Specific Information Needed For Patient Care Report

- **Onset** (witnessed or unwitnessed), preceding symptoms, bystander CPR, downtime before CPR and duration of CPR
- **Past History**: medications, medical history, suspicion of ingestion, trauma, environmental factors (hypothermia, inhalation, asphyxiation)
- **Presence or lack of DNR orders** if elderly or infirm.
- **Initial rhythm** on placement of cardiac monitor

Document Specific Objective Findings

- Unconscious, unresponsive
- Agonal, or absent respirations
- Absent pulses
- Any signs of trauma, blood loss
- Skin temperature

General Guidelines: Chest Compressions

- Push hard (2” compressions is adults) and push fast (100-120/minute)
- Ensure full chest recoil
- Rotate compressors every 2 minutes with rhythm checks (CPR Cycle)
- During CPR, any interruption in chest compressions deprives heart and brain of necessary blood flow and lessens chance of successful defibrillation
  - Continue CPR while defibrillator is charging, and resume CPR immediately after all shocks. Do not check pulses except at end of CPR cycle and if rhythm is organized at rhythm check
  - Try to coordinate to make analyze/rhythm checks and defibrillation pauses < 10 sec.

Monitoring During CPR

- All ambulance transport agencies in the Mesa County EMS System should be able to provide complete monitoring of CPR quality and ventilation parameters during performance of CPR. This should be monitor based and able to be downloaded to the PCR or to a separate program in order to evaluate CPR quality measures such as compression rate, depth, duration of pauses in compressions, and ventilator parameters.
  - If a transport agency does not have these capabilities currently, any upgrade to monitoring equipment MUST include the above mentioned capabilities.

Ventilation during CPR

- If suspected cardiac etiology of arrest, during first approximately 15 minutes of VT/VF arrest, passive oxygenation with OPA and NRB facemask is preferred to positive pressure ventilation with BVM or advanced airway
- EMS personnel must use good judgment in assessing likely cause of pulseless arrest. In patients suspected of having a primary respiratory cause of cardiopulmonary arrest, (e.g.: COPD or status asthmaticus), adequate ventilation and oxygenation are a priority
- In general, patients with cardiac arrest initially have adequately oxygenated blood, but are in circulatory arrest. Therefore, chest compressions are initially more important than ventilation to provide perfusion to coronary arteries
- Do not interrupt chest compressions and do not hyperventilate. Hyperventilation decreases effectiveness of CPR and worsens outcome.
2041 MESA COUNTY EMS SYSTEM ADULT (AGE ≥ 12 years)
CARDIAC ARREST GENERAL PRINCIPLES

General Guidelines: Defibrillation

- In unwitnessed cardiac arrest, give first 2 minutes of CPR without interruptions for ventilation. During this time period passive oxygenation is preferred with OPA and NRB facemask.
- If arrest is witnessed by EMS, immediate defibrillation is first priority, CPR should be performed while attaching defibrillator.
- All shocks should be given as single maximum energy shocks
  - Manual biphasic: follow device-specific recommendations for defibrillation. If uncertain, give maximum energy (e.g. 200J)
  - Manual monophasic: 360J
  - AED: device specific

General Guidelines: Timing Of Placement Of Advanced Airway

- Advanced airway (e.g. supraglottic, ETT) may be placed at any time after initial 3 rounds of chest compressions and rhythm analysis, provided placement does not interrupt chest compressions
- Once an advanced airway is in place, compressions are given continuously and breaths given asynchronously at 8-10 per minute - NO FASTER
- Always confirm advanced airway placement with ETCO2
  - Use continuous waveform capnography if available. In low flow states such as cardiac arrest, colorimetric CO2 detector may be inaccurate and not sense very low CO2 level

General Guidelines: Pacing

- Pacing is not indicated for asystole and PEA. Instead start chest compressions according to Universal Pulseless Arrest Algorithm.
- Pacing should not be undertaken if it follows unsuccessful defibrillation of VT/VF as it will only interfere with CPR and is not effective

General Guidelines: ICD/Pacemaker patients

If cardiac arrest patient has an implantable cardioverter defibrillator (ICD) or pacemaker: place pacer/defib pads at least 1 inch from device. Biaxillary or anterior posterior pad placement may be used

Transport of Cardiac Arrest Patients

- The best chance of survival for out of hospital cardiac arrest is by providing high quality, uninterrupted CPR and early defibrillation
- It is virtually impossible to perform adequate CPR in a moving ambulance
- Patients should generally have resuscitation attempts performed on scene and patients not transported without return of spontaneous circulation (ROSC) unless scene safety or other extreme circumstances dictate otherwise.
- Patients who do not have ROSC should be considered for termination of resuscitation (TOR) efforts according to TOR Policy.

Wakefulness During CPR

Mesa County EMS System Guidelines Approved March 1, 2019. Next Revision: January 2020
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- Implementation of high quality CPR, both manual and mechanical, has resulted in some patients having periods of wakefulness during CPR. This may include eye opening or arm movement. This may occur even in the absence of vital signs.
- If patient appears agitated or is distress during these periods of wakefulness, consider administering a benzodiazepine for anxiolysis.