Introduction and Purpose

This guide outlines the availability, maintenance, and proper use of Automated External Defibrillators (AEDs) at the Auraria Higher Education Center (AHEC). It also outlines roles and responsibilities to ensure program compliance and success.

Purpose

The purpose of the AED Program is to increase the chances of survival for individuals in the Auraria Campus community who experience cardiac arrest. Sudden cardiac arrest (SCA) is a medical event in which the heart’s rhythm becomes erratic, and the heart cannot pump oxygenated blood to the brain or other vital organs. Unless a normal heart rhythm is restored within a short time, death is most likely inevitable. An AED is a compact and portable battery-operated device used to automatically deliver measured electrical shocks to reestablish the heart’s normal rhythm. The simplicity of operating AEDs makes them suitable for use in public spaces by those who have basic Cardio-Pulmonary Resuscitation (CPR) and AED training.
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### Auraria Campus Authority and Approval

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<th>Position</th>
<th>Name/Department/Agency</th>
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<tbody>
<tr>
<td>Chief of Staff</td>
<td>Blaine Nickeson, Executive Office AHEC</td>
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<td>Clinical Director</td>
<td>Dr. Louis Lorenzo, Health Center at Auraria MSU Denver</td>
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<td>10-8-15</td>
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<tr>
<td>Center Director</td>
<td>Stephen Monaco, Health Center at Auraria MSU Denver</td>
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<td>10-8-15</td>
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<td>EHS/LS Manager</td>
<td>Emily Sanders, Facilities Services AHEC</td>
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<td>10/8/15</td>
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<tr>
<td>Campus Chief of Police</td>
<td>Michael Phibbs, Auraria Campus Police Dept. AHEC</td>
<td></td>
<td>10/8/15</td>
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</table>
Expected/Authorized AED Users

Under Colorado Good Samaritan laws, anyone, including untrained bystanders, is protected from civil litigation when using an AED in good faith; however, we encourage campus personnel to have prior training. We offer regular on-campus training on a first-come, first-served basis.

Staff and faculty at the Auraria Campus are not required to administer AEDs, nor will they be specifically compensated for assisting a victim of sudden cardiac arrest. Except for campus police and medical professionals in a clinical setting (Health Center at Auraria), all staff and faculty at the Auraria Campus are considered volunteers when rendering assistance to any individual suffering a medical emergency. Most of the Auraria Campus Police Department (ACPD) officers are trained to use AEDs, as are many professional clinicians.¹

¹ Defibrillators in clinical areas are not covered by State Immunity or AED statutes and are for use by professional medical personnel only, and should be marked as such.
Medical Emergency Procedures

AED Basics
In the case of sudden cardiac arrest, the AED circuitry is designed to analyze cardiac rhythm and inform the operator whether a shock is recommended. Electrode pads placed on the victim transmit information to the device for both monitoring and shock therapy. Once activated, AEDs guide the user through a few simple steps using voice and text commands. As a precaution, the AED will not electrically shock the victim unless the unit’s pre-programmed computer indicates necessity, at which time a voice prompt will warn bystanders to not touch the patient during shock phase.

Contraindications for Field AED Use
AEDs are only useful for cardiac arrest (no pulse and no respirations). AEDs are not useful for other medical or traumatic incidents. DO NOT use an AED if the patient exhibits the following signs:

- Patient is conscious
- Patient is breathing and responsive

Keys to Survival Success
When sudden cardiac arrest occurs, several key factors must be initiated in rapid order. Those key factors are known as the Chain of Survival.

1. Early recognition
2. Early cardiopulmonary resuscitation (CPR)
3. Early defibrillation
4. Early access to emergency medical services (EMS)

Early CPR and rapid defibrillation are two major contributors to survival of adult victims of sudden cardiac arrest. However, these must be combined with other elements, such as recognition that a person is having a medical emergency and early access to local EMS (ideally with paramedic services), to increase a victim’s odds of survival. According to the American Heart Association (AHA), use of AEDs by first responders and laypersons has “reduced time to defibrillation and improved survival from sudden cardiac arrest in several communities.”
How to Initiate the Chain of Survival

