



University of California Davis

Enhanced Life-Saving Program

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I. Introduction

An Automated External Defibrillator (AED) is a device capable of cardiac rhythm analysis, which will charge and deliver a shock after electronically detecting and assessing ventricular or rapid ventricular tachycardia when applied to an unconscious victim who has experienced sudden cardiac arrest. The AED must only be applied to victims who are unconscious, without a pulse, and not breathing. The AED will analyze the heart rhythm and advise the operator if a shockable rhythm is detected. If a shockable rhythm is detected, the AED will charge to the appropriate energy level, advise bystanders of the impending shock, and deliver the shock.

II. Scope

An AED can be used in conjunction with Cardiopulmonary Resuscitation (CPR) in cases of sudden cardiac arrest on campus, in accordance with accepted protocols, including those developed by the American Red Cross and the American Heart Association. Use of the AED and CPR will continue as appropriate during the course of emergency care, until the patient resumes pulse and respiration, and/or local Emergency Medical Services (EMS) arrive at the scene, and assume responsibility for emergency care of the patient.

III. Responsibilities

A. Medical Director: (Tom Ferguson)

1. Provides medical direction for use of the AED device.
2. Writes a prescription for the AED device.
3. Reviews and approves guidelines for emergency procedures related to the use of AEDs and CPR.
4. Evaluates post-event review forms.

B. AED Program Coordinator: (Joe Perry)

1. Insures that records of AED training in accordance with accepted protocols including those developed by the American Red Cross and American Heart Association are maintained by the appropriate departments.
2. Reviews equipment and accessory maintenance.
3. Reviews and revises the AED Policies and Procedures annually as needed in conjunction with the Associate Director of Employee Health Services, the University Fire Department, Risk Management, and Environmental Health and Safety and the Associate Vice Chancellor of Safety Services.
4. Works as a liaison between the University and the AED manufacturer.
5. Organizes meetings and works with the coordinators to maintain records, AED guidelines, and protocols.
6. Communicates with the Medical Director on issues related to this medical emergency response plan including post-event reviews.

C. Division Coordinators

1. Student Affairs: Medical Director, Student Health Center
2. Public Safety: Fire Chief, Fire Department
3. Campus Departments: Director, EH&S

D. Department AED Coordinator

1. Provides daily (internally by machine) and monthly equipment maintenance per manufacturer's recommendations;
2. Sends all maintenance and training records to University AED Program Coordinator for review.

E. CPR & AED Training Coordinators

1. Campus: Assistant Director, Outdoor Adventures
2. Public Safety: Assistant Fire Chief-Operations & Training, Fire Department

IV. Location

- A. Per the manufacturer's recommendations, the AED devices are placed in areas that are easily accessible and periodic inspection of the AED will be facilitated.

V. System Verification and Review

- A. Annual AED Program Review: Once each year, the AED Program Coordinator shall conduct, document and send to the Medical Director a system readiness review, including the following elements:
 1. Training records
 2. Equipment operation
 3. Maintenance record
- B. Periodic Systems Check: Once each calendar month, the Department AED Coordinator shall conduct, document and submit to the AED Program Coordinator a system check including the following elements:
 1. Emergency Ready Kit supplies
 2. AED battery life
 3. AED operation and status

VI. Equipment

- A. The Cardiac Science Automated External Defibrillator has been approved for this program and conforms to all state and local standards.
- B. Each AED will have:
 1. One set of adult defibrillation electrodes, connected to the device
 2. One spare set of adult electrodes
 3. One serial communication cable

4. One Ready Kit containing two pairs of gloves, one disposable razor, one pair of trauma shears, two gauze pads, one antiseptic towelette and one pocket mask barrier device.

(a) NOTE: Alcohol wipes are NEVER to be used on a patient, as it is flammable and may be ignited by AED use.

C. Procedures for purchasing equipment:

1. Notify UCD Fire Department Chief of need. (see Departmental AED Request template on page 11)
2. Provide training records and request letter to Fire Chief, who will forward the request to the Medical Director.
3. Fire Chief receives approval from Student Health Services Medical Director.
4. UCD Fire Department performs site assessment to help determine location for the AED.
5. UCD Fire Department, once provided a recharge account number from the requesting department, orders and receives the AED unit for the requesting department and coordinates AED distribution.

