

19.109 AUTOMATED EXTERNAL DEFIBRILLATOR

References:

American Heart Association – Healthcare Provider (CPR/AED)
 Ohio Revised Code Chapter 2305.235 – Immunity of Person Involved with
 Providing Automated External
 Defibrillation
 Ohio Revised Code Chapter 3701.85 – Automated External Defibrillator –
 Requirements for Use
 House Bill 717 -122nd General Assembly
 Federal Occupational Health – Public Access Defibrillation Guidelines

Definitions:

Automated External Defibrillator (AED) - An automated computerized medical device programmed to analyze and interpret the heart rhythm of a person in cardiac arrest. The device will advise through voice instructions if an electrical shock is appropriate and will prompt the user to push the shock button to deliver an electrical shock.

Cardiopulmonary Resuscitation (CPR) - Rescue breathing and external cardiac compression applied to a victim in respiratory and/or sudden cardiac arrest.

Sudden Cardiac Arrest (SCA) - A significant life-threatening event which occurs when a person's heart stops or fails to produce a pulse due to ventricular fibrillation or ventricular tachycardia (unorganized electrical activity or arrhythmia of the heart).

Public Access Defibrillation (PAD) Medical Director - A supervising physician who provides medical direction and oversight of the Department's PAD program.

Automated External Defibrillator (AED) Program Coordinator - A Training Section supervisor responsible for the training, application, and oversight of the Department's AED program. The supervisor is responsible for notifying the PAD medical director when an AED is used in an SCA incident.

Automated External Defibrillator (AED) Site Coordinator - A district/section/unit sworn/non-sworn supervisor designated to ensure the completion of forms which document the use of the AED for a SCA. The supervisor will complete monthly maintenance checks of the AED.

Purpose:

Familiarize Department employees with guidelines for training, application, location, maintenance and the notification process in the use of the AED.

Policy:

All employees of the Cincinnati Police Department who are certified as Healthcare Providers in CPR/AEDs will provide aid to anyone who is in sudden cardiac arrest (SCA) by following the early defibrillation response procedure. Training Section will maintain a list of all certified employees. Only personnel certified in the use of the AED will operate the device.

The Training Section commander will designate a Training Section supervisor to coordinate the AED program.

The AED program coordinator is designated as the Department's liaison regarding all matters on the Department's PAD program. The AED program coordinator will insure a Form 17, Notification of Intent to Renew CPR/AED Certification, is forwarded to non-sworn employees within 30 days of expiration of their certification.

District/section/unit commanders will designate a sworn/non-sworn supervisor certified in CPR/AED training as the AED site coordinator to maintain the AED(s) within their facility.

AEDs must be tested and maintained as required by the manufacturer's guidelines. The periodic testing and maintenance of AEDs outlined in this procedure complies with the manufacturer's routine maintenance guidelines as indicated in the owner's manual and supplied with each AED.

Information:

Millions of Americans suffer from cardiovascular disease. One-third of cardiovascular deaths are a result of cardiac arrest, the sudden and unexpected loss of heart function. Most often, cardiac arrest is due to chaotic beating of the heart (ventricular fibrillation) which can be restored to a normal rhythm if treated early with electric shock (defibrillation). For every minute that passes between the cardiac arrest and defibrillation, the probability of survival decreases by 7 to 10 percent. After 10 minutes, the probability of survival is extremely low.

The American Heart Association (AHA) advocates establishing a Public Access Defibrillation (PAD) program that places AEDs close to the victim to ensure the people most likely to arrive first at a medical emergency are equipped to provide the proper help. "Public Access", should not be interpreted as any citizen having the right to use an AED; the term only refers to the accessibility of the device by persons who have been certified in the use of AEDs. The AHA recommends, when practical, AEDs be placed in locations throughout a workplace that will permit the use of AEDs within three to five minutes of a recognized cardiac arrest. The AED automatically assesses the victim's heart rhythm and if necessary, will prompt the user to push the shock button to deliver an electrical shock. The AED will not deliver a shock (even if the shock button is depressed by the user) unless the heart rhythm is determined to be shockable.

