

# Pediatric Asystole/PEA

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**

**E**  
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?

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

**P**  
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?

12 Lead EKG  
ETCO<sub>2</sub> documentation  
Base Hospital Contact for PEA  
Discontinue Resuscitation  
Follow Operations 10 – Determination of Death

Return of spontaneous circulation?

Notify receiving facility.  
Consider Base Hospital for medical direction

**Post Resuscitation**

Pediatric Cardiac Arrest Treatment Protocols



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## 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 EtCO<sub>2</sub>.
- 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 EtCO<sub>2</sub> 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.

