

Policy Subject: Automated External Defibrillators (AEDs)	Effective: 3/15/2010
Affected Area: All departments that have an AED in their building	Reviewed/Revised: 12/31/2011

1.0 Purpose, Applicability, and Scope

Purpose -The purpose of this policy is to comply with state law by establishing a written plan as part of a comprehensive program for the management of the acquisition, distribution, use, and maintenance of automated external defibrillators (AEDs) on campus.

2.0 Abbreviations, Acronyms, and Definitions

AED – automated external defibrillator

CAB – Chest Compression, Airway, Breathing

CPR – cardiopulmonary resuscitation

EHS – campus Environmental Health and Safety

EMS – Emergency Medical Services

3.0 Roles and Responsibilities

Program Manager – The director of EHS (Mark Smith) shall serve as the program manager for the AED program. All AEDs on campus are owned by the University of Tennessee, Knoxville. Contact numbers include the following for the program manager:

Office: (865) 974-5084
 Mobile: (865) 223-1748
 Home: (865) 688-1286
 e-mail: msmith38@utk.edu

The alternate program manager is Jim Walker, who can be reached at:

Office: (865) 974-5084
 Mobile: (865) 680-0745
 Home: (865) 573-2731
 e-mail: jwalke10@utk.edu

The mailing address for program manager and alternate is:

Environmental Health and Safety
University of Tennessee
916 22nd Street
Knoxville, Tennessee 37996-3503

a. EHS shall:

- i. Determine which buildings on campus need an AED in coordination with the Emergency Management Steering Committee and the Medical Director.
- ii. Notify department heads and building representatives of buildings of the need to have an AED
- iii. Serve as a technical resource for questions and comments for the AED program and periodically review compliance with this program.
- iv. Post the most recent edition of this policy on the EHS website.
- v. Review and revise this policy periodically and upon notice of the need for changes.
- vi. Maintain a database and post a map of where AEDs are housed on campus.
- vii. Notify department heads and building representative of any changes related to AEDs.
- viii. Inspection of AEDs upon request.
- ix. Maintain records as required.
- x. Submit copies of this policy to outside first responders (Rural Metro), the Emergency Management Steering Committee, and the Medical Director
- xi. Submit copies of Appendix A (Automated External Defibrillator Use Report) to the Medical Director, Emergency Management Steering Committee, and the responding EMS agency following the use of an AED.
- xii. Conduct periodic program audits. See Appendix E and F.
- xiii. Purchase AEDs and register to maintain consistency.

b. Department heads, building representative or designee

- i. Notify staff members of the location of the nearest AED at least annually. This may be done by any of the following:
 - a. E-mail
 - b. Posting on bulletin boards
 - c. Staff meeting
 - d. Other means based on the department's communication plan
- ii. Ensure that department owned AEDs are inspected, tested and maintained in accordance with the manufacturer's specification
- iii. Ensure staff who are likely to use an AED are adequately trained, including periodic refresher programs.

- iv. Maintain records as required by Section 5.0 of this policy.
- v. Conduct an annual audit of AEDs and submit the results to EHS (Appendix E).

c. Medical Director:

- i. The medical director shall supervisor and endorse the placement of all AEDs
- ii. Review Appendix A submitted from EHS following use of an AED on campus.

4.0 Procedure

d. Purchasing an AED

AEDs that are purchased shall meet the requirements of Tennessee law (Appendix B) and the American Heart Association guidelines (Appendix C). Models that are purchased shall be consistent with other units on campus. Those individuals wishing to purchase an AED should consult Appendix H of this document.

e. Distribution and Location

Structures that are connected (e.g. the Student Services Building and the Communications Building) may be considered a single building. The Emergency Management Steering Committee will approve the location of AEDs in buildings on campus in coordination with the Medical Director. Department heads may elect to purchase an AED for their department; however, the purchase must be made through EHS. Consideration should be given to the potential for a cardiac arrest, the type of activity being performed and anticipated response time of rescuers.

Within a building, an AED should be placed in a location which: (1) is centrally located and clearly visible; (2) near a phone in order to call 911; (3) is accessible during times when the building is occupied; Trained personnel who use mobile AEDs shall have a cell phone with them while the AED is in the field.

University Police have purchased 10 AEDs, which are kept in their squad cars.

A list of AEDs on campus and their location is contained in Appendix D.

f. Training and Information

CPR and AED courses are available locally through the American Red Cross, the American Heart Association or other programs recognized by the Tennessee Emergency Medical Services Board. Appendix B, section 6, provides a list of other approved training courses. In general training is required every two years.