**ACTIVATE the following steps:**

1. Make sure the scene is safe.
2. Determine if the victim is conscious or responsive by tapping him or her on the shoulder and shouting, “Are you OK?”
3. Call for help and instruct another person to call 911 using a campus phone or 303-556-5000 using a cell phone.
4. Provide the dispatcher with the following information:
   - The building location on the Auraria Campus
   - Floor and room number
   - Explain that an AED is being deployed
5. Identify others who can stand at the building entrance and guide emergency responders to the scene.
6. If the victim is not breathing, perform CPR as instructed via phone by the 911 medical dispatcher or according to current American Red Cross/AHA guidelines. Remember, CPR is as easy as C–A–B.
   - **C – Compressions:** Deliver 30 compressions by pushing hard and fast on the center of the victim’s chest at a depth of two (2) inches.
   - **A – Airway:** Tilt the victim’s head back and lift the chin to open the airway.
   - **B – Breathing:** Use a barrier mask to give two (2) mouth-to-mouth rescue breaths.
7. Defibrillate using the following steps:
   1. When an AED arrives, have someone help you by placing it at the patient’s head and turning it on. Listen for the AED prompts. Continue CPR while your helper prepares the AED.
   2. Apply AED pads according to the picture instructions on the AED machine.
   3. Listen to the audio instructions and do not touch the victim while the AED analyzes the heart rhythm.
   4. If the AED tells you to deliver shock, instruct all other persons to stand back, ask if all (people) are clear, and administer shock.
   5. Follow the AED instruction while it analyzes the patient. It may be necessary to administer another shock or resume CPR.

Remember to make note of as much information as possible for EMS personnel about the scene, victim, and already-provided care. This includes:

- Victim’s name
- Known medical problems
- Known allergies or ID alerts
- The time the victim was found
- The number of shocks delivered
Auraria Campus AED General Issues and Warning Notices

- AEDs are intended to assist a person in cardiac arrest. The units are life-saving devices and need to be treated as such.

- AEDs have an internal program to recognize specific cardiac rhythms that cannot be overridden. The device will not give a shock to a person with a normal heart rhythm.

- Tampering with or disabling an AED (e.g., theft of the unit, causing it to not operate, removing the defibrillation pads, battery, or other related equipment, etc.) may result in criminal and/or civil charges.

- Theft or destruction of an AED is a criminal offense.

- The campus AED cabinets have alarms to alert for a possible medical emergency in the areas where they are mounted. Only authorized personnel are allowed to test the AED cabinet alarms.

- When a campus AED cabinet is opened, the alarm will sound. In most cases, this alone will not alert emergency responders. If deploying an Auraria Campus AED for a medical emergency, call 911 from a campus phone, activate an “emergency phone” (located on the red pillars around campus or on the walls in some buildings) or call 303-556-5000 from a cell phone for the ACPD and EMS to respond.

- Report all emergencies to the ACPD (911) and give as much information as possible.

- Report all damage/misuse of Campus AEDs to AHEC Environmental Health/Safety and Life Safety (AHEC EHS/LS) at 303-556-8397 or safetyoffice@ahec.edu.

AED WARNING NOTICES

Warning: Defibrillation current can cause injury

- Do not touch the patient during defibrillation.

- Do not touch equipment connected to or metal objects in contact with the patient during defibrillation.

- Disconnect other electrical equipment from the patient before defibrillating.

AEDs are not typically designed for wet environments. Use caution if the unit is moved to areas of rain, snow, high humidity, or other wet conditions.

DO NOT use AEDs in flammable atmospheres or near high oxygen concentrations.
Post-AED Deployment Procedures

Debriefing

1. It is mandatory that the AED Program Medical Director and the AHEC Office of Emergency Preparedness be notified within 24 hours by the ACPD when a campus AED device is used.

2. The AHEC Office of Emergency Preparedness will work with the AED Program Medical Director to provide any required documentation/data from the AED unit before it is put back in service.

3. It is recommended that the responder/rescuer and assisting persons speak to a behavioral/mental health professional. This can be done by contacting the Health Center at Auraria and making an appointment to discuss post-traumatic stress. Follow-up appointments are not required, but encouraged.

4. The AED Program Medical Director, AHEC Office of Emergency Preparedness, ACPD staff, and other appropriate personnel will conduct a debriefing meeting where all aspects of the performance of the system, personnel, AED unit, and protocols will be addressed to validate or improve effectiveness and identify any problem areas. Every effort should be made to schedule the debriefing meeting within 10 working days of any incident.

