

## More than Meets the Eye

### Buying an AED Doesn't Mean Your Company is Ready to Save Lives

By Brent Hetherington, BA, EMT-P

**Popular perception:** Buy an AED and your company is ready to save lives.

**Harsh reality:** Recently, a father of three died from sudden cardiac arrest (SCA) while visiting a Tennessee county courthouse. Six months later, hoping to prevent similar, unnecessary deaths, the man's widow offered to donate an automated external defibrillator (AED) to the public building. She was informed by embarrassed public officials that they already had one—that the life-saving device had, in fact, been in the building at the time of her husband's death. Unfortunately, no one had been trained to use it.

**Truth:** An automated external defibrillator (AED) is an exciting, new medical technology that is easy for trained laypeople to use to revive someone undergoing sudden cardiac arrest (SCA)—an abnormal heart rhythm that kills some 450,000 Americans annually, often without prior warning. But AEDs do not save lives on their own. They require the on-going support of an AED services program-- a dynamic management system that ensures total program readiness.

**Bottom line:** Companies need to place as much importance on their AED management systems and service providers as they do on selecting the "right" AEDs.

AED manufacturers responded enthusiastically when the American Heart Association challenged them in the 1980s to create AEDs simple enough for bystanders to use. The American Heart Association hoped to increase survival rates from SCA by ensuring early defibrillation by trained lay people in the critical first minutes before EMS arrives. That's because chances for survival decrease 7 to 10 percent for every minute that passes without defibrillation.

Manufacturers rallied, producing simple, intelligent, automated devices that use voice prompts to walk users through the shock process that restores a normal heart rhythm. Today these innovative devices are making a difference, saving lives of people in fitness centers, shopping malls, community centers and other places where large numbers of people gather.

But technology and availability are only part of the reason that AED programs save lives. Successful programs are backed by detailed “readiness” systems: (see sidebar) that ensure proper installation, team training and regular, on-going support.

At least five deaths have occurred in Tennessee during the last five years in buildings with AEDs on site--and additional incidents have been reported throughout the country. What went wrong?

All of these well meaning early adoptors of AED technology had one thing in common—they did not have a system in place that would ensure the readiness of their AED programs. The devices were either not accessible (in one instance the AED was still in its box in the basement); not ready for use (the batteries or pads were expired); or not mobilized (personnel did not know where to find the AEDs or how to use them).

Another example: I recently visited the corporate headquarters of a company which, on paper, had a properly implemented, well-maintained AED program. The program medical director and AED coordinator set up a seemingly failsafe manual system via checklists and task reminders to handle on-going training and maintenance.

During my visit, we stopped by the security desk where the AED was located. Out of habit, I immediately took the AED from its mount beneath the desk to check its readiness status. The AED status indicator light showed all systems were working and that the battery was in good shape. But when I checked the defibrillation pads, both were expired—meaning the unit would most likely be useless in case of an emergency.

The corporate AED coordinator immediately leafed through the logbook hanging by the AED storage case. Security had stopped checking the AED six months earlier, and the pads had expired within the last sixty days.

Disappointing, but not surprising.

Unfortunately, stories like these are not unusual. Companies tend to spend 95 percent of their time determining which is the “right” AED to purchase. Equally, if not more important, is establishing a readiness system— either through a carefully developed and strictly maintained internal system or by outsourcing to a service provider.

In fact, statistics compiled by Premedics show that 85 percent of companies that choose to implement and maintain their own AED programs are not ready to handle medical emergencies involving sudden cardiac arrest three years later. This despite the fact that a medical doctor must issue a prescription for each AED and oversee the program.

The solution?

Companies have two options. Establish internal systems with strong controls and clear, mandated accountability that absolutely ensures program readiness. (And I question whether this can be achieved successfully based upon our customer data.) Or consider purchasing an outsourced support solution—similar to those that monitor and service security systems.

If you choose the internal route, strict accountability is absolutely essential. Consider linking accountability to compensation. Require monthly reports that detail device readiness, team readiness and overall program/compliance readiness.

