The Case for Public Access Defibrillation (PAD) Programs

American Heart Association®
Fighting Heart Disease and Stroke

About 220,000 people die each year from sudden cardiac arrest. That's 600 a day — an average of 25 per hour.

Cardiac arrest usually results from some underlying form of heart disease. Most cardiac arrests are due to abnormal heart rhythms called arrhythmias. Ventricular fibrillation (VF) is the most common arrhythmia that causes cardiac arrest. VF is a condition in which the heart's electrical impulses suddenly become chaotic, often without warning. That causes the heart's pumping action to abruptly stop. When cardiac arrest occurs, the victim loses consciousness, has no pulse and stops breathing normally. Death follows within minutes.

Defibrillation is the only known therapy for VF. This technique of giving an electrical shock can restore the heart's normal rhythm if it's done within minutes of the arrest. For every minute that passes without defibrillation, a victim's chances of survival decrease by 7–10 percent. After as little as 10 minutes, very few resuscitation attempts are successful.

Traditionally, the ability to defibrillate was solely in the hands of emergency medical personnel. They were trained to interpret arrhythmias and determine when a shock was needed. Survival depended on the Emergency Medical Services (EMS) system being contacted and arriving quickly.

Unfortunately, quick EMS response isn't always possible. Even the very best EMS systems experience delays from heavy traffic, secured buildings, gated communities, large building complexes and high-rises. For example, in New York City where emergency response teams fight extreme traffic, the average arrival time for emergency vehicles is about 12 minutes. Not surprisingly, the cardiac arrest survival rate is less than 2 percent.

Today a new generation of defibrillators, called automated external defibrillators (AEDs) make it possible for trained lay rescuers to deliver defibrillation. The new AEDs are safe, effective, lightweight, low maintenance, easy to use and relatively inexpensive (about $3,000 each). Having trained lay rescuers equipped with AEDs in settings where large numbers of people congregate saves precious minutes and improves survival rates for cardiac arrest victims. Facilities such as high-security companies, sports arenas, large hotels, concert halls, high-rise buildings, gated communities, sprawling manufacturing plants and remote sites can benefit from obtaining AEDs and training employees to use them as part of a public access defibrillation (PAD) program.

The American Heart Association strongly encourages establishing PAD programs as an important way to save the lives of thousands of cardiac arrest victims. The materials in this package will help you make a decision about obtaining AEDs and making them safe and effective to use by establishing a public access defibrillation program.

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Quick Overview on Establishing a PAD Program

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The American Heart Association has a goal of helping businesses and other facilities establish public access defibrillation (PAD) programs to reduce the time to defibrillation and improve the cardiac arrest survival rate. This overview briefly summarizes issues involved in implementing a PAD program. Detailed information on each item mentioned below can be found in the pockets of the folder (see the contents listing in the center of the folder). In providing information about automated external defibrillators, the American Heart Association does not recommend one device over another. Information on AEDs is just a guide for making informed decisions about choosing the appropriate device for an emergency action plan. The decision to establish a PAD program and purchase the proper AED should be based on the particular needs of a company or other facility.

Elements of a PAD Program

1. Training designated rescuers in CPR and how to use an AED.

- Anyone expected to use an AED should be trained in how to use it and in CPR.
- The American Heart Association has developed the Heartsaver AED course, which is available through Community Training Centers in most cities.
- The course lasts about 3½–4 hours with participants receiving a course completion card after successfully demonstrating skills proficiency through written and performance evaluation.
- To obtain information on course availability, call your nearest American Heart Association or **1-800-AHA-USA1 (1-800-242-8721)**.

2. Having physician oversight to help ensure quality control.

- The Federal Drug Administration (FDA) requires a physician's prescription to buy an AED.
- The American Heart Association recommends further physician involvement to provide medical oversight of the PAD program and to help ensure the program's safety and effectiveness.
- Obtain suggestions for identifying a physician to provide medical oversight by contacting your local EMS system or the American Heart Association.

3. Integrating with the local Emergency Medical Services (EMS) system.

- Before establishing a PAD program, check with your local EMS system to determine the requirements that may apply. In some states requirements might include an application and filing a facility's plan to respond to a cardiac emergency.
- The local EMS needs to know where AEDs are placed in a facility. The public dispatch office may be able to add the AED's location to their 9-1-1 computer screen.
- Communicating ahead of time with the local EMS will save crucial seconds (or minutes) in a cardiac emergency, improving the chances of survival.

4. Using and maintaining AEDs according to the manufacturer's specifications.

- All AEDs work in a similar fashion. However, it's important for users to be trained to use their specific device the way it was intended to be used.
- AEDs require fairly low upkeep, but regularly scheduled maintenance will ensure their "readiness" in the event of an emergency.
- Reviewing the manufacturer's maintenance agreement will provide more information on maintenance requirements.