MEDICAL CARDIAC ARREST

Adult	Pediatric

Primary Direction

- 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**
- Movement and transport of patients interrupts CPR and prevents adequate depth and rate of compressions.

BLS

Provide High Performance CPR (See HP-CPR quick reference guide):

Continuous Chest Compressions rate of 100 - 120 per minute, allow for full chest recoil
- Avoid interruptions. Do not interrupt CPR to administer medications or procedures
- Use metronome to ensure proper rate

Automated External Defibrillator (AED) Follow AED prompts, shock if indicated
- Anterior posterior pad placement preferred
- Continue compressions while AED charges

Switch Compressors every 2 minutes
- Reassess pulse every 2 minutes during compressor switch
- Do not exceed 10 seconds during pause

Once compressions and AED are deployed

Passive Oxygenation
- OPA and bilateral NPAs
- Non-rebreather mask 15 LPM

With adequate personnel (≥ 3) or after 8 minutes of resuscitation*

Ventilate BVM with 100% Oxygen
- 1 small volume ventilation on the up stroke of every 10th compression
  ** Consider earlier ventilations for pediatrics or if arrest has suspected respiratory cause*

Compression depth 2” - 2.4”	Compression depth of at least 1/3 the diameter of the chest size

ALS

Cardiac Monitor, Defib Pads, Waveform $EtCO_2$, Metronome, **IV Vascular Access, when possible, humeral IO is preferred over tibia IO if IV attempt(s) unsuccessful or not feasible**, NG/OG Tube

Adult	Pediatric
ALS *(cont.)*	
Ventricular Fibrillation (VF) **Pulseless Ventricular Tachycardia (VT)**	
Manual Defibrillation on a 2-minute cycle • Anterior posterior pad placement is preferred • Pre-charge the monitor at 1:45, continue compressions during charging • Minimize perishock pause to less than 5 seconds • Switch compressors during perishock pause	
Defibrillate using manufacturer recommended energy dose. • If shocked prior to arrival, increase joules as appropriate • Anterior posterior pad placement preferred • Repeat every 2 minutes • Increase dose per manufacture recommendation **Epinephrine (1:10,000) 1 mg** IV/IO • Repeat every 3 - 5 minutes • No Max **Amiodarone 300 mg** (first dose) SIVP/IO • Repeat x1 in 3 - 5 minutes with **150 mg** • Flush with **NS 20 mL**	**Defibrillate** at **2 J/kg** • Anterior posterior pad placement preferred • Repeat every 2 minutes at **4 J/kg** **Epinephrine (1:10,000) 0.01 mg/kg** IV/IO • Repeat every 3 - 5 minutes **Amiodarone 5 mg/kg** SIVP/IO • Max single dose 300 mg • May repeat x 1 in 3 - 5 minutes
Asystole **Pulseless Electrical Activity (PEA)**	
<u>Address reversible causes based on applicable protocols</u>	
Epinephrine (1:10,000) 1 mg IV/IO • Repeat every 3 - 5 minutes • No Max	**Epinephrine (1:10,000) 0.01 mg/kg** IV/IO • Repeat every 3 - 5 minutes • No Max
AIRWAY CONSIDERATIONS	
• A **BLS airway** is the preferred method of airway management during cardiac arrest unless advanced airway is indicated. • See Airway Management protocol for advanced airway management options	

Adult	Pediatric

ALS *(cont.)*

CONSIDERATION IN PREGNANCY ≥ 20 WEEKS GESTATION

- **Place patient 25° 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 Advance Airway i-gel® or ET Intubation
- Do not interrupt CPR to perform procedures
- **Prepare for early transport after 4 minutes of CPR**

Termination of Resuscitation (TOR)

Consider TOR in the following conditions*, after a minimum of 20 minutes of resuscitation

- Patient remains pulseless with no signs of cellular metabolism or neurological activity (e.g., unreactive pupils, $EtCO_2$ < 10 mmHG, developing lividity)
- Persistent asystole, wide complex PEA < 40 BPM, or ventricular fibrillation

**Special Considerations*

- Consider transport if patient has persistent narrow complex PEA > 100, or persistent V-Tach after 20 minutes of HP-CPR
- Consider pediatric transport after 2 - 3 rounds of on scene ALS interventions IF the cause of the arrest is suspected to be airway related
- If resuscitation is terminated at-scene, consider performing an Honor Pause. (see Grief Support Quick Reference for pediatric version)
- Honor Pause
  - *"Let us take a moment to pause and honor this person. This is someone who was alive and now has passed away. They were someone's friend and family member. Let us stand in silence to honor both this person and all the valiant efforts that were made on their behalf."*

Direction

- EMS personnel shall not transport expired patients by ambulance except in the rare occurrence that a patient expires during transport. In these situations, EMS personnel shall continue resuscitative efforts and proceed with transport to the closest receiving facility.
- If resuscitative efforts are terminated, personnel shall confirm and document the patient's cardiac rhythm in 2 separate ECG Leads and provide printed rhythm strips of at least 15 second duration.
- Base Hospital Physician consultation should be obtained if EMS personnel have any patient care or scene safety concerns.
- This policy does not apply to Mass Casualty Incidents.
- Transmit Code Report via Physio Control Monitor – Required for all cardiac arrests