VII. Equipment Maintenance

- A. All AED equipment and accessories shall be maintained in a state of readiness and per manufacturer guidelines:
 1. The AED Program Coordinator shall be informed by the Division Coordinators of changes in availability of emergency medical response equipment (i.e.; taken out of/returned to service).
 2. The Department AED Coordinator shall ensure all daily and monthly maintenance tasks (Appendix II) are performed according to equipment maintenance procedures outlined in the operating instructions for detailed maintenance and testing. Copies of maintenance and inspection records are due to the AED Program Coordinator for the annual AED Program Review.
 3. Following use of emergency response equipment, it is the responsibility of the Department AED Coordinator to ensure that all equipment is cleaned and/or decontaminated. After use, the AED is to be cleaned with a soft cloth dampened with one of the following agents: ammonia-based cleaners, isopropyl alcohol (70%), or hydrogen peroxide.

VIII. Authorized Users

- A. Trained University Responders (Fire, Police, Medical):
 1. UCD responders will have successfully completed an approved CPR and AED training program through the American Red Cross or the American Heart Association.
 2. Trained responders must have on record a current course completion with the AED Program Coordinator.
- B. Trained Volunteer Responders (staff or public):

1. Volunteer responders should have successfully completed an approved CPR and AED training program through the American Red Cross or the American Heart Association and have a current course completion card.
2. Anyone can, at their discretion, provide voluntary assistance to victims of medical emergencies. The extent to which these individuals respond shall be appropriate to their training and experience. These responders are encouraged to contribute to emergency response only to the extent they are comfortable. The emergency medical response of these individuals may include CPR, AED use or medical first aid.

IX. Training

- A. Certification Training:
 1. University Responders must complete training adequate to provide basic first aid, CPR and AED use in accordance with the American Red Cross or the American Heart Association. University Responders will also be trained in universal precautions against bloodborne pathogens and shall be offered Hepatitis B vaccination free of charge. Individual departments are responsible for ensuring that training records are kept up to date with the Training Coordinators and AED Program Coordinator.
 2. Volunteer Responders must complete training adequate to provide CPR and AED use in accordance with the American Red Cross or the American Heart Association. Any Volunteer Responder wishing to potentially use one of the AEDs deployed on campus should have a current course completion card provided by an agency mentioned above.
 3. Once training has been completed and verified, the Student Health Services Medical Director will issue individual prescriptions for placement of the campus AEDs.

X. Recertification Training

- A. University Responders will renew first aid, CPR and AED training in accordance with the American Red Cross or the American Heart Association guidelines.
- B. Volunteer Responders should obtain documented renewal training in CPR and AED use in accordance with the American Heart Association or American Red Cross guidelines and submit the documentation to the AED Program Coordinator.

XI. Post Incident

- A. Post-Incident Documentation
 1. AED Incident Report Form (Appendix I): Must be completed by a Trained Responder for each medical event using the AED. The form shall be

forwarded by fax to both the Medical Director and the Fire Chief within 24 hours of the medical event.

2. Any and all patient information generated during AED use must be collected and placed in the patient's confidential medical file in Employee Health Services or Cowell Student Health and stored for *seven* years (30 years if incident cause by work factors).

B. Post-Incident Review

1. A review of each medical event using an AED shall be conducted by the AED Program Coordinator.
2. All key participants in the medical event shall participate in a review that includes:
 - (a) Actions that went well during the medical event
 - (b) Opportunities for improvement
 - (c) Critical incident stress debriefing
3. A summary of the post-incident review shall be sent to Risk Management and Environmental Health and Safety for maintenance according to the record retention policy.

XII. Data Storage and Retrieval

- A. Every time the AED is used on a patient, summary data of the incident is automatically stored in the internal memory of the AED. This allows for post-incident review for quality control and training purposes. This data may be requested or collected by emergency personnel on scene in accordance with local EMS authority protocols relating to the continuity of patient care.
- B. Reviewing Incident Data (Internal Memory):
 1. Remove the data card, if one is installed, and unplug the pads;
 2. Remove and reinstall the battery;
 3. Select **REVIEW INCIDENT** properties.
 4. Observe and record the amount of time the incident lasted and the number of shocks delivered.