Post-Incident Equipment Procedures

The following steps must be completed after the use of an AED:

1. The ACPD will remove the AED from service and take it to ACPD headquarters to secure the unit for evaluation by the AHEC EHS/LS.

2. If necessary, the AHEC Office of Emergency Preparedness and/or the AED Program Medical Director will download the incident data from the AED.

3. The AHEC Office of Emergency Preparedness will ensure any necessary paperwork is completed.

4. Once cleared by the AED Program Medical Director and AHEC Office of Emergency Preparedness, AHEC EHS/LS will replace the pads and batteries per the manufacturer’s guidelines and place the unit back in service.
Auraria Campus AED Program Management and Responsibilities

AHEC Office of Emergency Preparedness
The AHEC Office of Emergency Preparedness is responsible for the oversight of the Auraria Campus AED program, including:

- Developing and maintaining a written guide
- Updating the AED map(s) as needed (in conjunction with the AHEC EHS/LS)
- Overseeing compliance of the monthly AED unit inspections
- Coordinating first aid, CPR, and AED training
- Identifying and communicating relevant federal and state laws and regulations as they apply to AED programs
- Conducting an annual review of the Auraria Campus AED program

Program Medical Director (Health Center at Auraria)
The Health Center at Auraria is responsible for medical direction and control of the Auraria Campus AED program. Responsibilities include:

- Developing and/or approving all medical aspects of the program
- Approving the type(s) of AED unit(s) for the Auraria Campus that satisfy Colorado state laws
- Selecting and/or approving ancillary medical equipment and supplies for the Auraria Campus AED program
- Providing oversight for the types and frequency of AED trainings provided to the Auraria Campus staff and faculty that will satisfy Colorado State laws and best practices
- Performing a medical review each time an AED unit is used on the Auraria Campus
- Acting as the campus medical liaison with local emergency medical services (EMS) and the Denver Fire Department
- In cooperation with the AHEC Office of Emergency Preparedness, performing an annual review of all components of the Auraria Campus AED program
AHEC Office of Environmental Health/Safety and Life Safety

The AHEC EHS/LS is responsible for the day-to-day management of the Auraria Campus AED program, in consultation with the AHEC Office of Emergency Preparedness. Responsibilities include:

- Ensuring AED units are properly maintained and tested in accordance with the manufacturer’s guidelines
- Conducting and documenting the required monthly inspections
- Ensuring that adequate AED-related supplies and recommended ancillary medical equipment are kept on-hand
- Completing unit maintenance and maintaining testing records related to the Auraria Campus AED program
- Participating in annual program reviews

Auraria Campus Police Department

AHEC AED Program responsibilities for the ACPD include:

- Educating faculty, staff, and students on the location of AEDs in their buildings
- Ensuring ACPD personnel are trained in accordance with guidelines established by the Program Medical Director
- Maintaining ACPD personnel training records regarding CPR/AED/First-aid
- Ensuring that the AHEC Office of Emergency Preparedness is notified of any use of an Auraria Campus AED unit
Inspection and Maintenance

AED units will be inspected on a monthly basis. A *notification of completion* of the monthly inspections will be sent to the Health Center at Auraria, and the original inspection reports will be kept on file at AHEC EHS/LS. Inspections will ensure that the AED is fully charged and operational, and that associated equipment (e.g., defibrillation pads, wiring, etc.) is undamaged and ready for use. All AEDs in operational service will be maintained and tested according to the manufacturer’s guidelines. A professional contractor arranged through AHEC EHS/LS will be responsible for any national medical standards software updates.

AEDs that fail the physical inspection (and cannot be corrected by AHEC EHS/LS) must be removed from service by AHEC EHS/LS. The AHEC Office of Emergency Preparedness and ACPD must be notified if the unit will be removed from its regular station and not immediately replaced with a reserve AED unit. If the AED station will be empty until a reserve AED unit becomes available, a *sign stating that unit is out-of-service and indicating the location of the next closest unit* must be placed on the AED box.
AED Station Inspection Sheet

<table>
<thead>
<tr>
<th>Date</th>
<th>Building</th>
<th>Location</th>
<th>Serial #</th>
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<th>Spare Pads Expire</th>
<th>Battery Expires</th>
<th>Rescue Kit Present/Intact</th>
<th>Station Box Alarm</th>
<th>Infant/Child Key</th>
<th>Notes</th>
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AHEC EHS/LS will maintain monthly inspection sheets available for review at all times at the EHS/LS office. Address any other questions to AHEC Office of Emergency Preparedness at 303-556-3295.
Records and Program Review

Records Retention
The maintenance and testing records required by this program shall be maintained for a period of two (2) years (i.e., current year and immediate past year) by AHEC EHS/LS. Records that reflect the current status of ACPD CPR/AED/First-aid training shall be maintained according to their staff training policies. The AHEC Office of Emergency Preparedness should maintain all other records, including those associated with AED use or post-event debriefings, indefinitely.

