

POLICY: 555.11  
TITLE: Pediatric Cardiac Arrest – Non-Traumatic

EFFECTIVE: 02/01/2026  
REVIEW: 02/2028  
SUPERCEDES:

APPROVAL SIGNATURES ON FILE IN EMS OFFICE

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## PEDIATRIC CARDIAC ARREST – NON-TRAUMATIC

- I. AUTHORITY  
Health and Safety Code, Division 2.5, California Code of Regulations, Title 22, Division 9
- II. PURPOSE  
To serve as a patient treatment standard for EMRs, EMTs, and Paramedics within their scope of practice.
- III. PROTOCOL

**Provider Key: F = First Responder/EMR      E = EMT      O = EMT Local Optional SOP**  
**P = Paramedic                                      D = Base Hospital Physician Order Required**

	F	E	O	P	D
<b>ASSESSMENT</b>	X	X	X	X	
<b>HP-CPR:</b> including AED with AP pad placement. When available and <u>appropriate</u> *, use mechanical compression device or switch CPR providers every 2 minutes.	X	X	X	X	
<b>BLS AIRWAY:</b> okay if airway patent. Support ventilations with appropriate airway adjuncts.	X	X	X	X	
<b>OXYGEN:</b> ventilate with 100% oxygen.	X	X	X	X	
<b>ECG MONITOR:</b> lead placement may be delegated. Treat as indicated.				X	
<b>PULSE OXIMETRY:</b> apply and monitor.		X	X	X	
<b>SUPRAGLOTTIC AIRWAY:</b> if GCS is < 8 and not rapidly improving.			X	X	
<b>CAPNOGRAPHY:</b> apply and monitor if SGA has been placed.				X	
<b>VASCULAR ACCESS:</b> IV/IO, rate as indicated.				X	
<b>FLUID BOLUS:</b> NS 20 mL/kg as indicated. Reassess after each bolus.				X	
<b>EPINEPHRINE:</b> 0.01 mg/kg of 1:10,000 (0.1 mg/mL) IV/IO push. Repeat every 3 – 5 minutes. Maximum of 1 mg per administration.				X	
<b>VENTRICULAR FIBRILLATION - PULSELESS VENTRICULAR TACHYCARDIA</b>					
<b>DEFIBRILLATE:</b> 1 <sup>st</sup> defibrillation @ 2 joules/kg. Subsequent defibrillations @ 4 joules/kg, maximum 10 joules/kg of adult does.				X	
<b>AMIODARONE:</b> 5 mg/kg IV/IO bolus (max. 300mg). May repeat twice max 150mg.				X	

<b>MAGNESIUM SULFATE: For Torsade de Pointes</b> 50 mg/kg IV/IO, maximum total dose of 2 gm.				X	
	F	E	O	P	D
<b>CONSIDER</b>					
<b>TEST FOR GLUCOSE</b>		X	X	X	
<b>D10:</b> 2-4 mL/kg IV/IO if blood sugar < 70 mg/dL for age > 28 days old or 2 mL/kg IV/IO if blood sugar < 40 mg/dL age ≤ 28 days old. Recheck blood glucose and repeat as needed.				X	
<b>NALOXONE:</b> one spray pre-packaged IN (typically 2 – 4 mg) for respiratory depression. If opioid overdose is suspected, may repeat every 2 – 3 minutes in alternating nostrils, to a total of 12 mg. Consider alternate cause of obtundation/respiratory depression if ineffective.		X	X	X	
<b>NALOXONE:</b> 0.1 mg/kg IN/IM/IV/IO if mental status and respiratory effort are depressed and the child is not a newborn and there is a suspicion of opioid overdose. Maximum single dose 2 mg. Repeat every 5 minutes if indicated.				X	
<b>IF ROSC</b>					
<b>12 LEAD ECG:</b> treat as indicated.				X	
<b>PUSH DOSE EPINEPHRINE:</b>					
<ul style="list-style-type: none"> <li>• Draw up patient 0.01 mg/kg code dose 1:10,000 (0.1 mg/mL) epi</li> <li>• In same syringe, draw the necessary quantity of NS to total 10 mL</li> <li>• Label the syringe with “epi” and the calculated concentration in mcg/mL</li> <li>• Give 1 mL (1 mcg/kg) every 1-2 minutes and titrate to age appropriate SBP</li> </ul>				X	
	F	E	O	P	D
<b>**TERMINATION OF RESUSCITATION:</b>					
If NOT hypothermic, victim of submersion, or obviously pregnant AND after 15 two-minute cycles of HP-CPR performed and minimum one dose of epinephrine, no ROSC AND asystole on the monitor AND reversible causes identified/treated.	X	X	X	X	

\* Mechanical Chest Compressions device not recommended for 12 and under.

**\*\*Refer to Policy #570.20, Determination of Death in the Prehospital Setting**

**Reference: 10/17/2022 EMS Termination Of Resuscitation And Pronouncement of Death - StatPearls - NCBI Bookshelf (nih.gov) <https://www.ncbi.nlm.nih.gov/books/NBK541113/>**

**During CPR**

- Push hard (1/3 of Anterior-Posterior depth) and fast (at least 100/min)
- Ensure full chest recoil
- Minimize interruptions in chest compressions
- One cycle of CPR: 15 compressions then 2 breaths; 5 cycles = 1 – 2 min
- Avoid hyperventilation
- After advanced airway placement, give continuous chest compressions

**CONSIDER CAUSES AND TREAT PER TREATMENT GUIDELINES**

- Hypovolemia
- Hypoxia
- Hypo or Hyperkalemia
- Hypothermia

- Acidosis
- Toxins
- Cardiac Tamponade
- Tension Pneumothorax
- Thrombosis

**Pediatric Normal Vital Signs**

<i>Age</i>	HR	RR	BP	Temp (C)	Temp (F)
<i>Premie</i>	120-170	40-70	55-75/35-45	36-38	96.8-100.4
<i>0-3 months</i>	100-160	35-60	65-85/45-55	36-38	96.8-100.4
<i>3-6 months</i>	90-120	30-45	70-90/50-65	36-38	96.8-100.4
<i>6-12 months</i>	80-120	25-40	80-100/55-65	36-38	96.8-100.4
<i>1-3 years</i>	70-110	20-30	90-105/55-70	36-38	96.8-100.4
<i>3-6 years</i>	65-110	20-25	90-110/60-75	36-38	96.8-100.4
<i>6-12 years</i>	65-100	14-22	90-120/60-75	36-38	96.8-100.4
<i>12+</i>	55-100	12-20	100-135/65-85	36-38	96.8-100.4