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AED usage requires training, preparation

More than 200,000 Americans die every year from sudden cardiac arrest. The American Red Cross says that this statistic could easily drop 25 percent through the use of automated external defibrillators (AEDs).

The American Red Cross reports that 50,000 lives could be saved each year if AEDs were available for immediate use at the time of the emergency.

“An AED is a small machine designed to provide a lifesaving shock to a person suffering from sudden cardiac arrest,” said Don Lauritzen, health and safety expert for the American Red Cross. “The shock disrupts a heart’s electrical activity long enough to allow the heart to spontaneously develop an effective rhythm on its own.”

During sudden cardiac arrest, the heart suddenly stops beating normally and can no longer effectively pump oxygenated blood to the brain and the body’s vital organs.

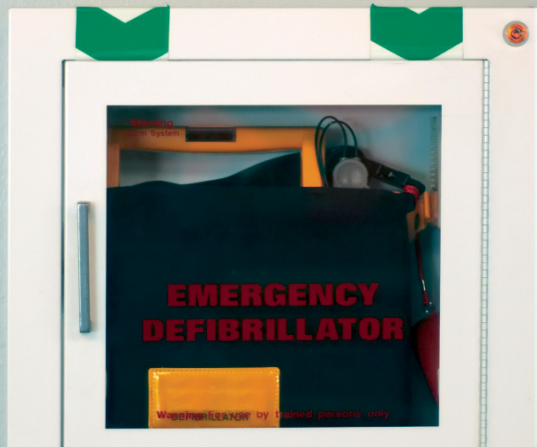
“Survival rates during sudden cardiac arrest depend entirely on the time from victim collapse to shock delivery by an AED,” said Tom Aufderheide, M.D., at the Medical College of Wisconsin. “Survival rates decline 10 percent for every minute defibrillation is delayed.

“A Public Access Defibrillation (PAD) program should be implemented in public places where it is reasonably expected a person might suffer cardiac arrest,” he said. “A worship center is a very logical place for an AED and PAD program.”

Implementing a PAD program

A PAD program should be developed to reflect the individual needs of an organization; however, the steps to develop all programs are very similar.

“To get assistance in beginning a program, seek out a member of the organization or community who is a paramedic or EMT,” Aufderheide said, “or consult your local chapter of the American Heart Association or American Red Cross.”



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Risk Reporter talks with American Red Cross health and safety expert, Greg Stockton

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(AEDs)**Assessment**

Begin by determining the organization's needs. Consider factors such as how many AED devices will be necessary and how long it takes for emergency medical services to arrive at the location.

"Ideally, an AED should be available at a victim's side within one minute of cardiac arrest (no more than a 30-second walk one way)," Aufderheide said. "Following this guideline, a worship center might require more than one AED — for example, one for the school gymnasium, the fellowship hall and a central hallway."

Funding

Determine the budget necessary to purchase AED equipment, train volunteers and staff and provide program maintenance. Also, consult a legal advisor or the local emergency medical services (EMS) department for the most current state AED legislation.

Implementation

Create an implementation and management team for the PAD program. Implementation should include proper training, development of AED protocol, maintenance and data management.

A specific AED policy should be developed outlining all procedures for implementing the service. The policy should include the following:

- Record of all volunteers' CPR/AED training status
- Where the AEDs should be stored (in an unlocked facility)
- Evaluation process for assuring AED readiness and effective use
- Policy for routine AED maintenance checks
- Procedure for use, including restocking responsibilities
- Formal review and evaluation form for all situations using an AED

AED training

"Every facility should have at least two persons trained in the use of AEDs available when the facility is in operation," Lauritzen said. "Larger facilities should consider having a larger number of individuals trained."

Worship centers should train key positions, such as day care workers, ushers and choir members, and create a daily schedule to ensure two trained volunteers are present for all activities and services.

"Volunteers should complete a certified AED training course," Aufderheide said. "The American Heart Association offers the Heartsaver AED Course, which includes CPR and AED training; the American Red Cross offers training as well."

Guidelines for safe use

"Operating an AED is simple and easy to use," he said. "The device is designed so that it will not shock a victim if a shock is not appropriate, and danger of accidental shock to volunteers is very minimal."

