CENTRAL CALIFORNIA
EMERGENCY MEDICAL SERVICES
A Division of the Fresno County Department of Public Health

Manual Emergency Medical Services Administrative Policies and Procedures	Policy Number 510.08
Subject BLS Treatment Protocols **CARDIAC ARREST – MEDICAL ADULT**	Page 1 of 3
References Title 22, Division 9, Chapter 3.1 of the California Code of Regulations	Effective Fresno County: 01/15/82 Kings County: 04/10/89 Madera County: 06/15/85 Tulare County: 04/19/05

BLS STANDING ORDERS	
Assess need for CPR	Check for responsiveness and pulse. Assess for carotid or femoral pulse for no longer than 10 seconds. If in doubt, begin chest compressions immediately.
Chest Compressions	Perform high quality manual chest compressions (see special considerations)
Airway	Check airway patency. Suction as needed. Place OPA/NPA.
Ventilate and Oxygenate	Provide ventilations with bag valve mask and high flow O2 to achieve chest rise. Do not over-ventilate.
Defibrillate	Apply AED with pads in anterolateral position and analyze as soon as possible. CPR should be continued while AED is prepared, and pads placed. If shock indicated by AED, defibrillate as soon as possible regardless of whether the arrest was witnessed.
Naloxone	2-4mg intranasally using mucosal atomizer device or prefilled device. To be administered ONLY in the event of suspected narcotic overdose. High quality chest compressions. ventilations, and defibrillation should take priority, and compressions should not be paused for medication administration.
Continue CPR	Pulse check and analyze rhythm every 2 minutes. Rotate compressors every 2 minutes with pulse checks if personnel available.
ROSC	In the event of return of spontaneous circulation - Recheck vitals every 3-5 minutes - Monitor closely for rearrest
Transport	If no ROSC after 20 minutes of CPR and ETA for ALS is >10 minutes, begin transport with ongoing CPR. Mechanical CPR device, if available, should be placed on patient prior to transport. (refer to protocol # 530.02). Rendezvous with ALS, if possible.

Approved By		Revision
EMS Division Manager	**Daniel J. Lynch** (Signature on File at EMS Agency)	**07/25/2025**
EMS Medical Director	**Miranda Lewis, MD** (Signature on File at EMS Agency)	

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SPECIAL CONSIDERATIONS AND PRIORITIES

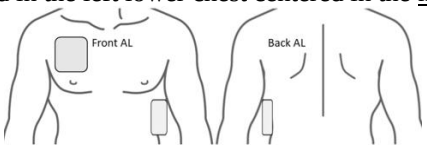
1. Determine if rescue efforts are appropriate. Refer to EMS Policy #549 – Initiation/Termination of CPR in the Medical Patient.

2. Management of medical cardiac arrest patients has the goal of initially stabilizing the patient at the scene prior to transport, if possible. Cardiac arrest victims will be transported lights/siren to the appropriate hospital. Non-lights/siren transport may be ordered when the risks of lights/siren outweigh the benefit to the patient.

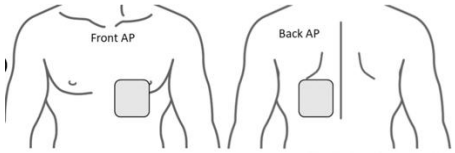
3. High Performance CPR includes the following elements:
   - Rate 110 per minute (use metronome to guide rate)
   - Depth 2 inches
   - Allow full chest recoil
   - Minimize interruptions in chest compressions (goal >90% compression fraction)
   - Avoid overventilation. Deliver only enough ventilation to cause chest rise.

4. Continuous ventilations with 10:1 compression to ventilation ratio may be delivered by those agencies which have trained in high performance CPR. Otherwise, deliver ventilations at a ratio of 30:2 until an advanced airway is placed.

5. Anterolateral pad placement is preferred initially to minimize interruptions in compressions. Pads should be placed in a coordinated manner while compressions are ongoing. The anterior pad should be placed just below the right clavicle. The lateral pad should be placed in the left lower chest centered in the midaxillary line.



