

West Virginia University Early Defibrillation Program

Introduction

An External Automated Defibrillator (AED) in the workplace can greatly increase a person's chance of survival in the event of sudden cardiac arrest. Statistics show that survival rates increase from about 5% without an AED to as high as 74% with an AED. A successful AED program must consist of:

- Choosing a program coordinator;
- Designating a medical director for the coordination of the program;
- Choosing an AED;
- Determining AED placement within a facility;
- Receiving appropriate training;
- Registering AED's with the WV Office of Emergency Medical Services;
- Notifying MECCA of the AED program;
- Maintaining and testing the AED;
- Activating the EMS system as soon as possible when rendering care; and
- Complying with the WV Office of Emergency Medical Services (EMS) data collection and
- Reporting guidelines.

This will meet the requirements of Chapter 16 Article 4C of the West Virginia State Code. This code also limits the liability of a person using an AED in good faith. A copy of the West Virginia State Code can be found at <http://www.legis.state.wv.us/WVCODE/Code.cfm?chap=16&art=4D#04D>.

AED's are only one component of the Cardiac Chain of Survival. The four links in this chain are:

1. Early access to care (calling 911);
2. Early cardiopulmonary resuscitation (CPR);
3. Early defibrillation; and
4. Early advanced care.

Responsible Parties:

The WVU early defibrillation program requires a cooperative effort from a diverse group of people and organizations. Everyone must fulfill their obligations of the program in order for it to be successful. The duties of the people and organizations involved are explained in the following paragraphs.

Medical Director

Medical oversight is an important part of the AED program. The Director of WVU Department of Occupational Medicine shall appoint a physician to serve as medical director of the WVU Early Defibrillator program. The medical director is responsible for signing the Office of EMS registration application and reviewing

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each AED patient contact. The medical director will work closely with Environmental Health and Safety.

Environmental Health and Safety

Environmental Health and Safety (EHS) acts as a liaison between the groups within WVU and the outside agencies involved in the program. Groups within WVU include Occupational Medicine and departments with AEDs. Outside agencies include the WV Office of EMS and the Monongalia Emergency Centralized Communication Agency (MECCA).

The duties of EHS include:

- Assist with AED selection and placement;
- Notify WV Dept. of EMS of program changes;
- Notify MECCA of all AED locations on campus;
- Coordinate CPR/AED training;
- Track recordkeeping data;
- Notify medical director of all AED usage;
- Report all AED usage to WV Dept. of EMS; and
- Update medical director annually of status of program.

Program Coordinator

The program coordinator is someone on-site who can be responsible for overseeing the day-to-day activities of the program. Possible program coordinators are building supervisors or chemical hygiene officers.

The duties of the program coordinator include:

- Purchase AED;
- Place the AED in a accessible location;
- Coordinate training with EHS;
- Perform maintenance checks as recommended by the AED manufacturer;
- Transfer maintenance records to EHS; and
- Notify EHS of AED use as soon as possible.

An Example

The department of Forestry wants an AED in Percival Hall. The department selects a program coordinator to oversee the AED program.

The program coordinator contacts EHS for advice on the type of AED to purchase and where to locate it. The Forestry Department will purchase the AED and place it in the appropriate location.

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EHS will notify the necessary outside agencies of the existence of the AED in Percival Hall. This includes MECCA and the WV department of EMS. EHS will also notify the Medical Director.

EHS will coordinate training with the program coordinator. All anticipated operators will be trained in CPR and AED usage. The training records will be kept on file at EHS.

The program coordinator will conduct periodic inspections and maintenance checks on the AED as recommended by the manufacturer.

In the event of a cardiac emergency, the responder will call 911 and provide the appropriate care. If the AED is used, the program coordinator will notify EHS as soon as possible following the incident. EHS will contact the medical director for a written review of the operation of the AED. EHS will send this review to the WV department of EMS.

Items for Consideration

Choosing an AED

There are many readily available types of AED's that are suitable for workplace use. Key features should include:

- Lightweight and portable;
- Easy to use, safe and effective;
- Automatically analyzes heart rhythms;
- Determines whether defibrillation is advised;
- Guides the user through defibrillation;
- Self-checking protocols; and
- Prompts the rescuer to begin CPR.

Environmental Health and Safety can assist in choosing an AED. The American Heart Association and American Red Cross can also offer assistance.

AED Placement

AEDs are most effective when they can deliver a shock within 3 to 5 minutes after a person collapses. When deciding where to place an AED, use a 3 minute response time as a guide. AEDs should be visible. No one is going to use an AED or ask for it if they do not know it exists. Alarmed AED cabinets can be used to deter theft. Reception areas, walls of main corridors, cafeterias, and near elevators could be ideal places for AEDs.

Training

The West Virginia State Code requires that anticipated operators complete training in cardiopulmonary resuscitation (CPR) and in the operation of an AED. Training must come from a nationally recognized program approved by the WV Office of EMS such as American Red Cross or American Heart Association. Contact Environmental Health and Safety at 304-293-3792 to schedule training.

Registration and Notifications

The WVU Early Defibrillation Program is registered with the WV Office of EMS. All AED's must be inventoried by EHS. EHS will notify Monongalia Emergency Centralized Communication Agency (MECCA) with the locations of the AEDs.

MECCA is an important part of the cardiac chain of survival. The four links in this chain are:

1. Early access to care (calling 911);
2. Early cardiopulmonary resuscitation (CPR);
3. Early defibrillation;
4. Early advanced care.

Notice: Call 911 immediately if someone is experiencing a cardiac emergency.

Maintaining and Testing AEDs

AED's must be maintained and tested in accordance with the manufacturer's guidelines. Written records of maintenance and testing must be kept. This will be done by the program coordinator or another designated person.

A checklist must be developed to assess the readiness of AEDs and their supplies. A sample checklist can be found at http://www.aednow.com/AHA_AEDChecklist.pdf. Completed maintenance checks will be sent to EHS for recordkeeping.

Data Collection and Reporting

West Virginia State Law requires AED use to be reported to the WV Office of EMS. Contact EHS as soon as possible after an AED incident. EHS will notify the medical director of the incident. They will also complete the appropriate paperwork and deliver it to the regional WV office of EMS