Automated external defibrillators (AEDs) are small, portable emergency medical devices that have been approved by the Food and Drug Administration for lay public use. They are credited with saving lives throughout the United States and abroad. They are designed to be user friendly and are endorsed by the American Heart Association (AHA) and the American Red Cross.

Unlike a heart attack, which is a “mechanical” event with warning signs, a sudden cardiac arrest is due to an electrical conduction abnormality in the heart resulting in an irregular heart rhythm, or arrhythmia, called ventricular fibrillation (VF). This is a chaotic, quivering of the heart muscle and results in a loss of normal heart function and inadequate circulation of oxygenated blood. It may occur in anyone, even in those who are young and considered healthy.

Defibrillation attempts to reverse VF by discharging an electrical shock, allowing the normal heart rhythm to regenerate. If cardiopulmonary resuscitation (CPR) is performed immediately and defibrillation initiated within one to two minutes, then the survival rate is greatly increased.

Defibrillators have been accessible in hospital settings for many years. Traditionally, only emergency medical personnel and healthcare providers had the ability to defibrillate. Today, the new generation of AEDs makes it possible for trained lay rescuers to defibrillate. Because the majority of the episodes of sudden cardiac arrest occur outside of a hospital setting, you may be contemplating making AEDs available at your facility.

Many companies have made decisions to purchase AEDs. But before making a purchasing decision, as part of your overall risk management program, an assessment should be conducted and a plan developed to determine the type and number of devices needed for proper implementation and oversight of your program.

**Recommended Practices**

The Occupational Safety and Health Administration (OSHA) and AHA recommend the following practices:

- Check your state’s regulatory requirements. According to the National Conference of State Legislature’s website, all 50 states have enacted laws or adopted regulations regarding AEDs for specific types of public facilities such as schools, health clubs, daycare centers, dental offices, places of public assembly and swimming pools. Noncompliance could result in claims of negligence. Seek legal counsel to verify your local requirements for mandatory placement of AEDs.

- Contact your state’s emergency medical services (EMS) office. They can tell you about any local requirements regarding the purchase of AEDs and guidance on who is authorized to use them.

- Select a program coordinator. A physician or medical authority, such as a facility nurse, should provide program oversight. In some states, this is required. The coordinator is responsible for quality assurance – overseeing that the requirements of an AED program (training, maintenance, etc.) are followed. Local EMS generally can help companies identify a physician who can participate.
Consult with a licensed physician to determine the type of AED and the features you will require. Consult with your local EMS providers and consider purchasing a unit that is compatible with the paramedics’ equipment.

Designate “users” or “response personnel” for the device. Provide training to response personnel in the use of AEDs, CPR and Emergency Cardiovascular Care. Most states define these requirements.

Develop a written AED program tailored to the law of your state in which the AED will be located and seek the advice of counsel. Assess the proper number and strategic placement of AEDs and ancillary medical supplies/equipment. The AHA recommends that devices be placed near phones and within a three-minute response time to likely victims. AEDs can be kept in a secure location, but they must be accessible for qualified users.

Follow the manufacturer’s instructions for maintenance of the device. Have a routine maintenance check, testing and replacement schedule.

Periodically, AEDs are recalled by manufacturers due to defects. Be sure to register every device.

Understand the “chain of survival,” including the need to place a 911 call immediately.

Have an AED Incident Follow-Up Plan.

Comply with state reporting and recordkeeping requirements. Your EMS can help you understand these requirements and be sure to seek the advice of counsel prior to implementing a program.

A higher duty of care is expected when a public entity adds AEDs to their emergency response programs. Those who attempt to provide CPR or use an AED are generally protected as Good Samaritans. Good Samaritan immunity differs by state. However, common elements are medical supervision of the AED program and AED training for first responders. Be aware that Good Samaritan immunities may not apply in certain circumstances, e.g., gross negligence, recklessness or willful misconduct. Specific state laws and regulations must be checked and updates applied to ensure your AED program and training is compliant.