	COUNTY OF SACRAMENTO EMERGENCY MEDICAL SERVICES AGENCY	Document #	9006.22
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	Pediatric Cardiac Arrest	Last Approved Date:	09/09/21
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EMS Medical Director

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EMS Administrator

# Purpose:

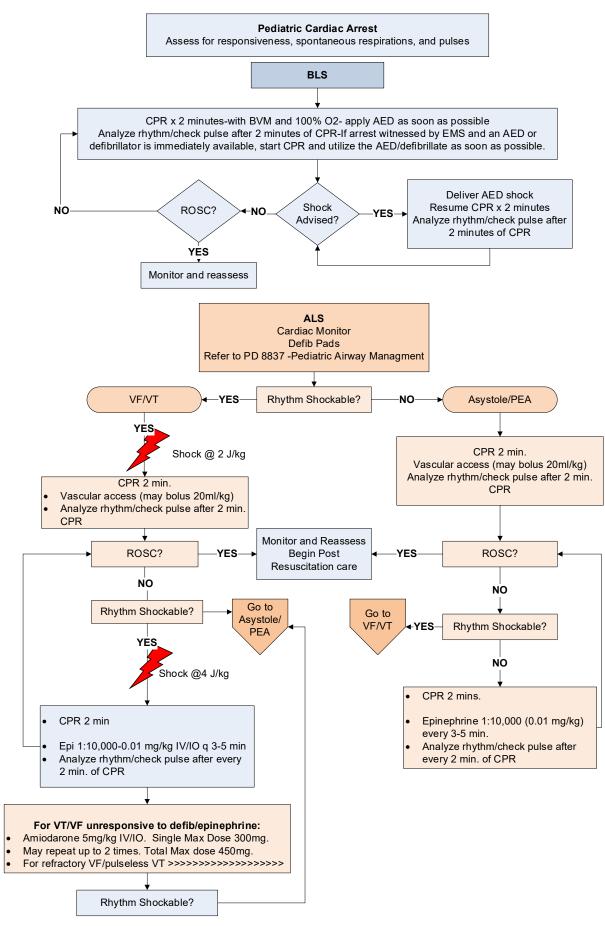
- A. To establish treatment standards in treating pediatric cardiac arrest patients.
- B. To establish pediatric treatment standards for Asystole, Pulseless Electrical Activity (PEA), Ventricular Fibrillation (VF), and Pulseless Ventricular Tachycardia (VT).

# Authority:

- A. California Health and Safety Code, Division 2.5
- B. California Code of Regulations, Title 22, Division 9

# Protocol:

- A. High-quality Cardiopulmonary Resuscitation (CPR) is fundamental to the management of all cardiac arrest rhythms. Periodic pauses in CPR should be as brief as possible and only as necessary to assess rhythm, shock VF/VT, vascular access, drug delivery, and perform a pulse check when an organized rhythm is detected or an advanced airway is placed for patients as per SCEMSA Policy 8837 Pediatric Airway Management.
- B. CPR must be performed with a "Chest Compression, Airway, Breathing" sequence (C-A-B) to emphasize the importance of maintaining blood flow with good compressions.
- C. Airway management per Pediatric Airway Management SCEMSA Policy; PD# 8837.
- D. Whenever feasible, transport the medical Durable Power of Attorney (DPOA) or immediate family member with the patient to the hospital. DPOA and immediate family members can provide medical insight and consent for special therapies or termination of resuscitation to hospital staff.
- E. The ability to maintain temperature in prehospital settings in pediatric patients is a significant problem with a dose-dependent increase in mortality for temperatures below 37°C or 98.6°F. Simple interventions to prevent hypothermia can reduce mortality. During transport, warm and maintain normal temperature, being careful to avoid hyperthermia.



#### CPR Quality:

- Push hard and fast (< 1 years of age 1.5 inches, >1 years of age, 2 inches) 100-120 times a minute and allow complete chest recoil.
- Minimize interruptions in compressions
- Avoid excessive ventilation
- Rotate compressor every 2 minutes or sooner if fatigued.
- If no advanced airway, 15:2 compressionventilation ratio.
- Advanced Airway: Waveform Capnography to confirm and monitor supraglotic airway placement.

#### Reversible Causes:

- Hypovolemia
- Hypoxia
- Hydrogen ion (acidosis)
- Hypo/Hyperkaliemia
- Hypothermia
- Tension pneumothorax Cardiac Tamponade
- Toxins
- Pulmonary Thrombosis
- Coronary Thrombosis Hypoglycemia
- Opiates

### POST RESUSCITATION CONSIDERATIONS:

- A. IV fluids should be placed at TKO unless hypotension is present.
- B. Post-resuscitation Bradycardia Dysrhythmia See PD# 9014 Cardiac Dysrhythmias Protocol
- C. Hypotension/Shock:
  - Administer 20ml/kg fluid bolus. Repeat once. Reassess vital signs and lung sounds after each bolus.
  - To determine if shock is present, assess capillary refill (≤ 2 seconds) and brachial and femoral pulses (absent, weak, or present).
  - Systolic blood pressure parameters for pediatric patients older than one year can be approximated by the following formulas:
    - a. 90mm HG + (2 x age in years)
    - b. 70mm HG + (2x age in years) Lower limit

### C. Push Dose Epinephrine

1. 0.01 mg/ml (10 mcg/ml)-0.5-2ml (5-20 mcg) IV/IO every 2-5 minutes. Titrate to systolic blood pressure (SBP) for the patient's age, improvement of symptoms, or a total of 0.3 mg is given.

NOTE: Monitor SBP while administering/titrating.

Cross Reference:	PD# 8837 – Pediatric Airway Management
	PD# 9013 – Pediatric Shock
	PD# 9014 – Pediatric Cardiac Dysrhythmias