



Medical Arrest	
ADULT	PEDIATRIC
<b>Primary Direction</b>	
<ul style="list-style-type: none"> <li>In the absence of factors requiring rapid transport (e.g., unsafe scene), all attempts should be made to perform resuscitative efforts on scene for a MINIMUM of 20 minutes or until ROSC is achieved.</li> <li>Transport pediatrics after 10 minutes of on-scene ALS interventions.</li> <li>Movement and transport of patients interrupts CPR and prevents adequate depth and rate of compressions.</li> </ul>	
<b>BLS</b>	
Compression depth 2" - 2.5"	Compression depth of at least 1/3 the diameter of the chest size
<u>Operating with less than 3 EMS personnel.</u>	
<p><b>Provide High Performance CPR</b></p> <ul style="list-style-type: none"> <li>If Mechanical Compression Device is utilized, minimize pauses, and follow guidelines under General Protocols 554.00.</li> </ul> <p><b>Automated External Defibrillator (AED)</b></p> <ul style="list-style-type: none"> <li>Follow AED prompts, shock if indicated.</li> </ul> <p><b>Once compressions and AED are deployed</b></p> <ul style="list-style-type: none"> <li>Passive Oxygenation via Non-rebreather mask 15 LPM.</li> <li>OPA and bilateral NPAs.</li> </ul> <p style="text-align: center;"><u>Operating with 3 or more EMS personnel *OR* after 8 minutes of resuscitation</u></p> <ul style="list-style-type: none"> <li>High Performance CPR.</li> <li>Ventilate BVM with 100% Oxygen.</li> <li>1 ventilation every 6-8 seconds.</li> <li>Establish Agency approved appropriately sized Supraglottic Airway (SGA) device.</li> </ul> <p><i>Consider earlier ventilations for pediatrics, as most medical cardiac arrests in pediatrics are hypoxia driven.</i></p>	
<b>ALS</b>	
<p><b>Cardiac monitor (Defibrillation Pads).</b> EtCO<sub>2</sub>.</p> <p><b>IV/IO Access (Humeral IO for adults is preferred over tibia IO).</b> <b>Identify and treat any potential reversible causes.</b> <b>Transmit Code Report via Physio Control Monitor – Required for all cardiac arrests.</b></p>	
<b>Ventricular Fibrillation (VF)/Pulseless Ventricular Tachycardia (VT)</b>	
<p><b>Manual Defibrillation on a 2-minute cycle.</b></p> <ul style="list-style-type: none"> <li>Pre-charge the monitor at least 15 seconds before pulse check, continue compressions during charging.</li> <li>Minimize pause to less than 10 seconds.</li> <li>Switch compressors every 2 minutes if not using mechanical compression device.</li> </ul>	

<p><b>Defibrillate using manufacturer recommended energy dose.</b></p> <ul style="list-style-type: none"> <li>Repeat as necessary at every pulse check.</li> <li>Increase dose per manufacturer recommendation.</li> </ul> <p><b>Epinephrine (1:10,000) 1 mg IV/IO</b></p> <ul style="list-style-type: none"> <li>Repeat every 3 - 5 minutes.</li> <li>Max dose 5 mg.</li> </ul> <p><b>Amiodarone 300 mg (first dose) Slow push IV/IO</b></p> <ul style="list-style-type: none"> <li>Repeat x 1 in 3 - 5 minutes with 150 mg.</li> <li>Flush with NS 10 mL.</li> </ul> <p style="text-align: center;"><u>OR</u></p> <p><b>Lidocaine 1.5 mg/kg IV/IO</b></p> <ul style="list-style-type: none"> <li>Repeat x 1 in 3-5 minutes.</li> </ul>	<p><b>Defibrillate 2 J/kg.</b></p> <ul style="list-style-type: none"> <li>Repeat every 2 minutes at <b>4 J/kg.</b></li> </ul> <p><b>Epinephrine (1:10,000) 0.01 mg/kg IV/IO</b></p> <ul style="list-style-type: none"> <li>Repeat every 3 - 5 minutes.</li> <li>No Max.</li> </ul> <p><b>Amiodarone 5 mg/kg Slow Push IV/IO</b></p> <ul style="list-style-type: none"> <li>Max single dose 300 mg.</li> <li>May repeat x 1 in 3 - 5 minutes.</li> <li>Flush with NS 10 mL.</li> </ul>
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**Asystole/Pulseless Electrical Activity (PEA)**

**Address reversible causes based on applicable protocols**

<p><b>Epinephrine (1:10,000) 1 mg IV/IO</b></p> <ul style="list-style-type: none"> <li>Repeat every 3 - 5 minutes.</li> <li>Up to a Max of 5 mg.</li> </ul> <p><b>Calcium Chloride 1 gm IV/IO</b></p> <ul style="list-style-type: none"> <li>Administer over 2 minutes.</li> <li>Only If Hyperkalemia highly suspected.</li> <li><b><u>Do not use for prolonged downtime.</u></b></li> </ul>	<p><b>Epinephrine (1:10,000) 0.01 mg/kg IV/IO</b></p> <ul style="list-style-type: none"> <li>Repeat every 3 - 5 minutes.</li> <li>No Max.</li> </ul>
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**Airway Considerations**

- BLS airway or SGA is the preferred method of airway management during cardiac arrest unless advanced airway is indicated.
- See General Protocols (554.00) for advanced airway management options.

**Consideration in Pregnancy Greater Than 20 Weeks Gestations**

- Place patient 25 degrees left lateral on backboard for CPR.
- IV/IO should be above the diaphragm.
- Pregnant patients are more prone to hypoxia so oxygenation and airway management should be prioritized.
- Consider early SGA or ETT.
- Do not interrupt CPR to perform procedures.
- Prepare for early transport after 4 minutes of CPR.

**Termination of Resuscitation (TOR)**

**After a minimum of 20 minutes of resuscitation, consider TOR in the following conditions:**

- Persistent asystole.
- PEA less than 40 BPM.
- Patient remains pulseless with no signs of life (unreactive pupils, developing lividity).
- If resuscitative efforts are terminated, personnel shall confirm and document the patient's cardiac rhythm in 2 separate ECG Leads and document rhythm strips of at least 6 second duration.

**Special Considerations**

- Consider transport to a STEMI Center if patient has persistent narrow complex PEA greater than 100, or persistent V-Tach/V-Fib after 20 minutes of CPR and a mechanical CPR device is available.
- This policy does not apply to Mass Casualty Incidents.

**Base Hospital Orders**

Contact Base Hospital for additional treatment or transport decisions.