Trained university employees are authorized to use an AED on campus or during university-sponsored activities. However, lifesaving treatment should not be withheld if a trained person is not available.

It is suggested that department heads and building representatives notify employees in their building, at least annually, of where the nearest AED is located.

All university employees should be familiar with emergency procedures, which include medical emergencies.

Department heads and building representatives shall have a sufficient number of employees trained to render CPR or use an AED if their building contains an AED. At least one trained employee shall be present when the building is open. Refresher training, as required by the appropriate training firm (e.g. American Red Cross or American Heart Association) and record keeping are mandatory. In most cases refresher training will be required every two years. Departments shall be responsible for keeping a list of individuals who have been trained. Training results must be forwarded to the Office of Employee and Organizational Development using appropriate forms and to the AED program manager

g. Use

When an unconscious victim is discovered, the following protocol will be followed:

Responder

Check the scene to make sure it is safe (e.g. no electrical hazards or chemical hazards)

Shake and shout at victim. If no response;

Have someone call 911. If no one is available, call 911 and return immediately to the victim.

Have someone retrieve the AED.

Begin the CAB's of CPR.

Utilize AED if necessary and the instructions/training provided

Police Dispatcher

Immediately dispatch an officer and call for an ambulance. The ambulance should be summoned right away. (DO NOT wait for the responding officer to arrive and authorize).

Upon arrival of the responding officer, obtain as much pertinent information as possible and communicate to EMS.

Once EMS is on the scene they are in charge of further rescue efforts for the victim.

Notification

Following any event involving the use of an AED, the responder must complete the AED Use Report (See Appendix A) and send to EHS by one of the following means:

- a. Mail - 916, 22nd Street or
- b. fax to 974-0094 or
- c. e-mail to msmith38@utk.edu or jwalke10@utk.edu.

EHS shall forward a copy of the AED Use Report to the Emergency Management Steering Committee, the Medical Director, and the responding EMS agency for review. Student names should be redacted from the AED Use Report before providing it to the responding EMS agency.

Campus police must notify EHS when an AED has been deployed.

a. Maintenance, Repair and Removal From Service

Departments that have purchased an AED shall inspect, test, and maintain the device in accordance with the manufacturer's specification. AEDs should be checked at least monthly to ensure it is available for use. All repairs shall be made by a factory authorized representative. Departments shall maintain spare supplies (e.g. pads and batteries) for their AEDs.

Spent batteries should be managed in accordance with the manufacturer's guidance. If there are no recommendations with respect to battery disposal, contact EHS at 974-5084.

The manufacturer's standards must be followed after use of an AED.

Records shall be kept of all inspections, testing, repairs and maintenance of the device.

Department shall schedule AED maintenance to the extent feasible so as to minimize down time.

EHS shall be notified immediately when an AED is removed from service, found to be missing, or inoperative. Efforts shall be made to provide a replacement unit as soon as possible. A sign shall be placed on the AED's case or cabinet when it is removed from service. The sign shall indicate that the AED is out of service and the location of the nearest unit.

b. Coordination With Emergency Responders

A copy of this policy will be given to Rural Metro for their use, comments and coordination. New AEDs shall be registered online at www.knoxaedregistry.org. Revisions shall be submitted by EHS to these off-site responders.

c. Program Review

Each department shall conduct an annual review of their AED program using the Annual Departmental AED Review Checklist found in Appendix E. The AED program manager shall collect the departmental reviews and including with the comprehensive review. Results shall be provided to the Emergency Management Steering Committee.

5.0 Recordkeeping

The following records must be maintained

1. Periodic maintenance, repair and inspection records
2. Record of employee training
3. Other records as defined by the equipment manufacturer
4. Record of use (Appendix A)
5. Record of transmittal to responding EMS agency and their approval of the plan, placement and program

Records 1, 2 and 3 from this section shall be kept by the department that owns the AED. Records 4 and 5 shall be maintained by EHS . The records shall be maintained for at least 10 years. If litigation is pending, threatened, or anticipated, records relating to such litigation shall not be destroyed unless approved by the Office of the General Counsel. Similarly, documents relating to an audit shall not be destroyed.