All sworn employees receive mandatory training and certification in CPR and the use of the AED every two years as approved by and in accordance with AHA guidelines for the Healthcare Provider.

Non-sworn employees may volunteer to receive approved AHA training to acquire CPR/AED certification.

AEDs are prescription devices. Plans and procedures must be approved by the PAD medical director before authorization is given for a prescription for the procurement of the device(s).

All Cincinnati Police Department facilities are equipped with the Phillips HeartStart FRx defibrillator which is easily identified in its bright red carry case and is mounted next to the AED wall sign for quick reference.

AEDs are typically placed in common areas. Personnel should familiarize themselves with the location of the AED within their facility.

The AED comes with a battery installed, a carrying case with a quick reference guide, a spare battery, two sets of defibrillation pads, and an Infant/Child Key (when treating an infant or child less than 55 pounds). Attached to the AED is a personal protection kit containing scissors, razor, gloves, hand towel and pocket breathing mask. Excess hair on the subject's chest should be removed with the supplied razor; a smooth shave is not required. Place used items and potentially hazardous materials in a biohazard bag.

Upon the use of an AED for a SCA, supervisors must ensure the proper reports are completed to document the incident for medical review and to evaluate the medical response. The AED Incident Report form is part of the patient care record and is confidential to both the victim of an SCA and the Cincinnati Police Department. To comply with the Health Insurance Portability and Accountability Act of 1996 (HIPAA) laws, the personal information of a victim of a SCA will not be released.

Supervisors will complete a Form 91SP, Supervisory Investigation of Employee Injury, for injuries to employees occurring as a result of a SCA. Contact Personnel Section when unable to determine if a Form 91SP must be completed.

The Employee Health Service (EHS) physician will not be contacted when an employee is the victim of a SCA which does not result in the employee sustaining injuries.

Procedure

- A. Medical Emergency Response requiring the Use of the AED
1. Personnel on the scene who become aware of a medical emergency will immediately contact PCS via radio or by dialing 911 and provide the location of the emergency and necessary medical information for responding Fire Department personnel.
 - a. If a department member is the victim of a SCA or when circumstances are warranted, consider requesting a Peer Support Crisis Intervention Team member respond.
 2. Request a supervisor respond to the scene.
 3. Only personnel certified in the use of the AED will operate the device.
 4. The AED will be applied only to subjects who are unresponsive and not breathing.
 5. The AED should be used only on dry surfaces.
 - a. If the victim of an SCA is lying on a wet surface, remove the victim to a dry surface. If victim is wet, dry the victim before applying the pads.
 6. Turn on the defibrillator and follow its prompts.
 7. Insert the Infant/Child key when the victim of a SCA is less than 55 pounds.
 - a. The defibrillator automatically reduces the defibrillation energy and provides specific voice and CPR coaching for the treatment of infants/children.
 8. Defibrillation shocks are to be delivered only in accordance with Training Section's early defibrillation response procedure. If the device advises **no shock**, follow the approved AHA protocols for patient care and CPR as indicated below.
 - a. If subject is not breathing and there are no signs of circulation, administer CPR until:
 - 1) Subject regains signs of circulation.
 - 2) The defibrillator prompts the user to stop CPR so it can perform analysis.
 - 3) Fire Department personnel arrive and assume care of subject.

