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

EFFECTIVE: 07/01/2024
REVIEW: 07/2027
SUPERCEDES:

APPROVAL SIGNATURES ON FILE IN EMS OFFICE

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
ASSESSMENT	X	X	X	X	
HP-CPR: including AED. When available and appropriate, use mechanical compression device or switch CPR providers every 2 minutes. Avoid interruption.	X	X	X	X	
BLS AIRWAY: okay if airway patent. Support ventilations with appropriate airway adjuncts.	X	X	X	X	
OXYGEN: ventilate with 100% oxygen.	X	X	X	X	
ECG MONITOR: lead placement may be delegated. Treat as indicated.				X	
PULSE OXIMETRY: apply and monitor.		X	X	X	
SUPRAGLOTTIC AIRWAY: if GCS is < 8 and not rapidly improving.				X	
CAPNOGRAPHY: apply and monitor if SGA has been placed.				X	
VASCULAR ACCESS: IV/IO, rate as indicated.				X	
FLUID BOLUS: NS 20 mL/kg as indicated. Reassess after each bolus.				X	
EPINEPHRINE: 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	
VENTRICULAR FIBRILLATION - PULSELESS VENTRICULAR TACHYCARDIA					
DEFIBRILLATE: 1st time @ 2 joules/kg. Immediately restart CPR. Reassess rhythm every 2 minutes. Subsequent defibrillations @ 4 joules/kg.				X	
AMIODARONE: 5 mg/kg IV/IO, followed by 20 mL NS. Repeat twice at 5 minute intervals.				X	
LIDOCAINE: if refectory VF/VT 1 mg/kg IV/IO. Repeat every 3 – 5 minutes up to a total dose of 100 mg.				X	
MAGNESIUM SULFATE: For Torsade de Pointes 50 mg/kg IV/IO, maximum total dose of 2 gm.				X	

	F	E	O	P	D
CONSIDER					
TEST FOR GLUCOSE		X	X	X	
D10: 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	
NALOXONE: 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	
NALOXONE: 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	
IF ROSC					
12 LEAD ECG: treat as indicated.				X	
PUSH DOSE EPINEPHRINE: • Draw up patient 0.01 mg/kg code dose 1:10,000 (0.1 mg/mL) epi • In same syringe, draw the necessary quantity of NS to total 10 mL • Label the syringe with “epi” and the calculated concentration in mcg/mL • Give 1 mL (1 mcg/kg) every 1-2 minutes and titrate to age appropriate SBP				X	
	F	E	O	P	D
****TERMINATION OF RESUSCITATION:** 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	

****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
- Acidosis
- Toxins
- Cardiac Tamponade
- Tension Pneumothorax