



Pediatric Post Resuscitation

History

- Respiratory arrest
- Cardiac arrest

Signs/Symptoms

- Return of pulse

Differential

- Continue to address specific differentials associated with the original dysrhythmia

Transport Destination Decision

Post-resuscitation patient is medically complex.

Consider facility capabilities:

- Pediatric ICU service
- Pediatric Cardiology service
- Pediatric Neurology service
- Targeted Temperature Management

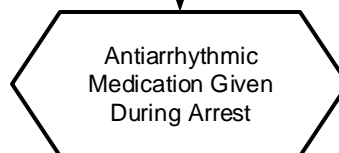
Hypotension Age Based

0 – 31 Days
< 60 mmHg

1 Month to 1 Year
< 70 mmHg

> than 1 Year
< 70 + (2 x age) mmHg

Pediatric Airway Protocol(s) AR 5 - 7 <i>as needed</i>	
	Monitor Vital Signs / Reassess
	Blood Glucose Analysis Procedure
	Optimize Ventilation and Oxygenation <ul style="list-style-type: none">• Maintain SpO2 ≥ 92 – 98%• Advanced airway if indicated• Age Appropriate Respiratory Rate• Remove Impedance Threshold Device DO NOT HYPERVENTILATE
	ETCO2 ideally 35 – 45 mm Hg
B	12 Lead ECG Procedure
	IV or IO Protocol UP 6
P	Cardiac Monitor
	Pediatric Diabetic Protocol PM 2 <i>if indicated</i>
	Pediatric Hypotension / Shock Protocol PM 3 <i>if indicated</i>
	Pediatric Bradycardia Protocol PC 2 <i>if indicated</i>
	Pediatric Tachycardia Protocol PC 5, 6 <i>as indicated</i>



NO

YES

P	Continue Antiarrhythmic Utilized Refer to Appropriate Pediatric Arrhythmia Protocol
	Agency Specific Antiarrhythmic

Post-intubation /
BIAD Management
Protocol AR 8

**Notify Destination or
Contact Medical Control**

Arrhythmias are common and usually self limiting after ROSC



If Arrhythmia Persists follow Rhythm Appropriate Protocol



Pediatric Post Resuscitation

Pearls

- **Recommended Exam:** Mental Status, Neck, Skin, Lungs, Heart, Abdomen, Extremities, Neuro
- **Goals of care** are to preserve neurologic function, prevent secondary organ damage, treat the underlying cause of illness, and optimize prehospital care. Frequent reassessment is necessary.
- **Hyperventilation** is a significant cause of hypotension and recurrence of cardiac arrest in the post resuscitation phase and must be avoided. Titrate FiO_2 to maintain SpO_2 of 92 - 98%.
- **Use length-based or weight-based pediatric resuscitation system** for medication, equipment, cardioversion, and defibrillation guidance. Pediatric paddles should be used in children < 10 kg.
- **Pain/sedation:**
Patients requiring advanced airways and ventilation commonly experience pain and anxiety. Unrelieved pain can lead to increased catecholamine release, ischemia, immunosuppression, and prolonged hospitalization.
Ventilated patients cannot communicate pain / anxiety and providers are poor at recognizing pain / anxiety.
Vital signs such as tachycardia and / or hypertension can provide clues to inadequate sedation, however they both are not always reliable indicators of patient's lack of adequate sedation.
Pain must be addressed first, before anxiety. Opioids are typically the first line agents before benzodiazepines. Ketamine is also a reasonable first choice agent.
- **Ventilator / Ventilation strategies:**
Tailored to individual patient presentations. Medical Control can indicate different strategies above.
In general ventilation with BVM should cause chest rise. With mechanical ventilation a reasonable tidal volume should be about 6 mL/kg and peak pressures should be < 30 cmH₂O.
Continuous pulse oximetry and capnography should be maintained during transport for monitoring.
Head of bed should be maintained at least 10 – 20 degrees of elevation when possible to decrease aspiration risk.
- **EtCO₂ Monitoring:**
Initial End tidal CO₂ may be elevated immediately post-resuscitation, but will usually normalize.
Goal is 35 – 45 mmHg but DO NOT hyperventilate to achieve.
EtCO₂ should be continually monitored with advanced airway in place.
- Administer resuscitation fluids and vasopressor agents to maintain SBP at targets listed on page 1. This table represents minimal SBP targets.
- Targeted Temperature Management is recommended in pediatrics, but prehospital use is not associated with improved outcomes. Transport to facility capable of intensive pediatric care.
- Consider transport to facility capable of managing the post-arrest patient including hypothermia therapy, cardiology / cardiac catheterization, intensive care service, and neurology services.
- The condition of post-resuscitation patients fluctuates rapidly and continuously, and they require close monitoring. Appropriate post-resuscitation management may best be planned in consultation with Medical Control.