Section 700P: Pediatric Treatment Protocols

Protocol 700-C1-P: Cardiac Arrest

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BLS Treatment

- ❖ Treat life threats. (See Procedure 701 *Life Threats*)
- ❖ Confirm DNR/POLST Status
- ❖ CPR per current County guidelines. Minimize delays and interruptions
- ❖ Establish airway
  - ➢ If iGel attempts fail, use oropharyngeal airway
- ❖ Apply AED and use as indicated
- ❖ Prepare for transport/transfer of care.

ALS Treatment

- ❖ Treat life threats. (See Procedure 701 *Life Threats*)
- ❖ Cardiac Monitor and determine rhythm
- ❖ Identify possible causes*
  - ➢ Treat according to Table 1
  - ➢ Known dialysis patients with possible hyperkalemia
    - ▪ Sodium Bicarbonate 1 mEq/kg IV/IO
    - ▪ **Calcium Chloride** 20 mg/kg IV/IO.
  - ➢ Penetrating Chest Trauma
    - ▪ Consider Tension Pneumothorax (see Procedure 702 *Pleural Decompression*)
- ❖ If ROSC achieved:
  - ➢ Maintain SpO$_2$ ≥ 95% using lowest concentration of O$_2$ possible
  - ➢ Ventilate to achieve an end tidal CO$_2$ of 35 – 45 mmHg Warning: Avoid hyperventilation
  - ➢ Maintain SBP ≥ 90 mmHg.
    - ▪ IV fluids, **Normal saline** 20 cc/kg bolus
      - • Push-dose **Epinephrine** 0.1 ml/kg (1 mcg/kg) very slow IV/IO every 3-5 minutes prn SBP < 90. See Procedure 708 *Push-dose Epinephrine Mixing Instructions*
        - ♦ Titrate to maintain SBP > 90 mmHg
        - ♦ For patients ≥ 5 kg, standard adult doses of 0.5 ml (5 mcg) will apply
  - ➢ Manage post-arrest arrhythmias as needed.
  - ➢ Obtain a 12 lead ECG and transmit as indicated. Crews in South County should contact Dominican Hospital before transporting a post-arrest STEMI patient north as transport to Watsonville Community Hospital may be more appropriate.
- ❖ Consider transporting hypothermic, drug-overdosed, or electrocuted patients.

*Causes of Cardiac Arrest	
• Hypovolemia	• Tox (OD/Drugs) (M1)
• Hypoxemia	• Tamponade (Cardiac)
• Hydrogen Ion (Acidosis)	• Tension Pneumothorax (702)
• Hyper/Hypokalemia	• Thrombosis (MI, PE)
• Hypothermia (E2)	

Table 1

Asystole	Pulseless Electrical Activity (PEA)	Ventricular Fibrillation or Pulseless Ventricular Tachycardia
❖ **Epinephrine** ➢ (1:10,000) 0.01mg/kg IVP/IO ➢ Repeat q3-5minutes for duration of arrest. ❖ Consider **Normal saline** ➢ 20 ml/kg fluid challenge. ➢ May repeat as indicated, ❖ If no response consider termination of resuscitative efforts (see Policy 613, *Determination of Death in the Field*)	❖ **Epinephrine** ➢ (1:10,000)0.01mg/kg IVP/IO ➢ Repeat q3-5minutes for duration of arrest. ❖ Consider **Normal saline** ➢ 20 ml/kg fluid challenge. ➢ May repeat as indicated, ❖ If electrical HR <40 BPM due to blunt trauma, consider determination of death prior to initiating resuscitation (see Policy 613, *Determination of Death in the Field)*	❖ Defibrillate ASAP ❖ **Epinephrine** ➢ (1:10,000) 0.01mg/kg IVP/IO ➢ Repeat q3-5min ❖ Defibrillate at max. joules as above after 5 cycles of CPR ➢ Start at 2 joules/kg then 4 joules/kg ➢ Defibrillate after each medication throughout the arrest ❖ **Amiodarone** ➢ 5mg/kg mg IVP/IO ❖ If return to supraventricular rhythm, consider: ➢ **Normal saline** 250ml bolus

Documentation

- ❖ Cardiac Arrest is a System Quality Indicator (See Policy 101 Quality Improvement Program and System Evaluation and Policy 502 Santa Cruz County Patient Care Record (PCR) and Transfer of Care Document)
- ❖ Minimum documentation elements include:

Bystander CPR (PUB-1)	Defibrillation (number and dose)
AED prior to arrival (CAR-1)	Intubation (see #6)
First Arrival time to rescuer CPR	ROSC (y/n) (CAR-2)
Initial rhythm recorded	Survival to ED discharge (CAR-3)
$EtCO_2$ readings (initial and continuous)	Survival to hospital discharge (CAR4)