



## PEDIATRIC CARDIAC ARREST

**Effective:** January 1, 2022  
**Replaces:** January 1, 2021  
**Review:** January 1, 2024

### 1. BLS Treatment

- 1.1. High quality uninterrupted CPR (**700-S01**)
- 1.2. Routine Medical Care – Pediatric (**700-S05**)
- 1.3. Confirm status of DNR / POLST
  - 1.3.1. Do not delay care and/or CPR while confirmation is being made (Policy 604)
- 1.4. Secure airway with **Oropharyngeal airway (OPA)**
- 1.5. **BVM** – Ventilate once every three seconds (1:3), with supplemental oxygen
- 1.6. **Apply AED** and follow device instructions

### 2. ALS Treatment

- 2.1. **Supraglottic airway device** (LMA Supreme)
  - 2.1.1. If Supraglottic airway attempts fail:
    - 2.1.1.1. **Oropharyngeal airway (OPA)**
- 2.2. **EtCO<sub>2</sub>** continuous numeric and waveform monitoring
- 2.3. Utilize length-based resuscitation tape to determine patient weight
- 2.4. **Vascular Access (IV) or (IO)**, TKO
  - 2.4.1. Consider **20ml/kg Fluid bolus**, max single dose of 250ml, repeat as needed
- 2.5. Place on cardiac monitor and treat accordingly
- 2.6. If Return of Spontaneous Circulation (ROSC) occurs after any intervention, obtain **12 Lead ECG** and transport to closest receiving facility (Policy 602)

### 3. Ventricular Fibrillation and Pulseless Ventricular Tachycardia

- 3.1. **Defibrillation: 2 joules/kg, 4 joules/kg, 4 joules/kg**
  - 3.1.1. Starting with lowest energy setting (2 joules/kg)
  - 3.1.2. Each subsequent counter shock increasing in energy
- 3.2. **Epinephrine (1:10,000) 0.01mg/kg IV / IO**, repeat every 3-5 minutes for the duration of the arrest
- 3.3. **Amiodarone 5mg/kg IV / IO**, single dose only
- 3.4. **BASE CONTACT**: Consult for further instruction on Amiodarone dosages, if there is a successful conversion to a sustained pulsatile rhythm or (ROSC)



#### 4. Asystole

- 4.1. **Epinephrine (1:10,000) 0.01mg/kg IV / IO**, repeat every 3-5 minutes for the duration of the arrest
- 4.2. Provider may consider termination of resuscitative efforts after a total of at least twenty (20) minutes of resuscitation if:
  - 4.2.1. Arrest was not witnessed by the EMS provider
  - 4.2.2. No return of spontaneous circulation (ROSC) prior to transport
  - 4.2.3. No shock was delivered by AED or manual defibrillation

#### 5. Pulseless Electrical Activity

- 5.1. Identify and treat any reversible causes
  - 5.1.1. **Hypovolemia:** Consider **20ml/kg Fluid bolus**, may repeat as needed (700-P10)
  - 5.1.2. **Hypoxia:** Ensure that the patient is adequately ventilated, utilizing an airway adjunct and bag valve mask with a supplemental oxygen supply
    - 5.1.2.1. Ensure proper chest rise and fall
    - 5.1.2.2. If there is question of endotracheal tube placement (esophageal intubation), provider should extubate the patient and return to a BLS airway
  - 5.1.3. **Hyperkalemia:** Peaked T-waves, with possible widening of the QRS complex:
    - 5.1.3.1. Consider **Calcium Chloride 10mg/kg IV/ IO**, max dose 1gm
    - 5.1.3.2. Consider **Sodium Bicarbonate 1mEq/kg IV / IO**, max dose 50mEq
  - 5.1.4. **Hypothermia:** Consider rewarming measures (700-P09)
    - 5.1.4.1. Patients that are hypothermic can be unresponsive to pharmaceutical therapy and electrical therapy
  - 5.1.5. **Tension Pneumothorax:** Perform pleural decompression (700-M02)
- 5.2. **Epinephrine (1:10,000) 0.01mg/kg IV / IO** May repeat every 3-5 minutes for the duration of the arrest
- 5.3. Treat any rhythm changes according to correct treatment protocol
  - 5.3.1. If the PEA changes to asystole, the provider may follow the criteria in section 4.2.

#### 6. Traumatic Cardiac Arrest

- 6.1. If the patient is asystolic, terminate resuscitative efforts
  - 6.1.1. Automated CPR devices are prohibited on traumatic pediatric arrest (700-M13)
  - 6.1.2. If a viable pulseless rhythm is present, treat accordingly

#### 7. Hypothermic Cardiac Arrest

- 7.1. Assess pulse for 45 seconds
- 7.2. If no pulse is present, **Start CPR**
- 7.3. If defibrillation is indicated, limit to one (1) shock until patient is warm
- 7.4. If patient presents with dysrhythmias, treat as appropriate
- 7.5. If core temperature is less than 86°F, withhold IV medications until body temperature rises



8. Pediatric Cardiac Arrest Treatment Flow Chart

