

Policy Title: **USE OF AUTOMATED EXTERNAL DEFIBRILLATORS**No. **A - 4**

Board approval: 8/1/19

Effective: 8/1/19

Supersedes: 9/1/07

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Reference: Automated External Defibrillator Act. (Source: P.A. 91-524, eff. 1-1-00.)

**I. Importance of early defibrillation**

- A. Successful resuscitation of out-of-hospital cardiac arrest victims depends on a series of critical interventions known as the chain of survival: early access; early CPR; early defibrillation; and early ACLS.
- B. Many Emergency Medical Services (EMS) Systems have demonstrated increased survival rates in cardiac arrest patients experiencing ventricular fibrillation after early public access defibrillation (PAD) programs were implemented and when all of the links in the chain of survival were present.

**II. Definitions**

- A. An **Automated External Defibrillator** (AED) is a medical device heart monitor and defibrillator that:
  - 1. has received approval of its premarket notification, filed pursuant to 21 U.S.C. Section 360(k) from the United States Food and Drug Administration;
  - 2. is capable of recognizing the presence or absence of ventricular fibrillation and rapid ventricular tachycardia, and is capable of determining, without intervention by an operator, whether defibrillation should be performed;
  - 3. upon determining that defibrillation should be performed, either automatically charges and delivers an electrical impulse to an individual, or charges and delivers an electrical impulse at the command of the operator; and
  - 4. in the case of a defibrillator that may be operated in either an automatic or manual mode, is set to operate in the automatic mode (Section 10 of the Act).
- B. **Person:** An individual, partnership, association, corporation, limited liability company, or organized group of persons (whether incorporated or not).
- C. **Trained AED user:** A person who has successfully completed a course of instruction in accordance with the standards of a nationally recognized organization such as the American Red Cross or the American Heart Association or a course of instruction in accordance with the EMS Rules to use an automated external defibrillator, or who is licensed to practice medicine in all its branches in Illinois (Section 10 of the Act).

**III. Approval of AED training programs for lay AED users**

- A. Training programs for lay AED users (including police officers who are not Emergency Medical Responders (EMRs) must be approved by the Illinois Department of Public Health (IDPH).
- B. IDPH shall approve programs offered in accordance with the following:
  - 1. The curriculum shall include complete training in CPR prepared according to nationally recognized guidelines.
  - 2. The instructor(s) shall have successfully completed the American Red Cross Automated External Defibrillation Training Instructor Course or the American Heart Association (AHA) Heartsaver AED Instructor Orientation.
  - 3. Instructors shall renew their qualification every two years and shall meet the following criteria:
    - a. Maintain provider status,
    - b. Teach two separate courses per year,
    - c. Complete an update on new information regarding course content, and
    - d. Provide documentation that teaching ability was monitored.

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4. The course shall meet the objectives of the AHA Heartsaver AED for the Lay Rescuer and First Responder course or the American Red Cross Automated External Defibrillation course and shall require at least the same number of hours for completion (generally four).

#### IV. Recognition of trained AED users in the NWC EMSS

- A. To be recognized as a trained AED user in the NWC EMSS, an individual must meet **one** of the following eligibility criteria:
  1. Have successfully completed an AED/CPR course of instruction in accordance with the standards of a nationally recognized organization such as the American Red Cross or the American Heart Association (see above); **or**
  2. be an EMR, EMT, Paramedic, or PHRN with practice privileges in the NWC EMSS who has completed an AED curriculum based on the National EMS Education Standards. The System will include AED operation as part of an initial EMS training programs in keeping with the National Scope of Practice Model, an individual may only perform a skill or role for which that person is:
    - a. EDUCATED (has been trained to perform the skill or role), AND
    - b. CERTIFIED (has demonstrated competence in the skill or role), AND
    - c. LICENSED (has legal authority issued by the State to perform the skill or role), AND
    - d. CREDENTIALLED (has been authorized by medical director to perform the skill or role).
- B. Recognition of training, credentialing, and ongoing validation of competency for EMS AED users must comply with requirements specified by the EMS MD.

#### V. Use of AEDs in the NWC EMSS

- A. The System encourages lay AED users to store an AED equipment kit with the unit to include the following:
  1. Gloves (latex-free and powder-free preferred)
  2. Pocket mask (optional with compression only CPR)
  3. Hand-held suction (i.e., V-vac)
  4. Scissors or clippers, and towel
  5. Adult & Peds defib pads sealed in packaging and within expiration dates
- B. For an AED program to provide optimal outcomes, an AED user should respond within six minutes of a person's collapse and/or be reasonably expected to respond prior to the arrival of EMS. Police officer AED users are encouraged to bring the AED to calls of a person down, chest pain, seizure, or difficulty breathing which may actually be a cardiac arrest.
- C. **Procedure for use:**
  1. Assess scene safety. Volunteer rescuers are not expected to place themselves at risk in order to provide aid to others, instead, the scene or environment around a victim must be made safe prior to attempts to assist.
  2. Confirm unresponsiveness; no pulse; no visible respirations or cough.
  3. Call for help; ask someone to activate the EMS System ASAP
  4. If an AED is not immediately available, perform compression-only CPR until an AED is brought to the patient.
  5. **If only 1 rescuer is present and an AED is immediately available, apply pads and use the AED first, analyze the rhythm and begin CPR after delivering a shock if advised. Or, if no shock is advised, then begin CPR**

