

**REGION I EMERGENCY MEDICAL SERVICES
STANDING MEDICAL ORDERS
EMT – Basic**

SMO: Cardiac Arrest Overview (Medical Etiology, Non-Trauma Related)

Overview: Approximately 2/3 of sudden deaths due to coronary disease take place outside the hospital. For EMS to have a chance at impacting the outcome of these patients, we must complete the four components of the Chain of Survival: Early Access; Early CPR; Early Defibrillation and Early ACLS.

INFORMATION NEEDED

- History of arrest:
- Witnessed collapse: time down and preceding symptoms
- Unwitnessed collapse: time down and preceding symptoms if known
- Bystander CPR and treatments, including First Responder, AED or PAD defibrillation, given prior to arrival
- Past medical history: diagnosis, medications
- Scene: evidence of drug ingestion, hypothermia, trauma, Valid DNR form, nursing home or hospice patient

OBJECTIVE FINDINGS

- Unconscious, with agonal or absent ventilation
- Absence of pulse
- Signs of trauma or blood loss (see TRAUMATIC CARDIAC ARREST Protocol)
- Rigor, fixed dependent lividity (see Guidelines for Determining Death in the Field Policy)
- Air and skin temperature

CPR Guidelines

- CPR is based on AHA 2010 Guidelines
- Push hard push fast: at least 100 compressions per minute, with full chest recoil, If shockable rhythm defibrillate as soon as possible
- 30 compression to 2 ventilations, after advanced airway is placed - asynchronous ventilation 8 to 10 ventilations per minute or every 6-8 seconds.
- Avoid hyperventilation
- Prevent and minimize CPR interruptions to less than 10 seconds
- Defibrillations at 360 Joules monophasic or equivalent biphasic.
- After defibrillation, resume Chest Compressions immediately.

TREATMENT

Approved: 3/2/2012
Revised: 2/07; 7/1/2011, 11/11
EMS/ Region1 SMOs

- ___ If hypothermic, remove wet clothing, begin basic re-warming (see HYPOTHERMIA Protocol)
- ___ If drug overdose is suspected see POISONING and OVERDOSE Protocols
- ___ Standard cardiac arrest management: ABC's, CPR, Early defibrillation with an AED.
See AED Policy for further details.
- ___ Provide grief support and referrals for family, friends and bystanders as needed
- ___ Request ILS or ALS intercept

Documentation of adherence to protocol:

- ___ initial presentation of patient
- ___ application of AED and response if AED used

PRECAUTIONS AND COMMENTS

- Ensure effective CPR continues while advanced skills are carried out.
- If an Automatic External Defibrillator is in place when ALS personnel arrive at the scene, determine quickly if it can be utilized as a manual defibrillator; if so keep it attached to the patient and utilize the device. If it cannot be utilized manually and has no EKG readout capability for ALS providers to use “real time” during the resuscitation, detach the device and utilize a manual monitor/defibrillator (See AED Policy for further details).

**REGION I EMERGENCY MEDICAL SERVICES
STANDING MEDICAL ORDERS**

EMT – Intermediate, EMT – Paramedic

SMO: Cardiac Arrest Overview (Medical Etiology, Non-Trauma Related)

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OBJECTIVE FINDINGS

- Unconscious, with agonal or absent ventilation
- Absence of pulse
- Signs of trauma or blood loss (see TRAUMATIC CARDIAC ARREST Protocol)
- Rigor, fixed dependent lividity (see Guidelines for Determining Death in the Field Policy)
- Air and skin temperature

CPR / ACLS Guidelines

- CPR / ACLS are based on AHA 2010 Guidelines
- Push hard push fast: a rate of at least 100 compressions per minute, with full chest recoil, defibrillate as soon as possible, if PEA or Asystole, refer to Asystole/PEA SMO.
- 30 compressions to 2 ventilations, after advanced airway is placed - asynchronous ventilation 8 to 10 per minute/every 6-8 seconds
- Avoid hyperventilation
- Prevent and minimize CPR interruptions to less than 10 seconds
- immediate defibrillation should be performed.
- Defibrillations at 360 Joules monophasic or equivalent biphasic.
- After defibrillation, resume CPR immediately.
- Medications are secondary to CPR
- Medications may be administered IV or IO; if these are not available ET may be used

TREATMENT

- Check rhythm, if V-Fib or V-Tach defibrillate and proceed to that specific DYSRHYTHMIA Protocol
- If hypothermic, remove wet clothing, begin basic re-warming (see HYPOTHERMIA Protocol)
- If drug overdose is suspected see POISONING and OVERDOSE Protocols
- Standard cardiac arrest management: ABC's, CPR.
- Provide grief support and referrals for family, friends and bystanders as needed
- Advanced Airway Management; confirm tube placement, ventilate with 100% oxygen
- IV or IO Normal Saline 500 cc bolus
- See Specific Cardiac Arrest protocols for pharmacological and other interventions
- If return of spontaneous circulation consider ROSC INDUCED Hypothermia Protocol

Documentation of adherence to protocol:

- Initial presentation of patient
- Defibrillations administered
- Correct doses of medications administered if indicated

PRECAUTIONS AND COMMENTS

- Ensure effective CPR continues while advanced skills are carried out.
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- **Epinephrine, Atropine, Lidocaine, Vasopressin, and Naloxone** may be administered via ETT. ET drug doses are double the standard IV dose. Maximum total doses of drugs are also doubled for ETT administration. Relative effectiveness of ET drug administration is in question.
- Remove any NTG patches to avoid further vasodilation during cardiac arrest and to prevent potential hazard if defibrillation becomes necessary.