TRAUMATIC CARDIAC ARREST

Effective: January 1, 2022
Replaces: February 12, 2019
Review: January 1, 2024

1. BLS Treatment

1.1. If patient shows signs of obvious death **(Policy 600)**, do not resuscitate
1.2. If non traumatic cardiac arrest is suspected as the cause of the traumatic event, treat the patient under **(700-A07)**
1.3. **Apply Spinal Motion Restriction (SMR) as indicated (700-M11)**
1.4. Address any areas of significant blood loss with hemorrhage control measures, regardless of any active bleeding or hemorrhage **(700-M17)**
1.4.1. Apply tourniquet(s) proximal to any large wound, laceration, or amputation of the extremities, regardless of any active bleeding or hemorrhage
1.5. High quality uninterrupted CPR **(700-S01)**
1.5.1. Mechanical CPR devices are prohibited on traumatic arrests **(700-M13)**
1.6. **Supraglottic airway device** (LMA Supreme)
1.6.1. If Supraglottic airway attempts fail:
1.6.1.1. **Oropharyngeal airway (OPA)**
1.7. **BVM,** ventilate once every six seconds (1:6), with supplemental oxygen
1.8. **Apply AED** and follow device instructions (BLS providers only)

2. ALS Treatment

2.1. Place patient on cardiac monitor
2.1.1. If the traumatic arrest patient is asystolic on initial contact, do not resuscitate
2.2. **Endotracheal Tube (ETT) with Bougie**, at least one attempt **(700-M01)**
2.2.1. If ETT attempt(s) fail:
2.2.1.1. **Supraglottic airway device** (LMA Supreme)
2.2.2. If both ETT and Supraglottic airway attempts fail:
2.2.2.1. **Oropharyngeal airway (OPA)**
2.3. **EtCO2** continuous numeric and waveform monitoring on every airway adjunct
2.4. **Initiate Transport to appropriate receiving trauma center**, all remaining care to be completed en route to trauma center **(Policy 602)**.
2.5. **Vascular Access (IV) or (IO),** (large bore, bilateral access preferred) wide open
2.6. If Return of Spontaneous Circulation (ROSC) occurs after any intervention, **titrate fluids** to maintain a systolic blood pressure of ninety (90), obtain **12 Lead ECG** (if it does not delay transport) and continue transport to trauma center.

3. Ventricular Fibrillation and Pulseless Ventricular Tachycardia

3.1. **Note: Epinephrine is not indicated in traumatic cardiac arrest**
3.2. **Defibrillation at manufacturer's suggested values (example: 100, 150, 200 joules)**
3.2.1. Starting with lowest energy setting
3.2.2. Each subsequent counter shock increasing in energy
3.3. **Amiodarone 300mg IV / IO** if rhythm has not changed after a total of 3 defibrillations
3.4. If after 5 minutes rhythm remains refractory:
3.4.1. **Amiodarone 150mg IV / IO**, for a max cumulative dose of 450mg

4. Pulseless Electrical Activity and Witnessed Asystole

4.1. **Note: Epinephrine is not indicated in traumatic cardiac arrest**

4.2. Identify and treat any reversible causes:

4.2.1. **Hypovolemia:** Reassess any hemorrhage control interventions to ensure they are adequately addressing blood loss and reapply if necessary. Consider a rapid **500ml fluid infusion.**

4.2.2. **Hypoxia:** Ensure that the patient is adequately ventilated

4.2.2.1. Ensure proper chest rise and fall

4.2.2.2. Reassess any sucking chest wounds or flail segment interventions

4.2.2.3. Reassess endotracheal tube position for dislodgment, occlusion or mainstem bronchus location

4.2.3. **Hypothermia:** Consider rewarming measures **(700-A09)**

4.2.3.1. Patients that are hypothermic can be unresponsive to pharmaceutical therapy and electrical therapy

4.2.4. **Tension Pneumothorax:** If tension pneumothorax is suspected or the patient has a traumatic injury to the chest, perform bilateral pleural decompression if not already completed. **(700-M02)**

4.3. Treat any rhythm changes according to correct treatment protocol

5. Cardiac Arrest Treatment Flow Chart