Once turned on, an AED prompts the volunteer through safe application and operation instructions. The AED will automatically analyze the victim's ECG rhythm and determine if a shock is required.

To avoid accidental shock of volunteers, try to use the AED in a dry area and cut off any wet clothing on the victim. When the "shock" button is pressed, make sure that no one touches any part of the victim.

The American Heart Association currently recommends that AEDs are safe for use on adults and children the size of an average 8-year-old or at least weighing 55 pounds.

AED maintenance

Responsibility for AED maintenance should reside with one primary coordinator. The coordinator should follow specific manufacturer guidelines for AED maintenance. In addition, the coordinator should perform and document weekly checks to verify that each AED and accessory equipment are in the designated location and in working order. Accessory equipment should include: batteries, pads, towel, scissors, razor, gloves and pocket CPR mask. An AED status log should be kept for each unit, indicating date and time the AED is checked as well as the status of the unit. Any problems should be reported and addressed immediately.

The Good Samaritan Law

The Good Samaritan Law in the United States was written to protect from blame those who choose to aid others who are injured or ill.

Although all states have a Good Samaritan Law that protects a trained volunteer using an AED, specific coverage varies by state.

Some states do not protect untrained individuals who use an AED. Consult an attorney for an explanation of the Good Samaritan Law in your state.

- **For more information** on AED training and use, contact the American Red Cross, www.redcross.org, or the American Heart Association, www.americanheart.org.



Managing Your Risks

Preventative measures

It has been argued that the most important step in the risk management process is the identification stage — that is, identifying what you are up against. Others say what you do with that information is key. Working in unison, both steps are extremely important to any risk management strategy.

Stories in this issue of Risk Reporter cover the importance of knowing what to do if an accident or incident occurs at your facility. For example, it's not enough to have an automated external defibrillator on-site; people must be trained to use one (see page 1).

After reading this issue, take some time to make a list of the activities that take place at your facility or that you sponsor. Then, make a list of things that could go wrong. Finally, make a list that represents the appropriate reaction for all emergencies, accidents and incidents.

You are involved in numerous activities that should involve some forethought in case something happens. Athletic activities are a prime example. What is the proper reaction if a participant requires medical attention for a serious injury? In addition to having a first-aid kit available (see page 4), the person in charge should have immediate access to a phone and know the venue's address in case an ambulance is required.

Similar preparation should occur for travel. If children are involved, a list of numbers in case parents/guardians need to be contacted should be created. Every vehicle should have a cell phone. You also should have a consent form for medical, dental or hospital care on file for each child involved.

All organized activities at your facility should be considered. Emergency plans should be created and reviewed with all employees, volunteers and leaders. In addition to outlining proper procedures, the plans also need to address who is responsible for what.

Knowing what to do when an accident or incident occurs can save precious time that can prevent a minor injury from becoming major and keep an incident from becoming a disaster.

Richard J. Schaber, CPCU
Risk Control Manager

- **For more information** on risk management issues, visit Church Mutual's Web site at www.churchmutual.com, click on "Safety Resources" and select "Booklets."



seasonal spotlight

Preparing for a lightning strike

Lightning strikes about 100 times per second or 8,640,000 times every day. Although it's impossible to predict where the next strike will occur, there are steps you can take to prevent or at least reduce the damage if that strike hits your steeple.

For worship centers — because they are often located in open areas, on high ground or have high towers and steeples — it's more important to take prevention steps than it is for other types of buildings.

Each year in the United States, thousands of homes and properties are damaged or destroyed by lightning, with damage costs estimated at \$4 to \$5 billion. In the last five years, more than 7,600 worship centers insured by Church Mutual reported fires that were caused by lightning.

Peter Jackson, consulting engineer from KENICK Inc., a company that consults with more than 115 electrical utilities across the country, stresses the importance of lightning and surge protection and preparedness.

"A lightning protection system that includes a lightning rod is important for every building because it provides a means for controlling the lightning and preventing damage," Jackson said. "A basic level of rod maintenance can be performed by congregational staff members. However, there are strict guidelines for installing a ground rod, and it should be handled by a professional."