6.0 Attachments

- Appendix A - Automated External Defibrillator Use Report
- Appendix B - Tennessee Codes Annotated 1200-12-01-.19 AED Programs
- Appendix C – American Heart Association Guidelines
- Appendix D – Map of AED Locations on Campus
- Appendix E – AED Comprehensive Annual Program Review
- Appendix F – Annual Departmental AED Program Review
- Appendix G – List of Individuals Trained and Authorized to Use an AED

7.0 Associated Standards

- Tennessee Codes Annotated (TCA) 63-6-218
- Tennessee Codes Annotated (TCA) 68-140-701 *et seq.*
- Rules and Regulations of the State of Tennessee 1200-12-01-.19

Appendix A

Automated External Defibrillator (AED) Use Report

Date and time of Use: _____ Location: _____

AED model used: _____

Patient Information:

Name: _____ Age: _____ Sex: _____ Race: _____

Patient Condition upon your arrival: (circle)

Conscious Breathing Pulse CPR

Unconscious Not Breathing No Pulse No CPR

What action did you take? _____

Was shock needed? Yes No Was shock delivered? Yes No

Did pulse return? Yes No Did breathing return? Yes No

Was CPR performed? Yes No By whom? _____

Did patient become conscious? Yes No

Condition on arrival of EMS? _____

Outcome (if known): _____

Names of all AED responders: _____ Date _____

Please submit report Campus Environmental Health and Safety at:

916 22nd Street, Knoxville, TN 37996-3503 or Fax to: 974-0094 or via e-mail to msmith38@utk.edu or jwalke10@utk.edu.

Rules of the Tennessee Department of Health and Tennessee Department of Conservation 1200-12-01-.19 Automated External Defibrillator Programs

(1) Each entity shall submit a written notice to the local primary emergency medical services provider or emergency communications district that provides the following information:

- (a) the name of the entity, the owner of the AED, and a contact person and an alternate with telephone numbers, and mailing address of the placement facility;
- (b) the street location and site within the facility where the AED shall be placed, means to access the AED, hours during the day when the AED may be available, and whether the AED may be used off-site;
- (c) description of the AED by manufacturer and model;
- (d) listing of the area emergency medical services and contact information for the EMS agency and emergency communications district;
- (e) the name and contact information of the physician supervising the AED placement; and,
- (f) how the use of the AED is coordinated with the local EMS system.

(2) Each entity shall maintain and submit a copy of a written AED plan to the local primary emergency medical services provider or emergency communications district that includes:

- (a) designation of the training programs adopted by the entity to prepare expected users;
- (b) a list of individuals appropriately trained and authorized;
- (c) a plan of action for proper use of the AED;
- (d) registration with local emergency medical services with acknowledgement by their representatives of the AED placement, plan, and program;
- (e) description of how the AED program coordinates with EMS and the dispatching entity;
- (f) maintenance and testing procedures necessary to maintain the device, as well as sample forms to document proper maintenance; and,
- (g) reports that shall be made of AED use along with other records to be maintained by the program.

(3) Each entity shall complete a report of the use of an AED and submit a copy to the responding EMS agency and the supervising physician to document the following:

- (a) time of use or deployment of the device;
- (b) the model of AED used;
- (c) names of the AED responders;
- (d) patient information, when known, to include name, age, race, and gender of the patient;

- (e) condition of the patient upon arrival of AED responders and resuscitative actions taken;
- (f) condition of the patient upon arrival of EMS; and,
- (g) patient outcome.

(4) Each placement of an AED shall be supervised and endorsed by a physician with an unrestricted license to practice medicine or osteopathy in Tennessee.

(5) Each automated external defibrillator shall comply with the provisions of T.C.A. § 68-140-710 and shall perform the following capabilities:

- (a) analyze heart rhythm and deliver electrical impulses (countershocks) for at least thirty (30) minutes after deployment;
- (b) deliver visual or audible warnings of low battery power;
- (c) provide an audible or visual warning of loose connections of the electrodes; and
- (d) incorporate an internal event record providing the time of activation, times of rhythm analysis, and times of delivery of countershocks.

(6) The following training programs in cardiopulmonary resuscitation and AED use are consistent with the scientific guidelines of the American Heart Association and have been approved by the Tennessee Emergency Medical Services Board.

- (a) Heartsaver AED and Basic Life Support for Healthcare Professional CPR and AED Courses of the American Heart Association
- (b) Advanced Cardiac Life Support Course of the American Heart Association (for Healthcare professionals in conjunction with Basic Life Support for Healthcare Providers)
- (c) Workplace First Aid and Safety; Adult CPR/AED Training Course of the American Red Cross
- (d) AED Training Course of the American Red Cross (in conjunction with Adult and Professional Rescuer CPR courses)
- (e) AED Course of the National Safety Council (in conjunction with AHA, NSC, or ARC Adult CPR Courses)
- (f) Heartsaver FACTS Course of the National Safety Council or American Heart Association;
- (g) Medic First Aid family of programs for Basic Life Support for Professionals and AED Training by EMP International, Inc.
- (h) American Safety and Health Institute programs for Basic CPR and AED education and training.
- (i) Coyne First Aid CPR and AED training program.

