



SENECA COUNTY Emergency Medical Services



Cardiac Arrest Management - ResQCPR & Autopulse

History

Events leading to arrest
Estimated down time
Past medical history
Medications
Existence of terminal illness
Signs of lividity, rigor mortis
Consider "Downtime"

Signs/Symptoms

Unresponsive
Pulseless
Apnea – or agonal gasps

Differential

Medical vs. Trauma
VF vs. VT (pulseless)
PEA
Asystole

Withhold Resuscitation if signs of Obvious Death are present or valid DNR order is present
Do Not Use ResQCPR or Autopulse in Traumatic Arrest

Begin continuous Chest compressions using ResQCPR device with ResQPod in Place
Remove all clothing from torso – Completely Remove clothing from under patient
Place Defib Pads - anterior posterior positioning is preferred
Utilize AED or Manual Defib to analyze rhythm and deliver shock as required
Do Not Interrupt High Quality ResQCPR other than to shock
Deliver Ventilations at 30:2 during ResQCPR –
Apply Autopulse Board under patient as quickly as possible – ensure the removal of all clothing from Torso
Initiate Autpulse and Begin ACLS protocol – ensure shoulder straps are in place prior to movement of patient
Insert advanced airway and secure head using towel rolls and tape to avoid displacement
When moving patient in mega mover – ensure slow, calculated movement to avoid patient shifting

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. ResQCPR and Autopulse are NOT used in Traumatic Arrests.

C. 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).

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- D. 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.
- E. 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.
- F. Paramedics must always utilize waveform capnography as a standard adjunct to airway control when equipment is available.
- G. 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.
- H. Upon placing and evaluating an advanced airway (ET, KING), it is strongly recommended that the patient's head be immobilized to maintain airway control.
- I. 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).
- J. 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.
- K. 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 unsecured 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 Autopulse. In the event a decision is made to transport a patient with on-going resuscitative efforts, automated CPR (Autopulse) should be initiated prior to transport.
- L. Patients with ROSC in the field should be transported affixed to the Autopulse 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 the mega mover case that is attached to the device to move patient attached to Autopulse..

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M. ResQCPR is performed in 2 minute intervals to allow for rescuer change and minimizing rescuer fatigue. Consider pre-charging the Philips MRx at 1:45 to utilize the rescuer switch at 2 minutes more efficiently for rhythm recognition and defibrillation (if necessary).

N. In the post-resuscitation scenario with return of spontaneous circulation (ROSC), a 12-Lead ECG should be acquired as time permits.

O. Transport Considerations: Contact Medical Control early in the resuscitation to advise them to prepare to receive a cardiac arrest. If you achieve ROSC, they may advise to meet Aero-Medical on the helipad. They may advise to begin Therapeutic Cooling – follow SCEMS ICE Protocol. If transport time is delayed, Aero-Medical Scene Transport may be advised with ROSC.

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