

Non-Traumatic Cardiac Arrest (Adult)

CFR and All Provider Levels

1. Begin CPR as per AHA guidelines
2. Turn on the Automated External Defibrillator (AED)
3. Apply the AED pads to the patient's bare chest with minimal interruption of chest compressions
4. Connect AED pads and follow the AED voice prompts
5. Continue CPR, re-analyze every two (2) minutes and shock as indicated

CFR STOP

EMT

6. Request ALS assistance
7. Continue CPR and AED analysis with minimal interruption of chest compressions
8. Transport after a total of three (3) cycles of CPR and AED analysis

EMT STOP

Paramedic

9. Continue CPR and defibrillation cycles with minimal interruption of chest compressions
10. If an AED is in place, transition from the AED to an ALS monitor after AED analysis and begin cardiac monitoring. Use the maximum joule setting possible when defibrillating
11. Perform needle decompression for a suspected tension pneumothorax (Appendix M: Needle Decompression of Tension Pneumothorax) as needed
12. Obtain intravascular access
13. Administer Epinephrine 1 mg IV (10 ml of a 1:10,000 concentration). Repeat every 3-5 minutes until patient achieves return of spontaneous circulation (ROSC)
14. Perform advanced airway management after second rhythm analysis
15. Obtain blood glucose level and treat as needed
16. If the rhythm is ventricular fibrillation/pulseless ventricular tachycardia, administer one of the following:
 - OPTION A: Amiodarone 300 mg IV
 - OPTION B: Lidocaine 100 mg IV
17. If on scene and after 20 minutes of ALS treatment, consider contacting OLMC for medical control options if indicated, or for termination of resuscitation

Paramedic STOP

Medical Control Options

18. For suspected tricyclic antidepressant overdose, salicylate toxicity, or hyperkalemia, administer Sodium Bicarbonate 44-88 mEq IV. Repeat Sodium Bicarbonate 44 mEq IV as needed every 10 minutes
19. For suspected hyperkalemia or calcium channel blocker overdose, administer Calcium Chloride 1 g IV slowly followed with a crystalloid fluid flush
20. Administer crystalloid fluids 20 ml/kg IV (maximum 2 L)
21. For persistent or recurring ventricular fibrillation or pulseless ventricular tachycardia, administer one of the following:
 - OPTION A: Amiodarone 150 mg IV
 - OPTION B: Lidocaine 50 mg IV
 - OPTION C: Magnesium Sulfate 2 g IV diluted in 10 ml Normal Saline over 2 minutes

Key Points / Considerations

- Do not interrupt compressions for placement of an advanced airway
- Minimize interruption in compressions for placement of a mechanical CPR device
- Do not delay compressions to begin ventilations
- Do not delay ventilations to connect supplemental oxygen
- An AED should be placed as soon as possible without interrupting compressions
- Artifact from vibrations in a moving ambulance may compromise the effectiveness of an AED
- Maximum joule setting may vary depending on the defibrillator used
- Consider the possibility of conditions with reversible causes masquerading as PEA/asystole that require immediate treatment
- Routine use of Calcium Chloride and/or Sodium Bicarbonate in cardiac arrest has not been shown to improve outcomes
- Calcium Chloride and Sodium Bicarbonate should be given in separate IV lines or separated by a flush of at least 20 ml of crystalloid fluid to prevent precipitation
- As per AHA, the benefit of double sequential defibrillation for refractory shockable rhythms has not been established