Automated External Defibrillator (AED) Program

Fact Sheet

For more information about this fact sheet, contact Risk Management.
Salt Lake area: 1-801-240-4049
All other areas: 1-800-453-3860, extension 2-4049

This fact sheet provides current best practices for implementing an automated external defibrillator (AED) program within an existing emergency action plan and in conjunction with established first aid and cardiopulmonary resuscitation (CPR) elements of the emergency action plan. Much of the content in this fact sheet comes from the American College of Occupational and Environmental Medicine guideline, "Automated External Defibrillation in the Occupational Setting," written by Larry M. Starr, that was published in the Journal of Occupational and Environmental Medicine *54, no. 9 (Sept. 2012): 1170–76.*

Cardiovascular disease is a leading cause of global mortality, accounting for almost 17 million deaths annually or 30 percent of all global mortality. One outcome of this enormous public health challenge is **sudden cardiac arrest (SCA)**, a condition that affects millions of people annually. For those over the age of 40, SCA is a leading cause of death. While a heart attack results from insufficient blood flow to the heart and can have early warning signals, such as chest pain or difficulty breathing, SCA has no warning. SCA victims unexpectedly collapse and, if not treated, will die in minutes. This is because SCA causes the heart to suddenly experience an abnormal rhythm (most commonly ventricular fibrillation) that prevents blood from circulating or reaching the brain.

When SCA occurs, immediate treatment is essential for victim survival. While the survival rate for SCA victims outside of a hospital setting is between 1 and 5 percent worldwide, ventricular fibrillation can be stopped and a normal heart rhythm reestablished if an AED and CPR are applied quickly. Out-of-hospital survival rates of 49–74 percent have been reported when an SCA is witnessed by a bystander who provides defibrillation within five minutes. For every minute an SCA victim is left untreated, the chance of survival decreases by about 10 percent. AEDs and emergency medical response services equipped with AEDs provide opportunities for a quick and effective response to SCA.

The Church has determined that if AEDs are provided, organizations should use the following guidelines. Please note that if AEDs are present at your location or you are planning on obtaining an AED, you must comply with the following guidelines or the AED should be taken out of service.

1. **Assess the proper number and placement of AEDs and supplies.** Evaluate each location to determine if the placement of an AED is needed and reasonable. An assessment should include the number of occupants, hours of operation, size of facility, availability of emergency medical services (EMS), and willingness of management to oversee placement and compliance. When practical, AEDs and additional supplies should be placed to allow use of the AED and the start of resuscitation efforts as quickly as possible following a suspected SCA. As probability of survival reportedly can decrease by 7–10 percent per minute until defibrillation, a five-minute response time is the goal. Risk Management

can assist with the evaluation process to determine the placement of AEDs to meet this response time goal.

2. **Establish a management system.** Each organization should establish a management system and have an assigned AED program administrator. It is important that defined lines of responsibility be established and that roles be defined for those who authorize, oversee, and monitor the AED program. Use of a third-party vendor can help support the program administrator and may help meet many requirements of an effective AED program. Risk Management must be notified of all AED placements, their locations, and the name of the assigned department program administrator.

3. **Have medical direction over and administrative control of the AED program.** A qualified medical director should oversee all medical aspects of an AED. Medical direction is essential to:

   - Provide a written authorization to acquire an AED (required in most locations).
   - Perform a case-by-case review each time an AED is used at the location.
   - Ensure that an ongoing quality assurance system is in place for the AED program.

4. **Be aware of and comply with national and local regulations and policies.** It is important that both the medical director and department program administrator responsible for AED program identify and comply with relevant local legislation on public-access defibrillation. If specific questions regarding legal issues and applicable regulations arise, please contact Risk Management.

5. **Train and retrain.** Many national and local AED regulations encourage individuals using an AED to be properly trained. Standardized training through a recognized training entity is encouraged. Topics should include adult (and child, if appropriate) CPR and use of the specific type of AED available and used at the location. This training should be integrated with other first aid response programs at the location. Life-support knowledge and skills, both basic and advanced, can deteriorate in as little as three to six months; frequent assessments and, when needed, refresher trainings are recommended to maintain knowledge and skills.

