

Automated External Defibrillator (AED) #0048

PURPOSE OF ORDER:

This order establishes policy and procedures for the deployment, use, and documentation of Automated External Defibrillators (AED).

SCOPE OF ORDER:

This order applies to all personnel assigned to the Fire Camp Training Unit.

ORDER:

DEFINITION:

The AED is a portable, self-testing battery-operated device that automatically analyzes the patient's cardiac rhythm. It advises the operator/rescuer to press the button and delivers an electric shock to a person's chest which in turn passes through the heart. It guides the operator through the rescue using a combination of voice prompts, audible alerts, and visible indicators.

BACKGROUND:

Medical research has shown that persons who suffer cardiac arrest have a greater potential for survival with early first responder defibrillation and cardio-pulmonary resuscitation (CPR). The purpose of the policy is to establish procedures and guidelines for the safe and effective use of Automatic External Defibrillators (AED).

POLICY:

It is the policy of the Los Angeles County Sheriff's Department to employ the use of defibrillators and initialize CPR, when appropriate. The Los Angeles County Emergency Medical Services Agency (LACEMSA) has approved the Los Angeles County Sheriff's Department to use AED devices. Recognizing that early defibrillation is a critical element of care in cardiac arrest cases, Automatic External Defibrillation units will be made available in selected locations at the Fire Camp Training Unit. Only AED's granted acceptance by the Federal Drug Administration and approved for use by the LACEMSA may be used. Only personnel trained and certified in accordance with the standards issued by the LACEMSA may use an AED. Securing a safe scene remains the number one priority of law enforcement. Use of the AED device is secondary to overall scene safety and is prioritized at the same level as injured or ill victim care.

QUALIFICATIONS/TRAINING:

1. AEDs shall be used by personnel trained in CPR and AED use, conforming to the American Heart Association (AHA) and POST standards.
2. Personnel shall be re-certified in CPR and AED use every two years.
3. Personnel shall participate in Cardiac Science vendor provided AED device familiarization/training before use in an actual rescue.

4. Personnel shall have a thorough understanding of the procedures set in the AED Manual.
5. The Training Bureau shall maintain records of all initial and recurrent CPR and AED training.

DEPLOYMENT:

There are three "Cardiac Science Powerheart G3 Plus" AEDs deployed at the Fire Camp Training Unit:

1. #1 is located in an AED cabinet in East Facility Main Control;
2. #2 is located in an AED cabinet in the Fire Camp Training Barrack 20;
3. #3 is deployed with the Fire Camp Training Unit support vehicle which accompanies staff and inmates on the daily training hikes.

GENERAL INSTRUCTIONS:

1. Personnel will take the AED to all emergencies and "persons down," whether staff or inmate, and will utilize it if indicated.
2. The AED is indicated for emergency treatment of victims exhibiting symptoms of Sudden Cardiac Arrest (SCA) who are unresponsive, not breathing and no pulse.
 - a. NOTE: Agonal breathing (gaspings, choking, snoring) is considered "not breathing."
1. Determine that the patient is over 1 year of age.
 - a. Note: When the patient is a child under 1 years of age, the AED should be used with a Pediatric Attenuated Defibrillation pad, if available. If there are no child pads, adult pads may be used; however, ensure that the pads do not touch each other. Therapy should not be delayed to determine the patient's exact age or weight. Use of an adult dose is better than no attempt of defibrillation.
2. Personnel utilizing the AED shall follow the device voice prompts and instructions for AED use and CPR until relieved by EMS personnel.
3. The following special situations may require the rescuer to take additional actions when using an AED:
 - a. Medication patches or pastes (e.g., Nitroglycerin patch) - AED electrode pads should not be placed directly on top of a medication patch. Remove the patch and wipe the area clean before attaching the electrode pad.
 - b. Pacemaker or Implanted Defibrillator- Do not apply the AED electrode pad directly over an implanted medical device. Place the electrode pad at least one (1) inch to the side of the implanted device.
 - c. Water- The patient who is in freestanding water should be removed from the water first before defibrillation is attempted. Quickly dry the patient before attaching the AED electrodes.
 - d. Metal- Remove any metal objects the patient is wearing before defibrillation is attempted.
 - e. Body hair- If the pads stick to the hair instead of the skin, press down firmly on each pad. If the AED continues to prompt "check pads" or "check electrodes," quickly pull off the pads then apply a new set of pads. If a large amount of hair still remains where the pads will be placed, shave the area (of the chest) with a razor.

