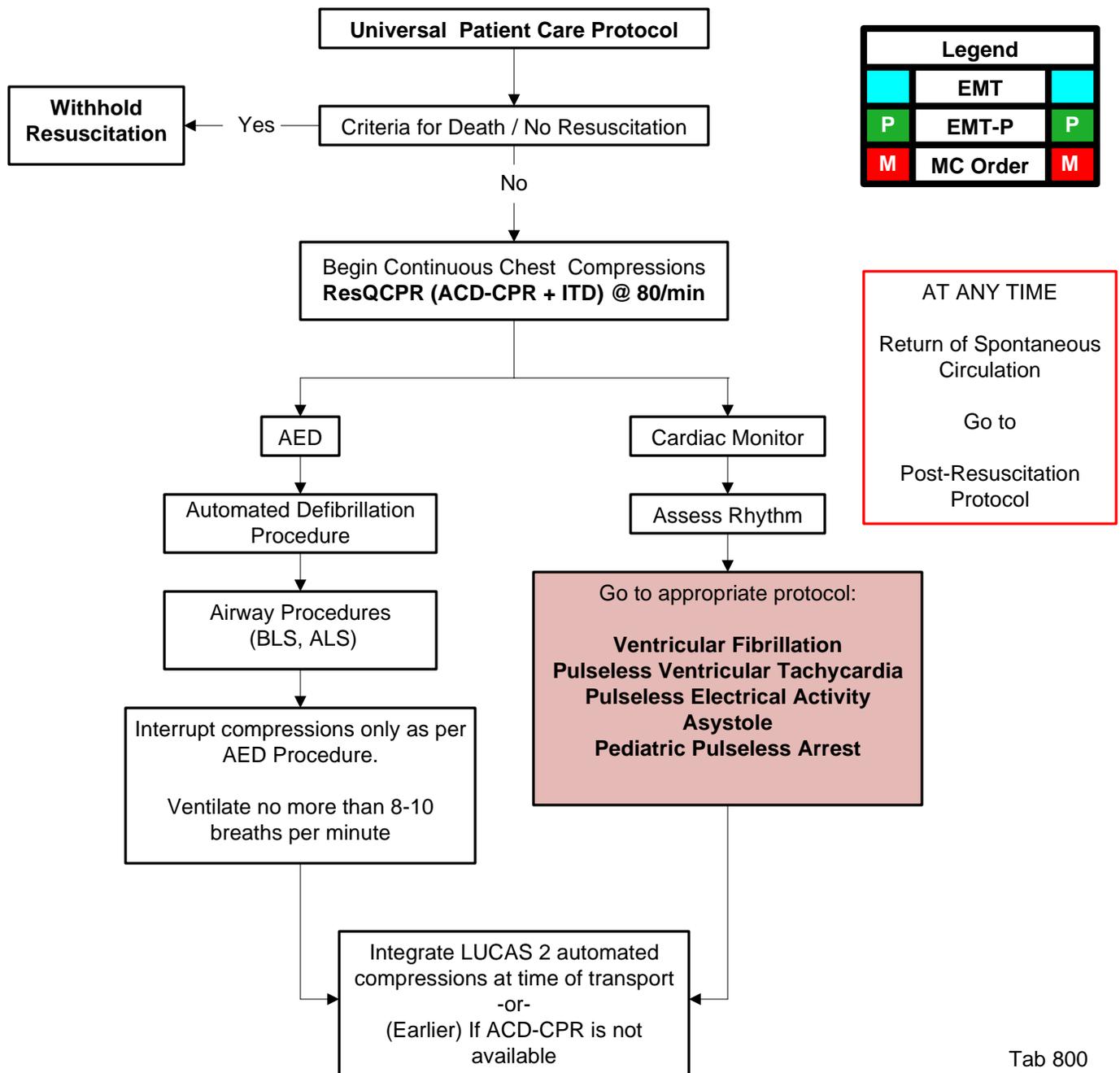


D Cardiac Arrest



History: <ul style="list-style-type: none"> • Events leading to arrest • Estimated down time • Past medical history • Medications • Existence of terminal illness • Signs of lividity, rigor mortis • DNR 	Signs / Symptoms: <ul style="list-style-type: none"> • Unresponsive • Apneic • Pulseless 	Differential: <ul style="list-style-type: none"> • Medical vs. Trauma • VF vs. Pulseless VT • Asystole • Pulseless Electrical Activity (PEA)
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D Cardiac Arrest



Special Considerations:

- A. Cardiac arrest is a life threatening condition and treatment should begin utilizing the appropriate approved protocol. Contact with **On-Line Medical Control** should occur when time permits to allow for early notification of patient assessment, treatments rendered in the field, and transport capabilities/decisions.
- B. Cardiac arrest as a result of significant trauma is not treated according to this protocol. Refer to the Traumatic Cardiac Arrest Protocol (Tab 800, Section O).
- C. Hypothermic arrest is not treated according to this protocol. Refer to the Hypothermic Cardiac Arrest Protocol (Tab 800, Section H).
- D. See Pediatric Protocols (Tab 1100) for special pediatric treatments.
- E. Aggressive, appropriate BLS and ALS interventions are necessary for improved survivability from cardiac arrest. With multiple responders, several treatments may be administered simultaneously. The on-scene "Paramedic" should make any necessary field assignments so that all resources are utilized to their fullest extent (i.e., CPR, ventilation control, patient packaging).
- F. Large peripheral veins (antecubital or external jugular) are preferred IV sites in cardiac arrest. 14-16ga catheters are optimal for peripheral vein cannulation. In the setting of peripheral collapse, multiple IV attempts should be abandoned and IO infusion be considered immediately.
- G. Begin intra-arrest therapeutic hypothermia (IATH) and temperature monitoring upon initiation of resuscitative efforts.
- H. The first paramedic(s) on scene should check effectiveness of ongoing CPR in progress. Pulselessness should also be checked as cardiac function may have returned after arrhythmia or vasovagal episode.
- I. Paramedics **must always** utilize waveform capnography as a standard adjunct to airway control when equipment is available.