6. **Develop a written emergency response program for each location.** A written summary of the AED program should be prepared, distributed, and discussed with all relevant personnel (for example, administrative, safety, and security personnel) at the facility. Since most states require registration of AEDs and local EMS notification, all information associated with state or local requirements and compliance should be included in the written program. The program should also identify the requirement for timely notification of Risk Management or the area office when an AED is used.

7. **Integrate the AED program with an overall emergency response plan, and coordinate with local emergency medical services.** The AED program should be a component of the more general plan describing emergency responses at the location. The AED component should address topics that include but are not limited to the awareness and placement of AEDs to ensure easy and timely access; the procedure for notification of a suspected cardiac emergency to EMS personnel or trained first aid responders; assessment of the scene and patient; proper universal precautions; responder and bystander debriefing; and equipment review, service, and replacement.

   Coordination with local EMS should be part of an integrated plan. This includes review

and coordination between EMS protocols and the location's response protocols; communication and logistic support to ensure rapid EMS access to the site and to the patient location; and collaboration between EMS and responders, including on-site patient treatment and supervision.

8. **Select and train responders.** Although an AED may be used by the first available bystander, trained or not, all designated first aid responders should receive training that is recognized and standardized. Location management is encouraged to identify individuals in the facility that could be trained in CPR, AED, and first aid procedures, if appropriate. Such people would be more likely to recognize, respond, and support the responses of victims when SCA or another medical emergency occurs.
9. **Obtain additional medical equipment and supplies required for an AED program.** In addition to an AED, other medical equipment and supplies are required to support safe and complete management of cardiac emergencies. The following supplies, which should already be available in a first aid kit, should be provided in addition to the defibrillator as part of the AED program:
    - Blood-borne pathogen response and cleanup kits, including disposable gloves (to promote use of universal precautions)
    - CPR breathing barrier mask
    - Disposable razor and towel (for use if an AED pad will not adhere to the chest)
10. **Schedule equipment and supplies maintenance and replacement.** It is important that AEDs be maintained in optimal working condition. Follow the AED manufacturer's recommended service schedule, and maintain records of all service and testing.
11. **Establish an AED quality assurance program.** The AED program should be incorporated into or have its own quality assurance program. Elements should include medical review by a qualified physician after every AED use; records of all AED-related training, locations, and servicing; and records of all medical reviews following AED use. In addition, administrators should provide a method to evaluate if the program is meeting its objectives (educational and administrative) and a method to improve or sustain critical elements.
12. **Identify cost of start-up and continued management.** Administrators should be aware that acquiring and placing an AED is only one element of a comprehensive and ongoing program. Costs of the program include acquisition of the device, training, materials, administration, and must be identified before starting a program. These ongoing costs should be monitored.

    Vendor-Program Administration. In the United States, the Church has entered into an agreement with RescueStat to provide compliance services for all AED program requirements. Services will be based on each organization's needs. RescueStat is not associated with any equipment or AED suppliers. Special Church pricing has been established based on the number of locations, AED devices in use, and services required. Each department may contact the provider directly at 1-866-782-8723 to establish service based on the negotiated agreement and notify Risk Management. The following services are available:

    1. Medical control and oversight.
    2. Ensuring compliance with federal and state regulations.
    3. CPR and AED initial and refresher training.
    4. Preparation of a written program specific to each location or department.
    5. Assessment of AED needs and placement.

6. Establishment of a quality assurance program, including:
    - Medical authorization and program review.
    - Tracking program for all trained responders.
    - Tracking program for all AED locations.
    - Case-by-case medical reviews.
    - Periodic program review and evaluation.

Additional Resources:

1. "Heart Disease and Stroke Statistics—2014 Update," Alan S. Go and others, American Heart Association, last modified Dec. 18, 2013, http://circ.ahajournals.org/content/129/3/e28.full.pdf+html.
2. "Out-of-Hospital Cardiac Arrest Survival Just 7 Percent," European Society of Cardiology, last modified Sept. 1, 2013, http://www.sciencedaily.com/releases/2013/09/130901154147.htm.

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