University of California, Davis
Enhanced Life-Saving Program
Appendix I

AED POST-INCIDENT REPORT

Complete this form for every incident necessitating AED use, submitting via fax within 24 hours of use to both the Medical Director and Fire Chief.

DATE & TIME OF AED USE: _____

EXACT LOCATION OF INCIDENT: (include building name, room #, facility name, city)

DESCRIPTION OF INCIDENT: _____

WITNESSES: _____

NAME OF AED OPERATOR: _____

OTHER ASSISTING RESPONDERS: _____

AED SERIAL NUMBER: _____

IF AVAILABLE/KNOWN:

PATIENT'S NAME: _____

UNIVERSITY ID NUMBER (If applicable): _____

DOB: _____ **AGE:** _____ **SEX:** F M **PHONE:** _____

ALLERGIES: _____

KNOWN MEDICATIONS: _____

PERTINENT MEDICAL HISTORY: _____

PHONE NUMBER: _____

EMS UNIT RECEIVING PATIENT: _____

TIME AND LOCATION OF TRANSPORT: _____

REPORTED BY: _____ **DATE:** _____

PHONE NUMBER: _____

Appendix II

AED MAINTENANCE CHECKLIST

Location: _____ Date/Year: _____

SERIAL NUMBER: _____

Use checkmarks to indicate review:

Task	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
Battery Status												
Adult Pad Sets (2)												
Face Mask												
Trauma Shears												
Razor												
Gloves (2 pairs)												
Antiseptic Towelette												
Gauze Pads (2)												
Data Card												
Pediatric Pads (optional)												

INSPECTED BY: _____

Remarks, Problems: _____

Corrective Actions: _____

AED Program Coordinator Comments: _____

Appendix III

AED Model Specifications

Powerheart AED G3 Automatic

There are a number of different models of Automated External Defibrillators on the market today, many of which have operational variations. One such variation is the difference between the “one-button operation” models and those that are fully automatic. While subtle, the difference between the models should be noted for purposes of preparedness.

The AEDs distributed throughout the UC Davis community via the University’s Enhanced Life-Saving Program are fully automated units. Once activated, the unit will instruct the user through defibrillation pad placement and rhythm analysis. The unit will then indicate to the user that a shock is advised or not advised. If no shock is advised, the unit will instruct the user to begin CPR. In the event that a shock is advised, the AED will instruct the user to stand clear of the patient and request that no one touch the patient. The unit will then provide a 3-2-1-shock countdown to the user, at which point a shock will automatically be delivered to that patient.

As noted in the Instruction Guide provided with the AED units, the defibrillation shock current delivered to the patient poses a serious health hazard to those making inadvertent contact with the patient. As such, disregarding the AED unit’s warning to stand clear can result in receiving a serious shock. It is imperative for all responders and bystanders to stand clear of the patient and secondary areas of contact (such as bed/gurney railing). Unlike the “one-button operation” units often provided in training sessions, these automatic AED models are intended to maximize the simplicity of providing successful defibrillation by removing the step of prompting the user to deliver the advised shock. This difference does not alter the sequence of care provided to the patient, but is a significant-enough change to kept in mind by those training to respond and provide care.

Further information and specifications of the AED units distributed throughout the UC Davis community can be found by accessing the manufacturer’s website for this unit:

http://powerheart.com/products/phaed_g3auto.htm

The model chosen for distribution is manufactured by the Cardiac Science Corporation, and is titled the “Powerheart AED G3 Automatic.”



Enhanced Life-Saving Program Departmental AED Request

Chief Joseph Perry
UC Davis Fire Department
One Shields Avenue
Davis, California 95616

Dear Chief Perry:

Please accept this request below for the placement of an AED unit at the location and department indicated below. Training documentation for Trained Volunteer Responders within our department has been attached.

Sincerely,

(name)
(department)

Required Information

Department:

Department AED Coordinator:

Coordinator's Phone #:

Coordinator's Email Address:

Department's Recharge Account #:

Building (containing AED):

AED Intended Location:

Certified Employee(s): (if list of names exceeds space provided, please attach list)

(please attach photocopies of supporting documentation of training)