

Worksite: _____ Instructor: _____ Date/Time: _____

Topic C694: Automatic External Defibrillators (AEDs)

Introduction: More than 200,000 Americans die of sudden cardiac arrest (SCA) every year. Up to 50,000 of these deaths could have been prevented if someone had initiated a Red Cross cardiac chain of survival, with an automated external defibrillator (AED).

An abnormal rhythm, called ventricular fibrillation, can cause the heart to stop beating. Without immediate treatment, fewer than five percent of victims survive. The most effective treatment is an electric shock delivered through the chest wall directly to the heart by the defibrillator.

The cardiac chain of survival is a series of four critical steps.

1. Early access to care (calling 9-1-1 or another emergency number)
2. Early cardiopulmonary resuscitation (CPR)
3. Early defibrillation. Delivering an electrical shock to the heart is the most critical step in restoring cardiac rhythm.
4. Early advanced cardiac life support, as needed

How AEDs work: AEDs are battery powered. A microprocessor inside the unit analyzes the victim's heart rhythm and advises the user if a shock is necessary. The unit will not deliver a shock if it senses that one is not necessary. The shock is delivered through two monitoring pads that are placed on a victim's chest.

Most AEDs guide the operator through the steps necessary to deliver a shock with visible or audible prompts.

Administered within three minutes of an attack, the electric shock can restore the normal rhythm to the victim's heart and can increase survival rates dramatically, to nearly 75 percent.

Training: Most AEDs are safe and easy to use; but users need to know more than just how to operate them. Untrained users may not recognize cardiac-arrest emergencies or they may not know how to use an AED safely, endangering themselves and others.

Users must know how to attach the device's monitoring pads, whom to contact for additional emergency support, and how to do CPR. An AED rescue kit should include items necessary to conduct CPR and control blood borne pathogens (i.e. CPR barrier mask, gloves, scissors, antiseptic wipes, etc). AED rescue kit placement must be readily accessible.

Where to get AED training: The Red Cross offers AED and CPR training, as well first-aid training. The American Heart Association offers CPR and AED training through their community training centers.

Many fire departments, hospitals, and ambulance services also offer training. Check your Yellow Pages under "First Aid Instruction".

Current Food and Drug Administration rules require those who purchase an AED to present a physician's prescription for the device.

Understand the current laws concerning AED use in your state. Consult with your legal advisor or local state EMS department for information on the most current AED legislation in your state. Determine if your company needs an internal implementation team to manage the program or needs to purchase a solution package to provide management oversight. The management of the program may include a program point of contact, medical direction, program maintenance, data management, and development of response plans.

All 50 states now have AED Good Samaritan provisions that help protect laypersons. Contact your local or state emergency medical services (EMS) department to find out about protections that your state provides for users.

Work-related risks: Risk factors associated with heart disease and cardiac arrest include the following: Shift work, strenuous and stressful jobs, older workers, extremely hot or cold environments, tasks with exposure to electrical hazards, and tasks with exposure to hazardous substances such as carbon monoxide, carbon disulfide, halogenated hydrocarbons, lead, and arsenic.

Conclusion: A person or entity that owns or leases an AED must maintain and test the AED according to the manufacturer's guidelines.

Employee Attendance: *(Names or signatures of personnel who are attending this meeting)*

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These guidelines do not supersede local, state, or federal regulations and must not be construed as a substitute for, or legal interpretation of, any OSHA regulations.