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6. If there are two trained rescuers and an AED is available, one performs compression only CPR while the other prepares the AED for use. The rescuer in charge of the AED will apply the pads around the hands of the person giving chest compressions. Do not stop CPR while the AED is being readied for use. The AED will prompt you to stop CPR when it is ready to analyze the heart rhythm.
  7. Power on the AED. An AED can be used on an adult, child, or infant. See notes on use of an AED in children below. Follow the AED visual and/or audio prompts. Place the AED near the victim's head and power on the unit. Some models require you to push a button to turn it on, while others turn on automatically when you lift the lid.
  8. Apply the AED pads. Expose the chest and wipe it dry of any moisture. If the person is wearing any medication patches, use a gloved (if possible) hand to remove the patches before wiping the person's chest. Apply the pads to the chest according to instructions on the pads. Place one pad on the right side of the chest, just below the collarbone. Place the other pad on the lower left side of the chest.  
NOTE: If victim is **under eight years old or under 25kg (55 lbs)**, remove pre-connected adult defibrillation electrodes, connect the Infant/Child Reduced Energy Defibrillation Electrodes to the AED and proceed. Do not delay therapy to determine precise age or weight of child. If in doubt, defibrillate with pre-connected defibrillation electrodes.  
Children over age 8 can be treated with a standard AED. For children ages 1–8, the AHA recommends the pediatric attenuated pads that are purchased separately. In infants <1 year of age a manual defibrillator is preferred. If a manual defibrillator is not available, an AED with a dose attenuator may be used. (AHA, 2018).
  9. Connect the pads to the AED if they're not already connected
  10. Briefly pause compressions and push the "analyze" button (if necessary). Refrain from using portable radios or cell phones within four feet of victim while AED is evaluating the heart rhythm.
  11. If shock is advised, the AED will automatically charge itself and tell you when to press the button that will deliver the shock. Clear the victim and push the shock button. It is critical that no one touches the victim or his clothing while the AED analyzes or delivers a shock.  
If shock is NOT advised, immediately resume/perform compression-only CPR.
  12. Minimize interruptions in chest compressions before and after each shock. Resume CPR beginning with compressions immediately after each shock. Perform 2 minutes (about 5 cycles) of CPR and continue to follow the AED's prompts until EMS arrives. If you notice obvious signs of life (spontaneous movement, breathing, pulse resumes, patients wakes up), discontinue CPR, place the patient in the recovery position (on their side) and leave the AED attached. Monitor breathing and any changes in the patient's condition.
- D. After patient care is turned over to EMS responders, AED users (or facilities that house Public Access Defibrillation (PAD) program AEDs) shall ensure that the device is prepared for return to service (consumable supplies are restocked).

## VI. Maintenance and oversight of AEDs by lay users

- A. A person acquiring an AED shall take reasonable measures to ensure that:
  1. the AED is maintained and tested according to the manufacturer's guidelines;

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2. any person considered to be an anticipated rescuer or user will have successfully completed a course of instruction in accordance with the standards of a nationally recognized organization, such as the American Red Cross or the American Heart Association, or a course of instruction in accordance with existing rules under this Act to use an automated external defibrillator and to perform cardiovascular resuscitation (CPR).
3. A person in possession of an automated external defibrillator shall notify an agent of the local emergency communications or vehicle dispatch center of the existence, location, and type of the automated external defibrillator. (Source: P.A. 95-447, eff. 8-27-07.)

## VII. **Liability protection**

- A. Members of the lay public who in good faith and without fee or compensation renders emergency medical care involving the use of an automated external defibrillator in accordance with his or her training is not liable for any civil damages as a result of any act or omission, except for willful and wanton misconduct, by that person in rendering that care (PA 90-746, eff. 8-14-98). It further exempts the following if the requirements of the Act are met: individuals or entities providing training in the use of AEDs so they are not liable for civil damages as a result of any act or omission involving the use of an AED; a person owning, occupying, or managing the premises where an AED is located; and trained AED users who are not liable for civil damages as a result of any act or omission involving the use of an AED in an emergency situation, except for willful or wanton misconduct [Section 30 (a)(b)(c)(d)].
- B. No local agency, entity of State or local government, or other public or private organization, nor any officer, director, trustee, consultant or agent of any such entity, which sponsors, authorizes, supports, finances, or supervises the training of persons in the use of cardiopulmonary resuscitation, automated external defibrillators, or first aid in a course which complies with generally recognized standards, shall be liable for damages in any civil action based on the training of such persons unless an act or omission during the course of instruction constitutes willful and wanton misconduct (210 ILCS 50/3.150(d)).
- C. No person who is certified to teach the use of cardiopulmonary resuscitation, automated external defibrillators, or first aid and who teaches a course of instruction which complies with generally recognized standards for the use of cardiopulmonary resuscitation, automated external defibrillators, or first aid shall be liable for damages in any civil action based on the acts or omissions of a person who received such instruction, unless an act or omission during the course of such instruction constitutes willful and wanton misconduct (210 ILCS 50/3.150(e)).

Ref. PA 095-0447: Amends the EMS Act to remove requirement to register an AED with the Resource Hospital.

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