

CPR – HIGH PERFORMANCE – ADULT

EMR, EMT, AEMT, EMT-I, Paramedic

INDICATIONS

- Any adult patient with cardiac arrest (unresponsive with absent or abnormal respirations) without a POLST Do Not Resuscitate (DNR) order
- See Termination of Resuscitation protocol for instances in which resuscitative efforts should be withheld

PRECAUTIONS

- Do not delay the initiation of chest compressions
- Pulse check should not take more than 10 seconds
- If definite pulse is not detected, then begin chest compressions

ELEMENTS of HIGH-PERFORMANCE CPR

1. Continuous chest compressions at 110-120 /minute (use a timing device)
2. Compression depth
 - a. Adult: 2-2.4" (5-6cm)
 - b. Child: at least 1/3 the depth of the chest – about 2" (5cm)
 - c. Infant: at least 1/3 the depth of the chest – about 1½" (4cm)
3. Minimal (1-2 second) chest compression interruption during shock administration using "hover" technique
4. Ventilations – just to get chest rise:
 - a. Bag-Valve-Mask (BVM) ventilations with 100% O₂ every 10th compression
 - b. Advanced airway present – asynchronous ventilations every 6 seconds (use a timing device)
 - c. If only 1 rescuer is present, perform compressions to ventilations at a rate of 30:2
5. Passive oxygenation with 100% O₂ via nasal cannula with EtCo₂ monitoring as soon as second oxygen source is available
6. Pulse check begins during chest compressions to assess quality of CPR and continues when chest compressions stop for rhythm analysis for maximum of 10 seconds

SCENE AUTHORITY and TRANSFER OF CARE

It is expected of all providers that communication will be respectful and cooperative when it comes to assigning roles, and that most of the time this can be worked out quickly without conflict. The following guidelines are provided to help prevent and resolve disputes:

Transporting agency is responsible for the patient care once they arrive on scene.

If first response and transporting agencies arrive on scene within the first two minutes of resuscitation, either agency may take the lead role, but the ultimate discretion for role assignment lies with the transporting agency.

If first response agency is on scene longer than two minutes before transporting agency arrives AND have established roles and resuscitation rhythm, transfer of care may be delayed. When transporting agency or additional crew arrives, oncoming provider will identify themselves and ask, "How can I help?" and "Would you like to maintain lead?" (if appropriate). Lead Role provider will give a brief verbal report and either continue in the Lead Role, directing oncoming ALS providers to either the IV and Meds or Advanced Airway roles as appropriate, or give up Lead Role to the transport team.

In most scenarios, first responders will ideally maintain Lead Role so that incoming ALS providers can complete ALS tasks, and official handoff report and transfer of care from first response to transport will take place immediately after IV and advanced airway have been established. However, first response agency must provide handoff report and transfer care if requested at any time by the transporting agency. Early handoff should generally be reserved for scenarios in which the resuscitation is not running smoothly or there are challenging scene factors. After handoff and transfer of care, transporting paramedic may reassign roles or may leave providers, including Lead, their established roles.

MECHANICAL CPR

1. A mechanical CPR device board/transport device may be placed under the patient early in the resuscitation when attaching monitor pads if it can be done with minimal interruption (<10 sec) to compressions, but should not be activated except in one of the following situations:
 - a. A 2- or 3-person crew may activate a mechanical CPR device after four minutes of manual CPR, rhythm assessed, and first shock delivered IF additional responders are anticipated to take more than 10 additional minutes to arrive
 - b. If available, a mechanical CPR device should be placed for transport of any cardiac arrest patient, regardless of ROSC, and activated for patients who are pulseless during transport
2. Mechanical CPR may be maintained it as long as device position, pulses and EtCO₂ are adequate