Annual Program Review
The AHEC Office of Emergency Preparedness and Program Medical Director will annually conduct a review of all components of the Auraria Campus AED Program and make appropriate recommendations for improvement or remediation.

The annual review will include, at the least, the following components:

- Review of the Auraria Campus AED written program
- Review of Colorado state laws and applicable guidelines related to AED use
- Review of written communications regarding deployment/use of AEDs with the ACPD
- Discussion and review of the Program Medical Director’s responsibilities and activities
- Discussion and review of AHEC EHS/LS’s responsibilities and activities
- Review of all training levels and AED locations, use, service, and testing
- Discussion of program review results with the AHEC Executive Office
- Written report on the annual review to be completed by AHEC Office of Emergency Preparedness and distributed to the Program Medical Director, AHEC EHS/LS, ACPD Command, and AHEC Executive Office
Authorities and References

Colorado Laws Pertaining to AEDs

C.R.S. 13-21-108

COLORADO REVISED STATUTES

* This document reflects changes current through all laws passed at the
  Second Regular Session of the Sixty-Ninth General Assembly
  of the State of Colorado (2014)
  and changes approved by the electorate at the November 2014 election *

TITLE 13. COURTS AND COURT PROCEDURE DAMAGES
ARTICLE 21. DAMAGES
PART 1. GENERAL PROVISIONS


13-21-108. Persons rendering emergency assistance exempt from civil liability

(1) Any person licensed as a physician and surgeon under the laws of the state of Colorado, or any other person, who in good faith renders emergency care or emergency assistance to a person not presently his patient without compensation at the place of an emergency or accident, including a health care institution as defined in section 13-64-202 (3), shall not be liable for any civil damages for acts or omissions made in good faith as a result of the rendering of such emergency care or emergency assistance during the emergency, unless the acts or omissions were grossly negligent or willful and wanton. This section shall not apply to any person who renders such emergency care or emergency assistance to a patient he is otherwise obligated to cover.

(2) Any person while acting as a volunteer member of a rescue unit, as defined in section 25-3.5-103 (11), C.R.S., notwithstanding the fact that such organization may recover actual costs incurred in the rendering of emergency care or assistance to a person, who in good faith renders emergency care or assistance without compensation at the place of an emergency or accident shall not be liable for any civil damages for acts or omissions in good faith.

(3) Any person, including a licensed physician, surgeon, or other medical personnel, while acting as a volunteer member of a ski patrol or ski area rescue unit, notwithstanding the fact that such person may receive free skiing privileges or other benefits as a result of his volunteer status, who in good faith renders emergency care or assistance without other compensation at the place of an emergency or accident shall not be liable for any civil damages for acts or omissions in good faith.
(4) (a) Notwithstanding the fact that the person may be reimbursed for the person's costs or that the nonprofit organization may receive a grant or other funding, any person who, while acting as a volunteer for any nonprofit organization operating a telephone hotline, answers questions of or provides counseling to members of the public in crisis situations shall not be liable for any civil damages for acts or omissions made in good faith as a result of discussions or counseling provided on the hotline.

(b) As used in this subsection (4), unless the context otherwise requires, "hotline" means a telephone line staffed by individuals who provide immediate assistance to callers in emergency or crisis situations.

(5) An employer shall not be liable for any civil damages for acts or omissions made by an employee while rendering emergency care or emergency assistance if the employee:

(a) Renders the emergency care or emergency assistance in the course of his or her employment for the employer; and

(b) Is personally exempt from liability for civil damages for the acts or omissions under subsection (1) of this section.


Cross references: (1) For the exemption from civil liability for veterinarians providing emergency care or treatment to an animal, see § 12-64-118; for the exemption from civil liability for persons administering tests to persons suspected of drunken or drugged driving, see § 42-4-1301.1 (6)(b); for the exemption from civil or criminal liability for physicians examining or treating minor victims of sexual assault, see § 13-22-106 (4); for the exemption from civil or criminal liability for physicians acting pursuant to a declaration under the "Colorado Medical Treatment Decision Act", see § 15-18-110 (1)(b).

