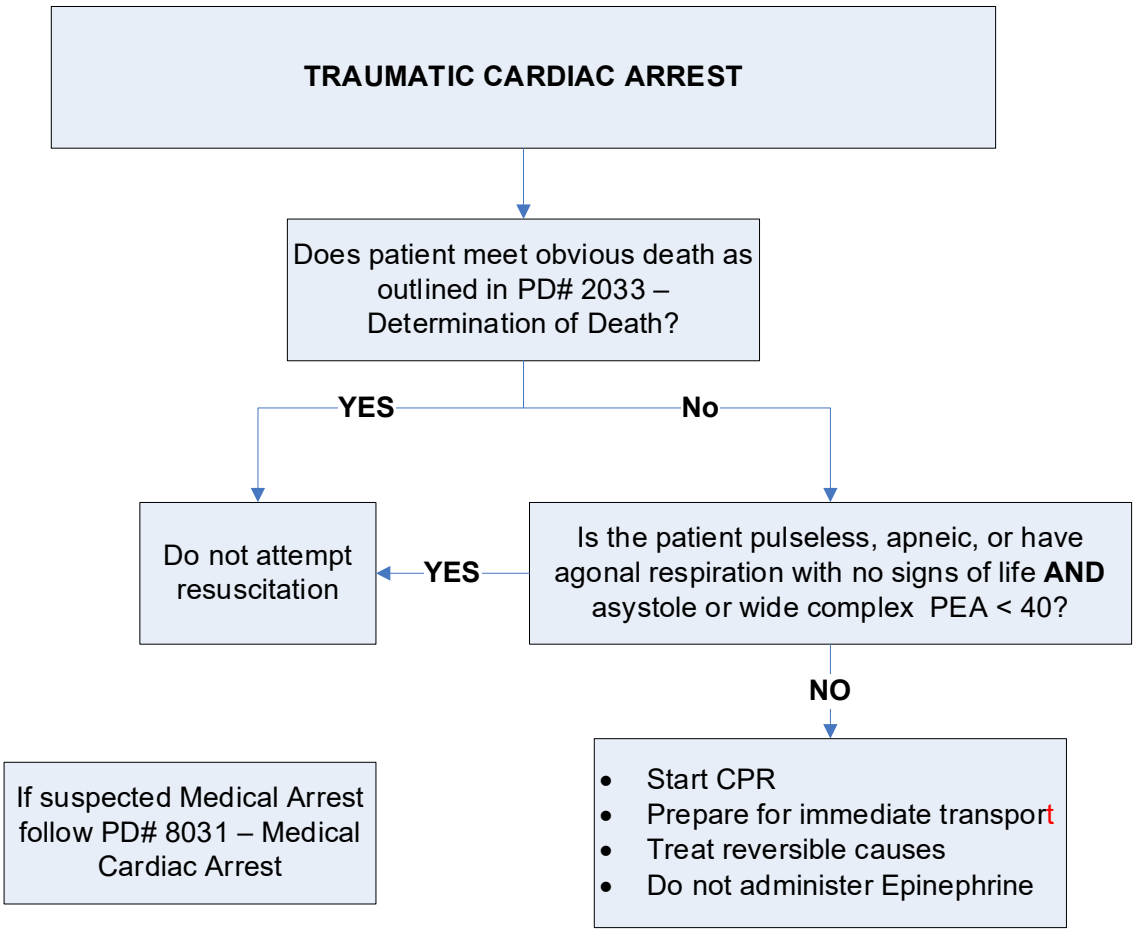
Post Resuscitation Considerations:

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 palpable pulse becomes present:
- Re-assess for and control external hemorrhage
- Administer TXA as indicated per P# 8065 – Hemorrhage Control
- 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 – 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 asystole or wide complex PEA < 40?
NO
If suspected Medical Arrest follow PD# 8031 – Medical Cardiac Arrest
Start CPR
Prepare for immediate transport
Treat reversible causes
Do not administer Epinephrine