9. The AED can be used on persons with an implantable pacemaker or internal defibrillator; however, the pads should not be placed directly over the implanted device. Place the defibrillation pads as close to the recommended pad placement area as possible.
 10. Do not remove the pads or turn off the device unless prompted by Fire Department personnel.
 11. Care of the subject will transfer to Fire Department personnel upon their arrival.
 12. Place all potentially hazardous material in a biohazard bag to be transported to a fire station or a hospital for disposal.
- B. Reporting the Use, Maintenance, and Annual Review of the AED
1. Upon notification of the use of an AED for a SCA, the responding supervisor will:
 - a. Ensure an AED Incident Report form is completed.
 - 1) Complete Part 1 and Part 2.
 - b. Forward a copy of the AED Incident Report form to the AED site coordinator.
 - c. Forward the original AED Incident Report form to the AED program coordinator.
 - d. Complete Form 91SP, Supervisory Investigation of Employee Injury, for an injury to an employee which occurs as a result a SCA, e.g., an employee receives a head injury as a result of a fall before, during or after a sudden cardiac arrest incident.
 - 1) An employee suffering a SCA without reported injuries does not require the completion of Form 91SP.
 - e. Complete Form 18I, Injury to Prisoner, when a prisoner is the victim of a SCA not the result of the use of force, while under or just prior to police control, requiring the use of an AED.
 - 1) If the arrested is seriously injured or is admitted to a hospital including for observation purposes only, immediately notify the district/section/unit commander of the facility where the incident occurred, the affected bureau commander and the Night Chief/Duty Officer, if on duty.
 - 2) The on-duty command officer will determine whether CIS will be notified.
 - f. Make a blotter entry describing the incident and action taken.

- 1) To comply with the Health Insurance Portability and Accountability Act of 1996 (HIPAA) laws, the subject's name and other personal information will not be released.
2. The AED Site Coordinator will:
 - a. Upon review and approval, forward the copy of the AED Incident Report form to the AED program coordinator.
 - b. Immediately complete a post-use safety check of the AED.
 - 1) Inspect the defibrillator for damage, missing parts, and for the presence of biohazard material.
 - a) Use a soft cloth dampened in soapy water; or two (2) tablespoons of chlorine bleach per quart of water; or 70% isopropyl (rubbing) alcohol to clean biohazard material located on the device. Do not use solvents or abrasive materials.
 - b) Immediately report damaged, missing or used parts to the AED program coordinator.
 - c. Ensure a new set of SMART Pads II is connected into the cable connector.
 - 1) Spare pads are located in the carry case
 - 2) If the pads are not connected or are not seated properly, the defibrillator will begin to chirp and the "i"-button will flash.
 - d. Perform a battery insertion test by removing the battery for five seconds and reinstalling it, replace the battery if indicated.
 - 1) A spare battery is located in the carry case.
 - 2) Upon completion of the self-test, the green "Ready" light will blink indicating the battery and defibrillator are ready for operation.
 - e. Check accessories and spare supplies for damage and expiration dates.
 - f. Perform a monthly inspection of the AED(s) and complete the AED Monthly Maintenance Checklist form by the 10th of each month.
 - 1) Forward a copy of the AED Monthly Maintenance Checklist form to the AED program coordinator, list any problems or concerns with the defibrillator.

3. The AED Program Coordinator will:
 - a. Forward the AED Incident Report form to the PAD medical director.
 - b. Ensure the incident data stored in the AED's internal memory is downloaded within twenty-four hours after a SCA incident.
 - 1) The downloaded data will be forwarded to the PAD medical director.
 - 2) A printed copy of the data retrieved from the data card will be maintained by the AED program coordinator.
 - c. Ensure replacement of the necessary supplies for each of the AEDs e.g., personal protection kit, battery pack, defibrillator pads, etc.
 - d. Conduct a debriefing with the defibrillator operator and other personnel at the scene within 3 days to evaluate any deficiencies in the response and application of the AED.
 - e. Maintain a file of the AED Incident Report forms and the AED Monthly Maintenance Checklist forms.
 - 1) If the victim of a SCA is a Department employee, file the AED Incident Report in the employee's medical jacket.
 - 2) If the victim of a SCA is someone other than a department employee, a separate file must be maintained.
 - f. Forward Form 17, Notification of Intent to Renew CPR/AED Certification, to non-sworn employees within 30 days of expiration of certification, verifying the employees intent to re-certify.
 - g. Annually review the PAD program with the PAD medical director for updates on information and recommendations for implementation based upon current scientific literature.
 - 1) Revisions require a new or renewed prescription and must be authorized by the PAD medical director.