

# **CARDIAC ARREST MANAGEMENT**

## **Incident Command for Cardiac Arrest (ICCA)**

### INDICATIONS

- Non-traumatic cardiac arrest

### CODE TASKS

- Resuscitation must begin and continue where patient is encountered
- Provide high quality, uninterrupted chest compressions
- Provide early defibrillation
- Provide controlled ventilatory management during the resuscitation
- IV/IO access and ALS drug delivery
- End Tidal CO<sub>2</sub> monitoring

### EQUIPMENT

#### **BLS:**

1. Automated External Defibrillator
2. Bag Valve Mask
3. Supraglottic Airway (Combitube or King Airway)
4. Oxygen

#### **ALS:**

1. Lifepak 1000 monitor/defibrillator/pads (or private provider equivalent)
2. Lifepak 12/15 monitor/defibrillator/ETCO<sub>2</sub>/pads (or private provider equivalent)
3. Bag Valve Mask
4. Advanced airway equipment (supraglottic airway or endotracheal tube)
5. IV/IO equipment
6. ACLS drugs

### PROCEDURE

1. Begin and continue resuscitation where the patient is encountered. **DO NOT MOVE THE PATIENT.** Call for an assist company (or as per private provider protocol). Patients should only be moved for scene safety concerns, not for provider convenience. Any delay in initiation of resuscitation will decrease the chance of survival.
2. Initiate high quality uninterrupted chest compressions. Harder-deeper-faster with rate 100-120 per minute. Use alternate providers to avoid fatigue. Chest compressions should only be interrupted to analyze rhythm and deliver defibrillation (< 10 seconds).
3. Attach cardiac monitor and assess rhythm. Defibrillate if ventricular fibrillation or pulseless ventricular tachycardia (or if AED advises). May initiate care with Lifepak 1000, however, upgrade to Lifepak 12/15 as soon as manpower allows.
4. Basic airway management with bag valve mask ventilation. Apply End Tidal CO<sub>2</sub> to BVM. Monitor ETCO<sub>2</sub> to assess quality of CPR. Goal ETCO<sub>2</sub>: > 12. If < 12 improve quality of chest compressions or switch compressors.

5. Continue 2 minute cycles of CPR and defibrillation until assist company arrives. Do not attempt IV/IO access or advanced airway management until at least three providers are on scene.
6. Code commander delegates tasks when assist company arrives.
7. IV/IO access and administration of drugs as per ALS SMOs B-3 and B-4. The proximal tibia is the preferred site for IO access during cardiac arrest resuscitation.
8. Place supraglottic airway (preferred advanced airway for patients in cardiac arrest). Endotracheal intubation may be performed as backup airway if unable to ventilate/oxygenate with supraglottic airway. Do not interrupt compressions during placement of an advanced airway.
9. Apply End Tidal CO<sub>2</sub>. Monitor waveform and number to assess:
  - a. Correct advanced airway position and ventilation
  - b. Quality of CPR
  - c. Return of spontaneous circulation (ROSC)
10. Contact online medical control from the scene (before moving the patient) to discuss the following options:
  - a. Termination of Resuscitative efforts (see policy....)
  - b. Continue resuscitation on scene and recontact medical control
  - c. ROSC achieved (consider therapeutic hypothermia see protocol ...) and transport to closest STEMI center
  - d. Ongoing resuscitation of patient without ROSC and transport to closest STEMI center versus closed comprehensive ED.

Patients with ROSC or refractory Ventricular Fibrillation/Pulseless ventricular tachycardia should be transported to the closest STEMI-Receiving Center (SRC). Consider transport to a SRC for any patient with ongoing resuscitation.

### MANDATORY DOCUMENTATION

1. "Cardiac Arrest" should be listed for paramedic impression for all non-traumatic cardiac arrest victims. Do not use "rule out" for any cardiac arrest impression.
2. All information from the first company on scene should be relayed to the transporting paramedics and included in both patient care records (assist company sheet and MRU).
3. All mandatory cardiac arrest questions in the MRU should be completed before record is closed.
4. End-Tidal CO<sub>2</sub> number and waveform should be documented in the patient care record.
5. Lifepak 15 "Report>All" should be downloaded into the MRU computer once at hospital. This includes every monitor that was used during the code.
6. Lifepak 15 "Report>All" should additionally be uploaded to CodeSTAT.

## ICCA ROLES AND RESPONSIBILITIES

Cardiac arrest is a shared ALS and BLS response. Successful resuscitation requires a coordinated effort. Upon arrival, resuscitation roles should be clearly delegated by the highest ranking medical member on scene, so that primary **code tasks** are carried out quickly and efficiently.

### 1. Code Commander

- Highest ranking medical member on scene
- Oversees all operations
- Responsible for timing of CPR cycles and defibrillation
- Requests additional manpower/resources
- Completes and/or delegates **code tasks**

### 2. Compressor-1

- Performs high quality uninterrupted chest compressions
- Assume compressor 2's role when relieved

### 3. Compressor-2

- Monitor's the effectiveness of compressor 1's compressions (monitors ETCO2 for compression quality feedback)
- Assists with seal during bag valve mask ventilation
- Relieves compressor 1 after 2 minutes or when compression quality decreases

### 4. Procedures

- Apply cardiac monitor/analyze rhythm
- Defibrillate
- Gain IV/IO access
- Administer medications as per ALS SMOs B-3 and B-4
- Basic and advanced airway management
- Apply and monitor End Tidal CO2

### 5. Logistics

- Oversee distribution of equipment
- Set up IV/IO equipment
- Assemble medications/assist with drug delivery
- Facilitates communication with online medical control
- Prepares for transport
- Relief for other tasks

### 6. Liaison/Safety

- Control the scene and provide for the safety of the resuscitation team
- Data collection/documentation: Patient demographics, medications, medical history, events
- Communicates and assists with family/bystanders

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