Authority: T.C.A. §§4-5-202, 68-140-504, 68-140-505, and 68-140-705. **Administrative History:** Original rule filed January 24, 2002; effective April 9, 2002. Amendment filed August 15, 2005; effective October 29, 2005.

Appendix C

American Heart Association Guidelines for AED Use

http://www.heart.org/idc/groups/heart-public/@wcm/@ecc/documents/downloadable/ucm_317350.pdf

Appendix D

Map of AED Locations on Campus

<http://web.utk.edu/~ehss/pdf/campusmap.pdf>

Appendix E

Automated External Defibrillators (AEDs) Comprehensive Annual Program Review

This form must be completed annually by the AED program manager or his/her alternate.

Program Element	Status	Comments or Action
Does the campus have a written plan for AEDs?		
Has the plan been reviewed/ revised within the past two years?		
Does the plan accurately reflect current practice?		
Has the medical director approved the plan and has this fact been documented?		
Has the local primary emergency medical services provider or emergency communications district approved the plan?		
Has a person or department been identified to manage this program?		
Has a medical director been identified?		
Is there a master inventory of AEDs?		
Is there written approval from a physician with respect to approved locations?		
Has each department that owns an AED submitted an annual review?		
Are there any outstanding items?		
Have there been any recalls or safety notices associated with the AEDs on campus?		
Other program elements		

Review Conducted by _____ Date of Review _____

Appendix F

Annual Departmental AED Program Review

Use the back of this sheet or separate sheets for additional comments. Questions about this checklist of the AED program should be directed to Mark Smith or Jim Walker in Environmental Health and Safety at 974-5084. Copies of the written plan can be found at:

<http://web.utk.edu/~ehss/safety%20manual/smpdf/AED%20Procedure%202%201.pdf>

Program Element	Status	Comments or Action
Is there an inventory of AEDs for the department?		
Are the AED located in a suitable environment (temperature, humidity, etc)?		
Are AEDs visible and accessible where provided?		
Are AEDs being inspected at least monthly?		
Is the inspection process documented?		
Are the expiration dates on the pads and batteries being tracked?		
Have all AEDs on campus been registered with the appropriate authorities?		
Have staff been trained in CPR and AED use by an approved source?		
Has the training been documented and is it current?		
Do staff in the department know who is authorized to use an AED?		
Have any AEDs been repaired or removed from service?		
Have repairs been documented?		
Has any AED been used on a person and has this been documented?		
Other items for review		

Review conducted by: _____

Date: _____

Department: _____

Appendix G

List of Individuals Trained and Authorized to Use an AED

[Dunford Hall](#)
[Andy Holt Tower](#)
[Alumni Memorial Bldg.](#)
[Art & Architecture](#)
[Carolyn Brown University Center](#)
[Claxton Education](#)
[Communications Bldg.](#)
[Conference Center](#)
[Dabney / Buehler](#)
[Facilities Services](#)
[Haslam Business Bldg.](#)
[Hesler Biology & Greenhouse](#)
[Jane & David Bailey Education](#)
[John C. Hodges Library](#)
[Kingston Pike Bldg.](#)
[Law College](#)
[McClung Museum](#)
[McClung Tower & Humanities](#)
[Presidential Court](#)
[Science & Engineering](#)
[Stokely Management Center](#)
[Student Services Bldg.](#)
[Walters Life Sciences](#)

Appendix H

Purchasing an Automated External Defibrillator

This guide has been developed to assist departments in the decision making process regarding the purchase of an automated external defibrillator (AED). Questions regarding the AED program at UT Knoxville should be directed to Mark Smith or Jim Walker at 865 974-5084.

Departments that purchase an AED will be responsible for:

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1. Contacting Environmental Health and Safety (EHS) to ensure the AED meets specifications before purchase.
2. Providing information to EHS about the unit for registration purposes.
3. Maintenance, repair and monthly inspections of the AED.
4. Maintaining records as required.
5. Being familiar with the AED written plan found at:
<http://web.utk.edu/~ehss/safety%20manual/smpdf/AED%20Procedure%202%201.pdf>
6. Ensure an adequate number of individuals in the building are trained in CPR/AED use. Courses are available through the American Red Cross or American Heart Association.
7. Completion of an annual program audit, found in the written plan.
8. Notifying staff of the AED location.
9. Notifying EHS when an AED has been used.

Note that EHS is available to assist or arrange service for the eight items listed above. Items number 3 and 6 involve a fee. Contact EHS for details.