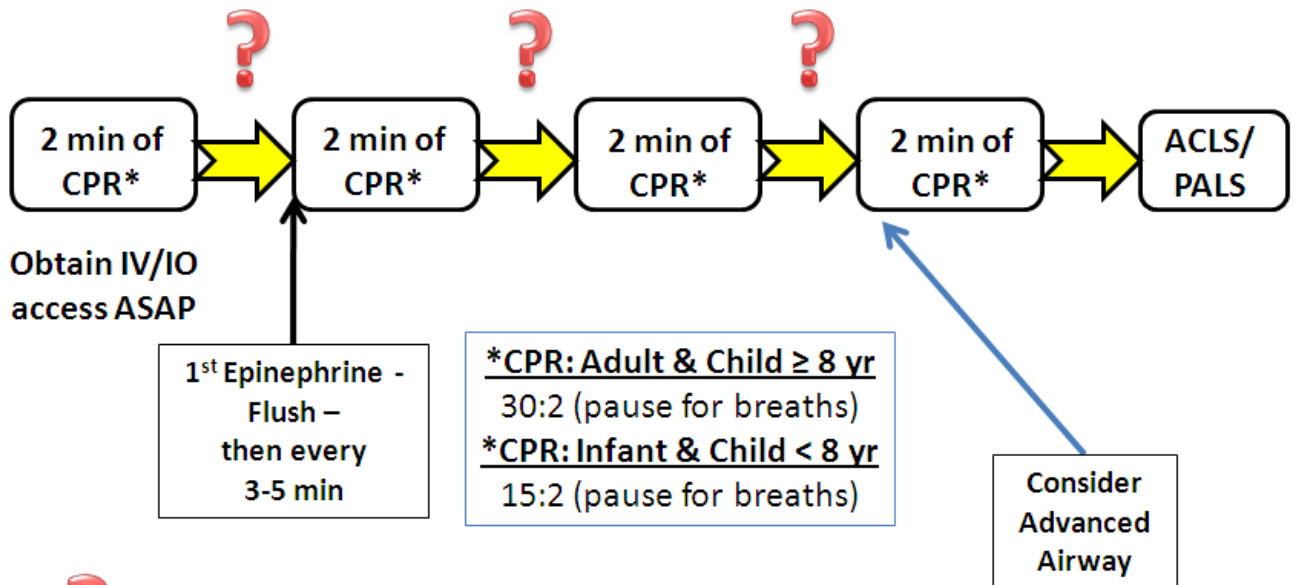


Asystole/ Pulseless Electrical Activity

Inclusion Criteria: Apneic, pulseless patients not in ventricular fibrillation or ventricular tachycardia. This guideline does not apply to patients for whom a resuscitation attempt is not indicated (refer to **Determination of Death Medical Policy**). If the patient's rhythm changes at any time during resuscitation, refer to appropriate treatment guideline.

NOTE: Advanced level units may discontinue resuscitation attempts in victims of blunt traumatic cardiac arrest if no signs of life are present **AND** the patient is asystolic.



? **Rhythm Check – If shockable, move to VF/pVT guidelines**
Remember to look for treatable/reversible causes

Advanced Level

1. Assess and support vital functions including provision of immediate and consistent high-quality CPR. Chest compressions are the first priority, consistent with the AHA's "C-A-B" resuscitation method. Apply ECG pads, ETCO₂ monitors. Perform all resuscitation maneuvers with the monitor/defibrillator in the PADDLES display mode.
 - a. Some agencies may use the manual monitor-defibrillator in AED mode for ADULTS only, depending on proper AED mode configuration, agency MOP, and specific authorization from EMS Medical Direction.
 - b. Obtain vascular access as soon as possible, but access does not take priority over chest compressions or application of the defibrillator.
 - c. Avoid over-ventilation!
 - d. Do not attempt placement of an advanced airway (supraglottic or endotracheal) for at least 6 minutes – not until completing three 2-minute CPR cycles – unless necessary because of regurgitation. Advanced airway insertion **MUST NOT** interrupt chest compressions.
2. Confirm asystole (if suspected) by checking for loose lead connections, monitor power, and signal gain. The Medical Direction Team no longer recommends checking for asystole in

multiple leads.

3.

Administer epinephrine 1:10,000	
Adult	Pediatric
<ul style="list-style-type: none">1 mg IVP or IO every 3 to 5 minutes	<ul style="list-style-type: none">0.01 mg/kg IVP or IO every 3 to 5 minutes

4.

If you suspect any of the following possible causes of asystole and PEA, initiate standing order treatment ASAP:

- Hypoxia** - Ventilate with 100% oxygen; confirm proper advanced airway position with capnography
- Hypothermia** - Protect from further cooling; do not actively rewarm; administer only 1 round of drugs
- Overzealous ventilation** – Provide only 8-10 breaths per minute over 1 second each, using a one-hand squeeze of the BVM. Low ET_{CO}₂ may indicate both overzealous ventilation and ineffective chest compression

d.

Hypovolemia - Infuse normal saline	
Adult	Pediatric
<ul style="list-style-type: none">250 ml boluses as needed (up to 1,000 ml)	<ul style="list-style-type: none">20 ml/kg bolus. BioTel must approve additional fluid.

e.

Hyperkalemia (renal failure or dialysis) or pre-existing acidosis (renal failure, dialysis, methanol ingestion, aspirin overdose) or tricyclic antidepressant overdose	
Adult and Pediatric	
<ul style="list-style-type: none">sodium bicarbonate 1 mEq/kg IVP	

f.

Narcotic overdose	
Adult	Pediatric
<ul style="list-style-type: none">Naloxone 2 mg IVP	<ul style="list-style-type: none">Naloxone 0.1 mg/kg IV push or IO

g.

Beta blocker overdose	
Adult	Pediatric
<ul style="list-style-type: none">Glucagon 1 mg – 5 mg IVP, may repeat	<ul style="list-style-type: none">Contact BioTel

h.

Calcium channel blocker overdose	
Adult	Pediatric
<ul style="list-style-type: none">Calcium chloride (10%) solution, 10 mg/kg – 15 mg/kg IVP (optional medication)	<ul style="list-style-type: none">Contact BioTel

i.

Tension pneumothorax	
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Adult	Pediatric
<ul style="list-style-type: none"> • Needle thoracostomy 	<ul style="list-style-type: none"> • Contact BioTel

5. **If resuscitation attempt prolonged (greater than 15 minutes), consider**

Adult	Pediatric
<ul style="list-style-type: none"> • Sodium bicarbonate 1 mEq/kg IVP • Calcium chloride (10%) solution, 10 mg/kg – 15 mg/kg IVP (optional medication) 	<ul style="list-style-type: none"> • Sodium bicarbonate 1 mEq/kg IVP

6. In the event of return of spontaneous circulation, refer to **Post Cardiac Arrest Management Guidelines**.
7. If no response to therapy and no evidence of reversible causes of asystole, consider terminating all resuscitation efforts in the field. (Refer to **Termination of Resuscitation Efforts Policy**.)
8. For additional patient care consideration not covered under standing orders, consult BioTel.