Jackson recommends worship centers use the following guidelines to protect against lightning damage:

- Conduct an electrical equipment audit and purchase quality surge protection for high-value equipment such as office computers, soundboards and video equipment. A surge protector shields electronics from surges in electrical power. Different levels of surge protection are available, beginning with "single-stage" devices with three small surge elements. A "multistage" surge protector with six large surge elements and inductive chokes is recommended for most facilities. The cost is usually between \$75 and \$100.
- Perform preventative lightning maintenance regularly:
 - Inspect ground rod cables twice a year. Do not physically touch or adjust the ground rod connection for the power system unless all power is turned off.
 - Inspect the location surrounding the power system ground to ensure the area is dry. A moist area increases the risk for lightning strikes.
 - If corrosion or loose connectors are noted, contact a professional to make repairs.
- Install a small, uninterrupted power supply (UPS) system on your main worship center computers, phone switch and any other item that should stay "on" during momentary power interruptions.
- Install "loss of phase" protection on all 3-phase motors, pumps and air conditioning compressors. This small device shuts off equipment during a power loss.
- **For more information** on lightning protection, contact the Lightning Protection Institute, www.lightning.org.

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A Perspective

How would your organization react to these situations?

- A member of your congregation suffers a heart attack during a Sunday service
- A child begins to choke at a potluck dinner in the church basement
- A volunteer receives a serious burn while preparing a meal in the kitchen

If you are unsure or if your only answer is to call 911, you have a problem. Every organization must be prepared for any type of emergency with proper training and first-aid kits.

Risk Reporter spoke with Greg Stockton, health and safety expert for the American Red Cross. Since its founding in 1881 by visionary leader Clara Barton, the American Red Cross has been the nation's premier emergency response organization, offering first-aid training and safety resources.



American Red Cross
Together, we can save a life

Risk Reporter: What is the importance of first-aid preparedness?

G. Stockton: In 2003, more than 40 million injury-related visits were made to U.S. hospital emergency departments. Injuries resulted in more than 160,000 deaths in the United States. Learning simple first-aid techniques can give you the skills and confidence to help when someone is injured.

Risk Reporter: Does the American Red Cross offer guidelines for CPR or safely dealing with blood-borne pathogens?

G. Stockton: The American Red Cross has the American Red Cross 2005 Guidelines for Emergency Care and Education that includes guidelines for CPR. The Red Cross also offers first-aid, CPR and AED training.

The standard for blood-borne pathogens comes from Occupational Safety and Health Administration (OSHA). One should use nonlatex gloves, such as vinyl or nitrile, when handling any blood-borne pathogens. Hands should be washed with soap and hot water after coming into contact with any blood or potentially infectious membranes. All contaminated needles or sharp instruments must be placed in a biohazard container, which is clearly marked as such.

Risk Reporter: During worship service activities, how many volunteers should be trained in first-aid and CPR?

G. Stockton: There is not one set recommendation for the number of or ratio of persons trained in first-aid/CPR/AED. For practicality's sake, however, it might be prudent to have the ushers trained along with workers for the parking area, if applicable, nursery and any other programs happening, such as children's services. Additionally, the facility's emergency response plan should spell out who should respond where and what training those volunteers will have.

Risk Reporter: What does the Red Cross recommend including in a first-aid kit?

G. Stockton: We recommend keeping at least one first-aid kit on-site; however, if the facility size is large, more than one kit should be kept on-site. First-aid kits should, at a minimum, include:

- Activated charcoal
- Antiseptic ointment
- Blanket
- Disposable gloves
- Hand cleaner
- Scissors and tweezers
- Syrup of Ipecac
- CPR breathing barrier
- Adhesive tape
- Band-Aids
- Cold pack
- Gauze pads and roller gauze
- Plastic bags
- Small flashlight and extra batteries
- Triangular bandage

Risk Reporter: Where is the best place to keep a first-aid kit?

Should there be more than one?

G. Stockton: First-aid kits should be kept in areas that are quickly accessible when needed and in areas where they might be more commonly needed, such as the kitchen, nursery, gymnasium and church vehicles. The locations of the first-aid kits should be specified within the church's written emergency response plan.

- **For more information** on first-aid kits and training, visit www.redcross.org.
- **For more information** on blood-borne pathogens, visit www.osha.gov.