Some of the components to a strong internal program:

- Device Readiness: Build a process with sufficient checks and balances to ensure equipment is fully operational. In addition, run in-person spot checks.

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- **Team Readiness:** Build a system for ensuring that sufficiently trained personnel are on each floor during each shift and that their certifications are up to date.
- **Overall Program/Compliance Readiness:** Develop a system to ensure each location within your program meets community and state requirements—as well as manufacturers' requirements. These will vary by community and state and are subject to change. Compliance is necessary for your program to be covered by Good Samaritan laws that protect AED users from liability.

There are many other details that must be handled to ensure a successful AED program—too many to discuss here. For additional information about setting up an internal program, visit the website of the American College of Occupational and Environmental Medicine (ACOEM) ([www.acoem.org](http://www.acoem.org)). ACOEM recommends implementing AEDs in the workplace and has developed 12 guidelines for establishing and managing workplace AED programs, first of which is the “Establishment of a centralized management system for the AED program.”

If you decide to outsource service, query your AED sales representative or your training coordinator about on-going monitoring services. AED hardware and training companies who understand the importance of readiness are offering bundled service packages with their products.

Optimal AED service systems provide monthly reports to each location they serve as well as monthly summary reports to corporate headquarters. These reports detail the status of each AED and when trained personnel need to be re-certified. Exceptional systems require consistent dialogue between the system and those accountable. If dialogue is dormant, then you should expect your system to prompt users via email, fax or even personal phone calls when actions need to be taken to ensure program readiness.

These support systems are designed to prevent the worst case scenario: someone dying in your building because your AED program was not ready. But they also provide an AED that ensures your program complies with federal, state and local laws and manufacturers' requirements. Quality service packages track all requirements for each of your locations. Currently, the costs for such systems are relatively low, ranging from \$10-\$50/month/AED.

Service providers may also offer additional services such as medical oversight, indemnification insurance, CPR/AED training, on-call phone support and ECC data management.

Perhaps most importantly, service providers offer AED program managers, safety directors and business owners peace of mind knowing all program details are handled and your company is always ready to save lives.

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### **Sudden Cardiac Arrest: The Unexpected Killer**

Each year, sudden cardiac arrest, an abnormal heart rhythm, kills 450,000 Americans—including children— often without prior symptoms. Studies cited by the American College of Occupational and Environmental Medicine indicate as many as 15 percent of those deaths occur in the workplace. Each minute SCA goes untreated, chances for survival

decrease by 7 to 10 percent. That's why 95 percent of all people who undergo SCA outside a hospital die.

Sidebar – Box this?

### **Evaluating Service Providers**

Service providers will talk about readiness in respect to three areas: device readiness, team readiness and over-all program readiness/compliance. Here's an overview of the issues involved with each:

#### **Device Readiness**

Step-by-step AED installation procedures should be followed carefully and completely in order to ensure operability. This includes proper testing, tracking of battery and pad expiration dates and establishing an ongoing maintenance schedule. Your service solution should track battery and pad expiration dates for you and remind you when to replace them.

#### **Team Readiness**

AEDs are automated for easy use. They provide voice and visual prompts that walk users through the resuscitation process. But saving someone's life using an electric shock is not an everyday activity. Proper, on-going training gives employees the confidence to respond quickly and effectively. Your service provider should, at the very least, track training certification renewal dates and remind you ahead of time when they need to be updated, as well as provide monthly program status reports. More sophisticated service providers will even schedule, provide and bill for training, ensuring consistency across multiple locations and reducing administrative workloads.

### **Overall Program/Compliance Readiness**

Keeping up with the requirements placed on AED programs can be challenging. To be indemnified under Good Samaritan laws, AED programs must meet FDA requirements; follow national guidelines; be registered with EMS as required by state and local laws; comply with requests by the physician who issues your medical prescription; meet manufacturers' requirements and follow your individual company plan. Requirements vary from state to state and community to community, as well as by manufacturer. Your service provider should be sophisticated enough to track these details for you based upon each location's individual requirements and provide you with a monthly report on your program's readiness.