Protocol
PC-01

SECTION: PC-01

PROTOCOL TITLE: PEDIATRIC CARDIAC/RESPIRATORY ARREST

REVISED: June 01, 2019

PED CARDIAC/RESPIRATORY ARREST

BLS SPECIFIC CARE: *See General Pediatric Care Protocol PM-1*

- *For unwitnessed arrest*: Consider 2 minutes of good, sustained, and effective CPR prior to defibrillation or AED attachment
- For *witnessed* Arrest, or after 2 minutes of good, effective and sustained CPR: AED use per current AHA guidelines and manufacturer recommendations
    - Adult AED's can be used in children less than 1 year of age
    - Single shocks are recommended to reduce interruption of CPR
- For a **suspected DROWNING/SUBMERSION**, providers should begin with five high quality ventilations, then proceed standard resuscitation practices. .
    - Ignore any "foam", sputum, or copious oral secretions (other than obvious vomit) in the mouth during initial ventilations. Suction only after initial 5 ventilations but do not interrupt high quality resuscitation to do so.
- When possible, reduce interruptions of chest compressions
- When VF/pulseless ventricular tachycardia (VT) is present, deliver 1 shock and immediately resume CPR, beginning with chest compressions. *Do not delay resumption of chest compressions to recheck the rhythm or pulse.*
- After 5 cycles (about 2 minutes) of CPR, analyze the cardiac rhythm and deliver another shock if indicated. If a non-shockable rhythm is detected, resume CPR immediately
- Careful use of BVM, airway adjuncts. Ventilations should occur over 1-2 seconds
- Avoid hyperventilation/hyperinflation
- Notify responding ALS unit ASAP

AEMT/ O.M. SPECIFIC CARE: *See General Pediatric Care Protocol PM-1*

- IV/IO access as soon as possible
    - 10-20 ml/kg normal saline bolus, repeat as needed for 3 total boluses

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PED CARDIAC ARREST

ALS SPECIFIC CARE: *See General Pediatric Care Protocol PM-1*

- Consider underlying causes of cardiac arrest and treat as well
- Defibrillation settings: (after 2 minutes of CPR unless witnessed arrest)
    - 2 - 4 J/kg SINGLE shock as needed
    - Subsequent single defibrillations at 4 J/kg
    - Higher energy levels may be considered, not to exceed10 J/kg or the adult maximum dose

Cardio-active Drugs

- Epinephrine (for all Pulseless Rhythms)
    - IV/IO: 0.01 mg/kg 1:10,000 concentration every 3-5 minutes
    - ETT: 0.1 mg/kg 1:1,000 concentration every 3-5 minutes

Antiarrhythmic therapy:

- Amiodarone (VF/VT)
    - 5 mg/kg
    - May repeat doses up to 15 mg/kg (max dose 300 mg)
- Amiodarone (Wide Complex Tachycardia)
    - 5 mg/kg IV/IO over 20-60 min
    - May repeat doses up to 15 mg/kg (max dose 300 mg)
- Lidocaine (VF, V-Tach, Refractory Torsades)
    - IV/IO: 1 mg/kg to a max of 3 mg/kg every 3-5 min
    - ET: 2 mg/kg diluted in NS
- Magnesium Sulfate (for refractory VF/VT, First Line for Torsades)
    - IV/IO: 25-50 mg/kg
    - Max 2 g

Consider as appropriate:

- Sodium Bicarbonate for known hyperkalemia, metabolic acidosis (DKA, TCA), prolonged resuscitation after ROSC
    - IV: 1 meq/kg repeated in 10 minutes at 0.5 meq/kg. Follow DKA/TCA recommendations if DKA or TCA OD is suspected
- Narcan (Naloxone) for suspected narcotic overdose
    - IV/ETT: 0.1 mg/kg repeated PRN
    - Max of 2.0 mg/dose
- Dextrose for hypoglycemia
    - Birth to 3 months; use D10 10ml/kg slow IV/IO push
    - >3 months; use D25 4 ml/kg slow IV/IO push
    - See Pediatric Hypo/hyper glycaemia Protocol (PM-6)