1. While using the AED, do not operate wireless phones (i.e., cell phones, FM 2-way radio) within one meter of the AED.

AED PROCEDURE:

Performing the Rescue

1. Assess the Patient:
 - a. Unresponsive
 - b. Not breathing
2. Direct someone to call Emergency Medical Services (EMS)/911 and to get the AED.
 - a. No pulse, start CPR.
3. Patient Preparation:
 - a. Place the AED near head of the victim, close to the AED operator. Open the AED lid. Turn the AED ON by pushing the lid's release button "In" and "Up" to open.
 - b. Remove clothing from the patient's chest.
 - c. Ensure the skin site is clean and dry.
4. Place AED pads and listen for the following audio instructions from AED:
 - a. "Tear open pad package and remove pads."
 - b. "Peel one pad from plastic liner."
5. "Place one pad on bare upper chest," placing the top of the electrode on the victim's upper-right chest (directly below the collarbone, as shown in the diagram). Avoid placing the electrode directly over the sternum.
6. "Peel second pad and place on bare lower chest," placing the other pad to the side of the left nipple, with the top edge of the pad a few inches below the armpit (as shown in the diagram).
Note: Standard defibrillation pads are non-polarized and can be placed in either position as shown on the pad package.
7. If the pads become disconnected from either the AED or the patient, the voice prompt will say, "Check pads." Check the following:
 - a. Make sure the pads are firmly placed on clean, dry skin.
 - b. Make sure pad connector is securely plugged into the AED machine.
8. ECG Analysis
 - a. As soon as the AED detects proper pad placement, it will begin to analyze the cardiac rhythm of the patient. The voice prompt will say, "Do not touch patient. Analyzing rhythm." Ensure that no one is touching the patient.
 - b. If the rhythm changes and a shock is no longer needed, the AED will prompt "NO SHOCK ADVISED. CONTINUE CPR."
9. Shock Delivery
If a shockable rhythm is detected (AED is ready to deliver a defibrillation shock):
 - a. Shock Button will flash and AED will prompt "SHOCK ADVISED."

- b. Hear the charged tone, "CHARGING!" and
- c. Voice prompts, "STAND CLEAR!"
Note: Ensure that no one is touching the patient. Always loudly state "clear the patient" message, such as "I'm clear, you're clear, everybody's clear." At the same time, perform a visual check that no one is in contact with the patient.
- d. "Push flashing button to deliver shock."
Note: If you do not press the Shock button within 30 seconds of hearing the prompt, the AED will disarm and prompt you to start CPR.
- e. "SHOCK DELIVERED."
The shock will produce a sudden contraction of the victim's muscles.
Note: Defibrillation shock current may cause a serious electrical shock hazard. To avoid this hazard, do not touch the patient when shock being delivered.

10. CPR

- a. The voice prompt will say, "It is now safe to touch the patient. Start CPR."
- b. Begin CPR starting with chest compressions after the AED delivers the shock.
- c. The AED will continue with the prompt, repeating "Give Breath" twice. Following this, the phrase "Continue with compressions."
- d. This cycle will continue until the CPR time expires (i.e., after 5 cycles or about 2 minutes of CPR). At the end of CPR, the phrase "Stop CPR" will be played. The AED will return to the ECG Analysis Mode.
- e. If the patient has a pulse but is not breathing, perform rescue breathing at the recommended rate.
- f. If the patient is conscious and breathing normally, leave the pads on the patient's chest connected to the AED.

11. Transfer of Patient to ALS Personnel (Paramedics)

- a. Make the patient as comfortable as possible. Continue to monitor the patient and follow voice prompts until Advanced Life Support (ALS) personnel arrive.
- b. Provide a thorough verbal report to the paramedics to include: patient name and age, chief complaint, vital signs, applicable medical history, and medications/treatments.
- c. Transfer patient to ALS personnel with the electrode pads still attached to the patient, disconnect the electrode from the AED.

