

## Automated External Defibrillators (AED)

Last Reviewed January 2006

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**Definition:** Automated External Defibrillators (AED) are specialized medical devices designed to recognize and treat certain lethal heart rhythms during a cardiac arrest. AEDs provide auditory and visual prompts to assist first responders, whether they are medically trained or not, in treating an individual in a cardiac arrest. The AED delivers an electrical shock to persons, only when the heart is in ventricular fibrillation or ventricular tachycardia. In other cardiac arrest situations, the heart does not respond to electric current but needs medications and breathing support instead. AEDs have been shown to decrease mortality when used by trained persons and used in conjunction with cardiopulmonary resuscitation (CPR). AEDs are less successful when the victim has been in cardiac arrest for longer than a few minutes, especially if no CPR was provided.

According to Federal regulations promulgated by the Food and Drug Administration, AEDs are classified as Class III medical devices and are restricted for sale only by an order of a physician. Use of an AED, therefore, requires medical oversight by a licensed physician.

**AEDs in the School Setting:** Many schools in Maine have or are considering obtaining an AED. Several national advocates encourage schools to be prepared for an emergency by having within their plan, an AED in the school and/or at school sponsored athletic events. Although there are currently no professional organizations that promote AED's in schools, many condone the application of an AED program in schools when there is adequate planning for, and maintenance of, the program.

It is expected that the need for an AED in a school setting would be rare. In the AAP Policy Statement of January 2004, they estimate the risk of sudden cardiac arrest in high school athletes to be 0.5 – 1 per 100,000 high school athletes (see Resources). It appears that the use of an AED is more likely to occur with a student or school visitor that has not yet been diagnosed with an underlying cardiac condition.

### **School Nurse Responsibility:**

- Evaluate the need for developing an AED program considering:
  - Size of school,
  - Community use of school,

- School and community acceptance,
- EMS response time.
- Determine interest of school administration
- Consult with school physician
- Carry out planning as defined below.

**Planning for an AED:**

1. Designate a project coordinator,
2. Engage the school physician, school administrator and school board,
3. Include in the school’s Emergency Plan,
4. Establish or engage the school’s first responder team,
5. Invite local EMS in the planning process,
6. Identify training needs and instructors,
7. Identify the location and security/accessibility of the equipment,
8. Identify the budget required to maintain the equipment and maintain training level,
9. Identify liability issues (eg. Good Samaritan law, training competencies, equipment maintenance, etc.),
10. Develop policies and procedures,
11. Present policy to school administrators/school board,
12. Decide on equipment to purchase,
13. Train first responders and others as needed.

It's important for the local EMS system to know where AEDs are located in the community. In the event of a sudden cardiac arrest emergency, the 9-1-1 dispatcher will know if an AED is on the premises and will be able to notify the EMS system as well as the responders already on the scene.

Policies/procedures should include:

- Location of AED(s) and related equipment,
- Designation of who is responsible for AED program and identification of medical director,
- Process, schedule and checklist for inspecting and maintaining equipment and supplies,
- Process of communication when AED is used,
- Record keeping when AED is used,
- Initial and periodic refresher training of staff.

**Related laws:**

**[Title 22: HEALTH AND WELFARE](#)**

Subtitle 2: HEALTH

Part 4: HOSPITALS AND MEDICAL CARE

**[Chapter 421: AUTOMATED EXTERNAL DEFIBRILLATORS \(HEADING: PL 2001, c. 364, @1 \(new\)\)](#)**

## §2150-C. Automated external defibrillators

**1. Definitions.** As used in this section, unless the context otherwise indicates, the following terms have the following meanings.

A. "Automated external defibrillator" or "AED" means a medical device approved by the United States Food and Drug Administration that:

- (1) Is capable of recognizing the presence or absence of ventricular fibrillation or rapid ventricular tachycardia;
- (2) Is capable of determining whether defibrillation should be performed on an individual;
- (3) Upon determination that defibrillation should be performed, automatically charges and requests delivery of an electrical impulse to an individual's heart; and
- (4) Upon action by an operator, delivers an appropriate electrical impulse to the individual's heart to perform defibrillation.

B. "Department" means the Department of Public Safety.

**2. Prohibition.** A person may not use an AED on another person unless the person using the AED:

A. Has successfully completed a course, approved by the American Red Cross, the American Heart Association or the department, in the use and operation of the AED; and

B. Has made a reasonable attempt to summon appropriate emergency services personnel when communication is possible.

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(2) The clinical use made of the AED; and

C. Maintain and test the AED in accordance with the applicable standards of the manufacturer and any other standards prescribed by the department.

**4. Penalties.** A person who violates any provision of this section commits a civil violation for which a civil forfeiture not exceeding \$50 may be adjudged.

**5. Effect on other law.** This section is not intended to modify or limit and may not be interpreted as modifying or limiting the immunities provided under Title 14, section 164.

### Resources:

AHA Heartsaver CPR in School -

AHA Heartsaver Instructors brochure -

<http://www.americanheart.org/presenter.jhtml?identifier+3047680>

AHA AED Q & A - <http://www.americanheart.org/presenter.jhtml?identifier+3027092>

AHA and NASN Joint Statement: Response to Cardiac Arrest and Selected Life Threatening Emergencies -

<http://www.nasn.org/Portals/0/statements/jointstatementcardiac.pdf>

AAP Policy “Response to Cardiac Arrest and Selected Life-Threatening Medical Emergencies: The Medical Emergency Response Plan for Schools.” -

<http://aappolicy.aappublications.org/cgi/content/full/pediatrics;113/1/155?eaf>

AAP The Preparedness of Schools to Respond to Emergencies in Children: A National Survey of School Nurses -

<http://pediatrics.aappublications.org/cgi/content/full/116/6/e738>

AAP Panel says AEDs can be used on small children. -

<http://www.pediatrics.aappublicatins.org/cgi/content/full/120/4/e1368>

NASN Policy -

Medtronic’s, AED Program guide, sample policy, sample procedure, etc. for School -

[http://www.aedhelp.com/implement/implement\\_docs.cfm](http://www.aedhelp.com/implement/implement_docs.cfm)

Louis Acompora Memorial Foundation - <http://www.la12.org/console.htm>

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