D Cardiac Arrest



Special Considerations (cont.),

- J. If any underlying cause of arrest is suspected (i.e., hypothermia, diabetes, overdose), it would be appropriate to integrate those treatment protocols during the resuscitative process. Do not, however, delay administration of cardiac medications while integrating treatments from other protocols.
- K. If there is any evidence of trauma noted during the resuscitative process, consider appropriate spinal motion restriction (SMR) techniques.
- L. Upon placing and evaluating an advanced airway (ET, KING), it is **strongly recommended** that the patient's head be immobilized to maintain airway control.
- M. The AutoVent (ATV) can deliver consistent tidal volume (TV) and rate. Consider its use on a basic facemask or advanced airway for better ventilatory control. Set tidal volume at approximately 600mL (sufficient to produce chest rise).
- N. The ResQPOD (ITD) attached to a basic facemask and/or advanced airway improves hemodynamics during chest compressions and increases the likelihood of ROSC from a cardiac arrest state. ***ResQPOD use is mandated in cardiac arrest victims > 1 year of age.***
- O. The importance of efficient, high-quality CPR cannot be over emphasized. Deploy and utilize the ResQCPR System (ACD-CPR + ITD) during on-scene resuscitative efforts. Ensure continuous airtight seal when using the ResQPOD ITD on a basic face mask. The ResQPUMP compression rate is 80/min (use two-tone metronome and compression / decompression force guide on pump handle to help guide efforts). In a patient with an un-secured airway, engage the ResQPOD ventilation timing lights (10/min) and ventilate on the upstroke (decompression phase of chest compressions). Once an advanced airway is secured (ET, KING), the ResQPOD should be attached and ventilations continue at 10/min (with timing light). Care should be taken not to over ventilate the patient. **KEEP YOUR VENTILATIONS AT 10/MINUTE. INTERRUPTIONS IN COMPRESSIONS NEED TO BE KEPT TO A MINIMUM.**

The ResQCPR System (ACD-CPR + ITD) **MUST** be used (when available) during all on-scene resuscitative efforts for adult patients (≥ 16 years of age). In the event you are unable to achieve a suction-seal with the ResQPUMP, revert to use of manual compressions and/or automated CPR with the LUCAS Device. In the event a decision is made to transport a patient with on-going resuscitative efforts, automated CPR (LUCAS 2) should be initiated just prior to transport.

D Cardiac Arrest



Special Considerations (cont.),

- P. Patients with ROSC in the field should be transported affixed to the LUCAS 2 automated CPR device in the event re-arrest occurs. This will diminish the work-effort and time needed for device setup in a moving vehicle. Use a scoop stretcher (when possible) to move patient attached to LUCAS 2. The curved LUCAS back-plate conforms very well with the scoop stretcher and will help facilitate transfer of the patient.
- Q. **ResQCPR is performed in 2 minute intervals to allow for rescuer change and minimizing rescuer fatigue. Consider pre-charging the Life Pak at 1:45 to utilize the rescuer switch at 2 minutes more efficiently for rhythm recognition and defibrillation (if necessary).**
- R. In the post-resuscitation scenario with return of spontaneous circulation (ROSC), a 12-Lead ECG should be acquired as time permits.

Transport Considerations

- 1. Any adult (≥ 16) cardiac arrest not related to trauma or hemorrhage should be triaged to the closest "STEMI" / "Hypothermia" Center. Upon notification, LCEMS Dispatch will determine the closest open facility, and assign med channel for MC contact.
- 2. "STEMI" / "Hypothermia" Centers include St. Lukes, St. Vincent Mercy Medical Center (SVMMC), The Toledo Hospital (TTH), The University of Toledo Medical Center (UTMC), and Mercy St. Anne.

Special Patient Treatment Considerations:

- A. ESRD (End-Stage Renal Disease) patients with suspected hyperkalemia as potential cause of arrest:
 - I. VF, Asystolic, or PEA arrest
 - a. 1Gram Calcium slow IO/IV push
 - b. 50mEq Sodium Bicarbonate IO/IV push

D Cardiac Arrest



Special Considerations (cont.),

- B. Tricyclic Overdose as suspected cause of arrest:
 - I. VF, Asystolic, or PEA arrest
 - a. 1mEq/kg Sodium Bicarbonate IO/IV push

- C. Beta-Blocker Overdose as suspected cause of arrest:
 - I. VF, Asystolic, or PEA arrest
 - a. Glucagon 1mg (1 unit) IO/IV push

- D. Torsades de Pointes:
 - I. 2Grams Magnesium Sulfate IO/IV push

- E. Suspected narcotic overdose:
 - I. 4mg Narcan IO/IV