Pediatric Asystole/PEA

Effective July 2020

For non-traumatic cardiac arrest in which any resuscitation is initiated, NOT dead on arrival

**History**
- Events leading to arrest
- Estimated downtime
- Past medical history
- Medications
- End stage renal disease
- Suspected hypothermia
- Suspected overdose
  - Tricyclic
  - Digitalis
  - Beta blockers
  - Calcium channel blockers
- DNR, POLST, or Living Will

**Signs and Symptoms**
- Pulseless
- Apneic or agonal respirations
- No electrical activity on ECG
- No heart tones on auscultation

**Differential**
- Airway obstruction/respiratory disease
- Hypovolemia (e.g., trauma or other)
- Cardiac tamponade
- Hypothermia
- Drug overdose (e.g., tricyclic, digitalis, beta blockers, or calcium channel blockers)
- Myocardial infarction
- Hypoxia
- Tension pneumothorax
- Pulmonary embolus
- Acidosis
- Hyperkalemia

**AT ANY TIME**
Return of spontaneous circulation

Go to Post Resuscitation TP

**Cardiac Arrest-Non traumatic**

Begin chest compressions (15:2 ratio)
1.5 inches for infants; 2 inches for children
Change compressors every 2 minutes
(Limit changes/pulse checks to < 5 seconds)

Shockable rhythm?

Search for reversible causes and treat appropriately

Establish IV/IO

Normal Saline Bolus
Use Broselow Tape; refer to dosing guide
May repeat x2

Epinephrine (1:10,000)
Use Broselow Tape; refer to dosing guide

Criteria for discontinuation?

Return of spontaneous circulation?

Notify receiving facility.
Consider Base Hospital for medical direction

Reversible Causes
- Hypovolemia
- Hypoxia
- Hydrogen ion (acidosis)
- Hypothermia
- Hypo/Hyperkalemia
- Hypoglycemia
- Tension pneumothorax
- Tamponade (cardiac)
- Toxins
- Thrombosis (pulmonary)(PE)
- Thrombosis (coronary)(MI)

12 Lead EKG
ETCO2 documentation
Base Hospital Contact for PEA
Discontinue Resuscitation
Follow Operations 10 – Determination of Death

Post Resuscitation
Pearls

- Airway is a more important intervention in pediatric arrests. This should be accomplished quickly with a BVM, airway adjunct, and appropriately sized mask. Patient survival is often dependent on proper ventilation and oxygenation.
- Efforts should be directed at high quality chest compressions with limited interruptions.
- Use appropriately sized pediatric BVM with EtCO₂.
- Do not delay chest compressions while applying any device or intervention.
- Use a metronome during chest compression to ensure proper rate.
- Provide resuscitative efforts for 30 minutes to maximize chance of ROSC.
- If resuscitative efforts do not attain ROSC, consider cessation of efforts per Operations 10 – Determination of Death.
- Resuscitation is based on proper planning and organized execution. Procedures require space and patient access. Make room to work. Utilize a team focused approach assigning responders to predetermined tasks.
- Reassess airway and document EtCO₂ frequently.
- Defibrillation vests should be removed by EMS personnel before compressions, but do not cut vests. Once removed, disengage battery to prevent alarming.
- Pediatric pads should be used in children < 10kg or measurement of Purple.