Post Rescue Process:

- 1. After transfer of the patient to EMS personnel, prepare the AED for the next rescue:
 - a. Connect a new pair of pads to the AED.
 - b. Close the lid.
 - c. Verify that the Status Indicator on the handle is green.
 - d. Ensure all supplies are present and in operating condition.
 - e. When the indicator is green, the unit is ready for a rescue.
 - f. If the indicator is red, refer to the trouble shooting guide in the user's manual.

2. Retrieve Rescue Data

- a. Notify unit sergeant or lieutenant.
 - b. Identify the computer with the required software program (RescueLink).
 - c. Start the RescueLink software.
3. Open the AED lid.
 4. Connect cable to the computer and to the AED's port under the blue rubber data access cover. The voice prompt will say "Communications Mode."
 5. On the RescueLink program's menu bar- Select COMMUNICATIONS and then GET RESCUE DATA.
 6. Select Internal Memory of AED then press OK.
 7. Select a rescue by clicking on the date and press OK.
 8. Wait for the data to load and appear in RescueLink, it can take a couple of minutes.
 9. Select PATIENT INFORMATION and make entries in the following fields:
 - a. Incident ID: (use patient's last name and incident date, e.g., Doe 8 10 2011)
 - b. Responder Facility: e.g., Fire Camp, MCJ, PDC
 - c. Patient Name: first, middle, last
 - d. Patient Description: DOB, age, sex, race
 10. Print a hard copy of the rescue data:
 11. On RescueLink's menu bar, select File and then PRINT REPORTS. In the new window that opens, select REPORT SET UP. Make sure the following boxes have a check mark next to them:
 12. ECG Heart Rhythm
 13. Incident Summary Report
 14. Event List Summary
 15. Click OK and then Print.
 16. Close the AED lid.

DOCUMENTATION:

1. Responding/operating personnel are responsible for the completion of a "Person Injured/III" or "Person Dead" Incident Report, and an Inmate Injury Report (if necessary).
2. The operator shall complete a Los Angeles County Department of Health Services EMS Agency (LACEMSA) "AED Post Event Report." The completed report shall be submitted to the Fire Camp Training Unit AED Coordinator, who shall then forward a copy of the report to LACEMSA within 72 hours (Attachment A).
3. The printed rescue data will be forwarded to Medical Services Bureau for inclusion in the patient's (inmate) medical record and document.
4. A second hard copy of the rescue data and AED Post Event Report shall be included in the unit's incident file.

MAINTENANCE:

1. A record of the devices readiness and availability shall be documented daily by the following personnel:
 - a. AM Shift Main Control Officer in the Unit Daily Log (East Facility Main Control unit).
 - b. AM Shift Fire Camp Deputy #1 in the UDAL (Barrack 20 and support vehicle units).
2. Any unit requiring service, batteries, or pads shall be removed from service and brought to the unit AED coordinator, and noted in the appropriate log.

EQUIPMENT/SUPPLIES:

1. Cardiac Science Powerheart G3 Plus Automated External Defibrillator
2. Spare Adult Electrode Pads
Note: AED electrode pads are disposable and should be discarded properly (i.e., pads contaminated with blood and/or any body fluids should be discarded in a biohazard container) after each use. They have a limited shelf life and should not be used beyond the expiration date.
3. Two Responder Ready-Kit (pocket mask, razor, gloves, towels, scissors, and a small biohazard (red) bag)
4. Spare Battery (The AED battery has a shelf life of five years)

NOTE: Shelf life is defined as the length of time a battery can be stored, prior to installation into the AED without degrading its performance.

AUTHORITY:

Los Angeles County, Department of Health Services, Pre-Hospital Care Policy, Reference Number 413, 413.1. California Health and Safety Code Sections 1797.52, 1797.107, and 1797.183, 1797.196. Penal Code Section 13518, and the California Code of Regulations Title 22, Division 9, Chapter 1.5.
