PEORIA AREA EMS SYSTEM
PEDIATRIC PREHOSPITAL CARE MANUAL

Resuscitation of Pediatric Pulseless Rhythms Protocol

The successful resuscitation of patients in cardiac arrest is dependent on a systematic approach to resuscitation. ACLS medications are an important factor in successful resuscitation of the pulseless patient when the initial rhythm is not ventricular fibrillation (V-fib) or in cases where defibrillation has been unsuccessful. It is important that BLS providers understand the value of effective CPR and an ALS intercept in providing the patient with ACLS therapy.

First Responder Care

Not applicable. First Responders are not equipped with ACLS medications and shall treat the patient in accordance with the *Pediatric Cardiac Arrest Protocol*.

BLS CARE

Not applicable. BLS providers are not equipped with ACLS medications and shall treat the patient in accordance with the *Pediatric Cardiac Arrest Protocol*.

Ventricular Fibrillation (V-fib) or Pulseless Ventricular Tachycardia (V-tach)

ILS CARE

1. Initiate *Pediatric Cardiac Arrest Protocol*.
2. Evaluate the rhythm after 2 minutes of CPR. If V-fib or pulseless V-tach: Defibrillate at 2 Joules / kg. **
    - ****If the patient converts to a perfusing rhythm** (with a heart rate > 80 bpm), administer Lidocaine: 1mg/kg IV (**with Medical Control order only**).
3. Immediately resume CPR for 2 minutes and re-evaluate the patient/rhythm.
4. Epinephrine 1:10,000: 0.01mg/kg IV. (***Max single dose: 1mg)*** and repeat every ***3 to 5 minutes*** as needed.
5. If pulseless V-fib/V-tach persists: Defibrillate at 4 Joules / kg.
6. Immediately resume CPR for 2 minutes and re-evaluate the patient/rhythm.
7. Lidocaine: 1mg/kg IV. Repeat bolus: 1mg/kg IV in ***3-5 minutes*** to a total of 3mg/kg for refractory V-fib/V-tach.
8. If pulseless V-fib/V-tach persists: Defibrillate at 4 Joules/kg.
9. Immediately resume CPR and re-evaluate patient/rhythm every 2 minutes.
10. **Dextrose:** if blood sugar is < 60mg/dL:

a) 0-1 month	D10: 2mL/kg IV
b) 1 month - 2 years	D25: 2mL/kg IV
c) >2 years	D50: 2mL/kg IV

11. Narcan: 0.1mg/kg IV/IO (***Max single dose***: **2mg)** if suspected narcotic overdose.
12. Initiate ALS intercept and transport as soon as possible.
13. **Contact Medical Control** as soon as possible.

ALS CARE

1. Initiate *Pediatric Cardiac Arrest Protocol.*
2. Evaluate the rhythm after 2 minutes of CPR. If V-fib or pulseless V-tach: Defibrillate at 2 Joules / kg. **
    - ****If the patient converts to a perfusing rhythm** (with a heart rate > 80 bpm), administer Lidocaine: 1.0mg/kg IV/IO.
3. Immediately resume CPR for 2 minutes and re-evaluate the patient/rhythm.
4. Epinephrine 1:10,000: 0.01mg/kg IV/IO. (***Max single dose***: **1mg**) and repeat every **3 to 5 minutes** as needed.
5. If pulseless V-fib/V-tach persists: Defibrillate at 4 J/kg.
6. Immediately resume CPR for 2 minutes and re-evaluate the patient/rhythm.
7. Lidocaine: 1mg/kg IV/IO. Repeat bolus: 1mg/kg IV/IO in 3-5 minutes to a total of 3mg/kg for refractory V-fib/V-tach.

    OR

    Amiodarone: 5mg/kg IV/IO bolus (300mg maximum single dose) for persistent V- fib or pulseless V-tach. May repeat 5mg/kg bolus up to 2 times for refractory V-fib and pulseless V-tach to a total of 15mg/kg.

8. If pulseless V-fib/V-tach persists: Defibrillate at 4 J/kg.
9. Immediately resume CPR and re-evaluate the patient/rhythm every 2 minutes.
10. Dextrose: if blood sugar is < 60mg/dL:

a) 0-1 month	D10: 2mL/kg IV/IO
b) 1 month - 2 years	D25: 2mL/kg IV/IO
c) >2 years	D50: 2mL/kg IV/IO

11. Narcan: 0.1mg/kg IV/IO (***Max single dose:*** **2mg**) if suspected narcotic overdose.
12. **Contact Medical Control** as soon as possible.
13. Transport as soon as possible.

Pulseless Electrical Activity & Aystole

ILS CARE

1. Initiate *Cardiac Arrest Protocol.*
2. Evaluate rhythm after 2 minutes of CPR.
3. Epinephrine 1:10,000: 0.01mg/kg IV (***Max single dose:*** **1mg**) every 3 to 5 minutes as needed.
4. Continue CPR and re-evaluate patient/rhythm every 2 minutes.
5. **IV Fluid Therapy**: 20mL/kg fluid bolus for suspected hypovolemia.

6. **Dextrose**: if blood sugar is < 60mg/dL:

a) 0-1 month	D10: 2mL/kg IV
b) 1 month - 2 years	D25: 2mL/kg IV
c) >2 years	D50: 2mL/kg IV

7. Narcan: 0.1mg/kg IV/IO (***Max single dose***: **2mg**) if suspected narcotic overdose.
8. Initiate ALS intercept and transport as soon as possible.
9. **Contact Medical Control** as soon as possible.

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1. Initiate *Cardiac Arrest Protocol.*
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3. Epinephrine 1:10,000: 0.01mg/kg IV/IO (***Max single dose***: **1mg**) and repeat every ***3 to 5 minutes*** as needed.
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5. IV Fluid Therapy: 20mL/kg fluid bolus for suspected hypovolemia.
6. Dextrose: if blood sugar is < 60mg/dL:

a) 0-1 month	D10: 2mL/kg IV/IO
b) 1 month - 2 years	D25: 2mL/kg IV/IO
c) >2 years	D50: 2mL/kg IV/IO

7. Narcan: 0.1mg/kg IV/IO (***Max single dose***: **2mg**) if suspected narcotic overdose.
8. Needle chest decompression for a patient in ***traumatic*** cardiac arrest with suspected tension pneumothorax.
9. **Contact Medical Control** as soon as possible.
10. Transport as soon as possible.

Critical Thinking Elements

- Pediatric cardiac arrest is often related to hypoxia and poor ventilation. Ensure proper oxygenation and ventilation.
- Prompt transport of the pediatric patient is an important aspect of successful resuscitation. *Do not spend time at the scene attempting to do procedures you may not feel confident in or experienced in doing.* CPR and good BVM ventilation are the only procedures needed initially.
- Broselow tapes are an effective means to estimate weight. Refer to PAEMS protocols for medication doses.