(2) For the legislative declaration contained in the 1990 act amending subsection (1) and enacting subsection (3), see section 1 of chapter 256, Session Laws of Colorado 1990.
**C.R.S. 13-21-108.1**

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**TITLE 13. COURTS AND COURT PROCEDURE DAMAGES**

**ARTICLE 21. DAMAGES**

**PART 1. GENERAL PROVISIONS**


13-21-108.1. Persons rendering emergency assistance through the use of automated external defibrillators - limited immunity

(1) The general assembly hereby declares that it is the intent of the general assembly to encourage the use of automated external defibrillators for the purpose of saving the lives of people in cardiac arrest.

(2) As used in this section, unless the context otherwise requires:

(a) "AED" or "defibrillator" means an automated external defibrillator that:

(I) Has received approval of its premarket notification filed pursuant to 21 U.S.C. sec. 360 (k), from the federal food and drug administration;

(II) Is capable of recognizing the presence or absence of ventricular fibrillation or rapid ventricular tachycardia, and is capable of determining, without intervention by an operator, whether defibrillation should be performed; and

(III) Upon determining that defibrillation should be performed, automatically charges and requests delivery of an electrical impulse to an individual's heart.

(b) "Licensed physician" means a physician licensed to practice medicine in this state.

(3) (a) In order to ensure public health and safety, a person or entity who acquires an AED shall ensure that:

(I) Expected AED users receive training in cardiopulmonary resuscitation (CPR) and AED use through a course that meets nationally recognized standards and is approved by the department of public health and environment;

(II) The defibrillator is maintained and tested according to the manufacturer's operational guidelines and that written records are maintained of this maintenance and testing:
(III) (Deleted by amendment, L. 2009, (SB 09-010), ch. 52, p. 186, § 1, effective March 25, 2009.)

(IV) Written plans are in place concerning the placement of AEDs, training of personnel, pre-planned coordination with the emergency medical services system, medical oversight, AED maintenance, identification of personnel authorized to use AEDs, and reporting of AED utilization, which written plans have been reviewed and approved by a licensed physician; and

(V) Any person who renders emergency care or treatment to a person in cardiac arrest by using an AED activates the emergency medical services system as soon as possible.

(b) Any person or entity that acquires an AED shall notify an agent of the applicable emergency communications or vehicle dispatch center of the existence, location, and type of AED.

(4) (a) Any person or entity whose primary duties do not include the provision of health care and who, in good faith and without compensation, renders emergency care or treatment by the use of an AED shall not be liable for any civil damages for acts or omissions made in good faith as a result of such care or treatment or as a result of any act or failure to act in providing or arranging further medical treatment, unless the acts or omissions were grossly negligent or willful and wanton.

(b) The limited immunity provided in paragraph (a) of this subsection (4) extends to:

(I) The licensed physician who reviewed and approved the written plans described in subparagraph (IV) of paragraph (a) of subsection (3) of this section;

(II) The person or entity who provides the CPR and AED site placement;

(III) Any person or entity that provides teaching or training programs for CPR to the site at which the AED is placed, which programs include training in the use of an AED; and

(IV) The person or entity responsible for the site where the AED is located.

(c) The limited immunity provided in this subsection (4) applies regardless of whether the requirements of subsection (3) of this section are met; except that the person or entity responsible for the site where the AED is located shall receive the limited immunity only if the requirements of subparagraph (II) of paragraph (a) of subsection (3) of this section are met.

(5) The requirements of subsection (3) of this section shall not apply to any individual using an AED during a medical emergency if that individual is acting as a good Samaritan under section 13-21-108.

References

- American Heart Association – AED
- American Red Cross – Learn About AEDs
  - http://www.redcross.org/prepare/location/workplace/easy-as-aed
- Denver Health Paramedic Division
  - https://www.denverems.org/
- Health Center at Auraria
  - https://www.msudenver.edu/healthcenter/
## Acronyms

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<tr>
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<td>AED</td>
<td>Automated External Defibrillator</td>
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<td>AHA</td>
<td>American Heart Association</td>
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<td>Auraria Higher Education Center</td>
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<td>Cardio-Pulmonary Resuscitation</td>
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<td>SCA</td>
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