Pulseless Electrical Activity

Cardiac Arrest

CRITERIA

- Patient unresponsive, without pulse or respiration, and with Pulseless Electrical Activity evident on ECG (check 2 leads) or AED advising not to shock
- Patients with rigor mortis, lividity, decomposition or injuries inconsistent with survival (e.g. decapitation) are excluded
- Determine DNR status

PROTOCOL

EMR	Follow *General – Universal Patient Care/Initial Patient Contact protocol.*	**EMR**
EMR	Follow American Heart Association guidelines for CPR	**EMR**
I	Administer one dose of ***Epinephrine 1:10,000 1 mg IV/IO***. Epinephrine should be administered every 3-5 minutes during cardiac arrest.	**I**
I	For arrest in **Renal Dialysis patients only,** also administer the following medications: ***Calcium Chloride 1 g IV/IO push*** followed by ***Normal Saline 40 mL flush*** followed by ***Sodium Bicarbonate 1 mEq/kg IV/IO*** and repeat in 10 minutes if no change and medications are available	**I**
EMT	Consider spinal immobilization	**EMT**
	For Return Of Spontaneous Circulation (ROSC) refer to *Cardiac Arrest – Post Resuscitation Care protocol)*	

DETERMINING MEAN ARTERIAL PRESSURE

$$MAP = \frac{2(DBP) + SBP}{3}$$

PEARLS

The American Heart Association guidelines emphasize the importance of effective uninterrupted CPR during cardiac arrest. The following points are applicable in the non-shockable cardiac arrest protocols:

- Do not compromise CPR to obtain an advanced airway; consider Blind Insertion Airway Device
- Once advanced airway is obtained, perform asynchronous CPR
- Ensure full chest recoil during CPR
- Obtain IV/IO access at earliest opportunity

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- Identify and treat potentially reversible causes:
    - Hypoxia
    - Hyperkalemia or hypokalemia
    - Hypothermia
    - Hypovolemia
    - Hydrogen ion (acidosis)
    - Tablets (drug overdose)
    - Tension pneumothorax
    - Tamponade (cardiac)
    - Thrombosis (cardiac, pulmonary)
    - Toxins
    - Trauma
- All medications in the treatment of non-shockable cardiac arrest are standing order for paramedics
- If there is no ***Epinephrine 1:10,000 preloaded syringe***, combine in a ***10 mL syringe*: *1 mg (1 mL) of Epinephrine 1:1,000 with 9 mL 0.9% Normal Saline***. This creates the same as an ***Epinephrine 1:10,000 preloaded syringe***
- **DO NOT** place combo pads or electrodes directly atop an Automated Internal Cardiac Defibrillator (AICD), implanted pacemaker or medication patch.

ALS care should be obtained as rapidly as possible, but do not delay transport waiting for ALS.