6. If 3 shocks have been delivered and patient remains in a shockable rhythm, consider changing pad placement to antero-posterior position. The anterior pad should be placed on the left side of the chest between the midline of the chest and the left nipple (under the left breast in a female). The posterior pad should be placed lateral to the spine just below the left scapula at the level of the heart. This should be done in a choreographed, stepwise fashion to minimize interruptions in compressions.



7. Hypothermia - Contact the Base Hospital as soon as possible. In the presence of isolated hypothermia or drowning, transport should be initiated after initial steps of resuscitation. Continue resuscitation until rewarming has been implemented in the emergency department.

8. Mechanical CPR Devices - Manual chest compressions are the standard of care for patients in cardiopulmonary arrest. Studies have shown no mortality benefit to support the use of mechanical CPR devices over high-quality manual chest compressions. However, there are situations where manual CPR is challenging or dangerous for the prehospital provider and mechanical chest compressions are preferred.

   A. Indications:

      1. Patients being transported with ongoing CPR.
      2. Prolonged resuscitation (>10 minutes) to prevent rescuer fatigue or when limited rescuers are available,
      3. Prophylactic application prior to transport in patients with ROSC in case of rearrest. Device should only be activated in the event of rearrest.
      4. Cardiac arrest patients located in a confined space where manual CPR and rapid extrication are not possible

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B. Contraindications:

1. Patient is too small for the device to be applied per manufacturer instructions.
2. Patient is too large for the device to be applied per manufacturer instructions.
3. Age and weight restrictions per manufacturer instructions.
4. Device cannot be appropriately positioned on the chest.
5. Cardiac arrest due to trauma.
6. Patients with ventricular assist devices.

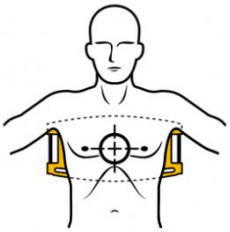
C. Procedure:

1. Manual CPR should be performed immediately on patient arrival. Do not delay initiation of chest compressions to place the mechanical CPR device.
2. Ensure the chest is exposed prior to placement of the device.
3. The CPR feedback device must be removed prior to application of the mechanical CPR device, unless otherwise specified in manufacturer instructions.
4. Minimize interruptions in compressions when applying the device. The device should be applied in a choreographed stepwise fashion with manual chest compressions delivered between steps.
5. Follow device specific manufacturer instructions for application and operation.
6. Ensure appropriate defibrillator pad placement and reassess pad placement with each rhythm check.

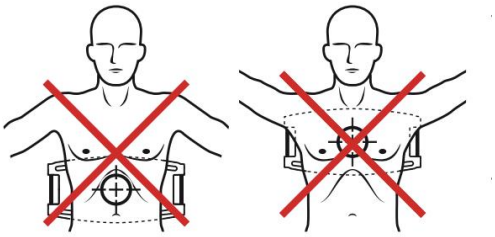
D. Special Considerations:

1. It is critical that the suction cup is placed in the appropriate position indicated below and continually reassessed during transport.

Correct placement:



Incorrect placement:



2. The neck stabilization strap must be applied prior to patient movement. Secure the arms to the device using the device straps. Additionally, a permanent marker should be used to mark the upper and lower edges of the suction cup on the patient's chest. These markings will be referenced as landmarks to ensure the suction cup is in appropriate position throughout transport.

3. If the suction cup position migrates during transport, it must be immediately corrected. Misplacement of the device may lead to inadequate circulation and internal injury.

4. Defibrillation may safely be applied while the LUCAS device is providing compressions.

E. Zoll AutoPulse:

1. Ensure that the device is appropriately positioned according to the manufacturer instructions.
2. The device should be continually monitored during transport to prevent migration.
3. Ensure shoulder restraint should be applied prior to transport to keep the patient properly aligned on the AutoPulse platform.