**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 or medallion, 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 2005 Guidelines
__ Push hard push fast: 100 compressions per minute, with full chest recoil (if arrest is witnessed by EMS defibrillate as soon as possible
__ 30 compression to 2 ventilation, after advanced airway is placed - asynchronous ventilation 8 to 10 per minute
__ Avoid hyperventilation
__ Prevent and minimize CPR interruptions
__ 5 Cycles (2 minutes) of CPR should be complete before defibrillation is attempted (should a patient arrest in the care of EMS and equipment available, immediate defibrillation may be performed.
__ Defibrillations at 360 Joules or equivalent biphasic**.**
__ After defibrillation, resume CPR immediately.

**TREATMENT**

__If hypothermic, remove wet clothing, begin basic rewarming (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/ 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).
- If a provider has an AED that can not be programmed to the new guideline
    - The provider will need to follow the AED old prompts until the AED is replaced
    - The provider should contact the EMS System to decide when the old AED should be replaced.

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

**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 or medallion, 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 / ACLS Guidelines**

__ CPR / ACLS are based on AHA 2005 Guidelines
__ Push hard push fast: 100 compressions per minute, with full chest recoil (if arrest is witnessed by EMS defibrillate as soon as possible
__ 30 compression to 2 ventilation, after advanced airway is placed - asynchronous ventilation 8 to 10 per minute
__ Avoid hyperventilation
__ Prevent and minimize CPR interruptions
__ 5 Cycles (2 minutes) of CPR should be complete before defibrillation is attempted (should a patient arrest in the care of EMS and equipment available, immediate defibrillation should be performed.
__ Defibrillations at 360 Joules 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 rewarming (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 Normal Saline 500 cc bolus
__See Specific Cardiac Arrest protocols for pharmacological and other interventions

**Documentation of adherence to protocol:**

__ Initial presentation of patient
__ Defibrillations administered
__ Medications administered

**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).
- **Epinephrine, Atropine, Lidocaine 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.