5.4

Link 4: Early Defibrillation
Public Access to Defibrillation (PAD)

Numerous scientific studies conducted during the past two decades have proven that rapid defibrillation is the single most important factor affecting survival from Sudden Cardiac Arrest in adults. This research, coupled with important technological advances, has driven an international movement to increase access to early defibrillation.

In order to have AEDs available more quickly for persons who need them, some facilities (such as hotels, airports, country clubs, schools etc.) are purchasing these devices under what is called a Public Access Defibrillation (PAD) program. Since AEDs are prescription devices and must be labeled with the prescription statement required by law (CFR 801.109), a physician who oversees the PAD program at a facility must write a prescription for most AEDs in order for the facility to purchase it. This is easily accomplished and there are many who are willing to help you start a PAD program. To date, one model of AED has been cleared for the FDA for over-the-counter sale and in-home use.

Public Access refers to accessibility for trained users to use AEDs in public places. While AEDs are now very simple to use and many untrained laypersons have used them successfully, it is best to assure that trained personnel are always on site (at locations where this is feasible). A trained user does not necessarily mean trained medical personal but also refers to laypersons with AED training.
How to Set Up an AED Program

The Sudden Cardiac Arrest Association is committed to broadening public access to defibrillation. Numerous scientific studies conducted during the past two decades have proven that rapid defibrillation is the single most important factor affecting survival from sudden cardiac arrest in adults. This research, coupled with important technological advances, has driven an international movement to increase access to early defibrillation. In this section, SCAA highlights important information for identifying your community's needs and implementing a successful community AED program.

This information can also be helpful for businesses, schools, service organizations and others seeking to establish AED placement and CPR/AED training programs in schools, sports centers, office buildings, shopping centers, residential communities and other venues.

On-Site AED Programs

Even if a community has done everything possible to strengthen its chain of survival, the success of a community defibrillation program can be limited. For example, if you live in rural area and EMS has long distances to cover, or an urban area, where EMS has to contend with traffic and high-rise buildings, the time to first shock may be delayed. This is why many locations – such as airports, office complexes, residential communities, shopping centers, sports stadiums and schools – have established on-site defibrillation programs to place AEDs and to train staff and volunteers in CPR and AED use.

When sudden cardiac arrest occurs outside the hospital, it occurs most often in the home. For this reason, some families of at-risk individuals have elected to place AEDs in their homes and to be trained in CPR and AED use. As research continues in this area and AEDs become more readily available for home use, it is possible that home placement of AEDs will increase significantly.

Determine The Need

Saving lives takes a team effort. And, it takes consideration of a number of factors that will help determine the type of AED program your community needs, including the size and location of your community - large city, small suburb, and rural community. Evaluation of the current emergency response system is important to assess how prepared your community currently is to handle sudden cardiac arrest. Checking with your local government is also important as laws and requirements vary. Once you determine your community's needs, then you can identify areas for improvement: greater public awareness, more public and professional training, wider placement of AEDs.
Based on the chain of survival approach, the following questions can help your community assess areas of focus and need:

**Early Access**
- Does your community have Enhanced 9-1-1 coverage?
- Does the public know how to recognize a cardiac emergency?
- Does the public know to call 9-1-1 (or the local emergency number) immediately in the event of an apparent cardiac emergency?

**Early CPR**
- Are emergency dispatchers trained to give callers instructions in CPR?
- Is most of the teen and adult population trained in CPR?

**Emergency Defibrillation**
- Do state laws and regulations permit first-arriving emergency personnel and trained laypersons to use defibrillators?
- Are all first-responding emergency personnel equipped with defibrillators?
- Are these personnel trained to deliver the first shock within 60 seconds of their arrival (if response time is greater than five minutes)?
- Is the average "call-to-shock" time five minutes or less in at least 90 percent of cases?

**Early Advanced Care**
- Does your community have paramedics or emergency physicians prepared to provide early advanced care?

*If you can answer "yes" to each of these questions, the chances for SCA survival in your community are strong. If any answer is "no", the chances for SCA survival are greatly diminished.*

**Key Community Program Components**
Once you have identified your community's needs, developing an on-site Public Access Defibrillation program involves consideration of four major components -- personnel, equipment, emergency response plan, and ongoing quality improvement. The following check list provides essential elements to consider for your program.
**Personnel**
1. Identify program coordinator.
2. Identify a group of responders and train in CPR and AED use.
3. Enlist a medical consultant (consider local EMS).

**Equipment**
1. Select AED appropriate for venue and users.
2. Determine most accessible location for 24 hour availability.
3. Check AED present and in "ready" mode daily.
4. Replace pads and batteries as needed (expire about every two years).

**Response Plan**
1. Develop an emergency response plan (ERP) including activation of on-site responders and call to 911.
2. Assure occupant awareness of ERP and AED location(s).

**Quality Improvement**
1. Assure compliance with local legal requirements
2. Review plan annually and consider drills

*Download, read, print, and distribute the 10 Step Community AED Program Guide from the SCAA website to begin your community AED program today.*

**Legislative Initiatives**
The Sudden Cardiac Arrest Association (SCAA) is deeply committed to preventing loss of life due to sudden cardiac arrest. For this reason, SCAA has taken a leadership role and joined forces with other professional and patient organizations that share this commitment and have unified to form the Sudden Cardiac Arrest (SCA) Coalition. By leveraging the passion and resources from its member organizations, the SCA Coalition aims to prevent sudden cardiac arrest deaths through legislative initiatives that lead to greater public awareness, research and access to life-saving therapies.

- State Laws on Heart Attacks (provided by the National Conference on State Legislatures) (February 2008 update)
- State Laws on Automated External Defibrillators (provided by the Centers for Disease Control and Prevention)
- Josh Miller Helping Everyone Access Responsive Treatment in Schools (HEARTS) Act of 2007
- Cardiac Arrest Survival Act (Public Health Improvement Act of 2002)

Links to more information on these initiatives can be found on the SCAA website!
Successful Programs
Many communities around the United States are actively engaged in improving survival from sudden cardiac arrest. Examples of some of the successful efforts include the following:

- Rochester
- Maine Cardiovascular Health Program
- Nashville Public Access Defibrillation Program
- San Diego Project Heart Beat Public Access Defibrillation Program

ADDITIONAL AED RESOURCE LINKS

ABCs of AEDs
http://www.nirsa.info/know/2007/08/risk001.html
AEDs at Camp
http://findarticles.com/p/articles/mi_m1249/is_2_79/ai_n16133379
AEDs: Life-saving Technology is Only Part of the Story
http://findarticles.com/p/articles/mi_qa3922/is_200212/ai_n9150907/pg_1
American Hearth Association Policy Recommendations on Community Lay AED Programs
http://circ.ahajournals.org/cgi/reprint/CIRCULATIONAHA.106.172289v1
Federal Occupational Health Guide to AEDs
http://www.foh.dhhs.gov/Public/WhatWeDo/AED/AED.asp
Recent Changes in CPR
http://www.nirsa.info/know/2008/04/risk001.html
Occupational Health and Safety: Assessing Your Needs
http://www.ohsonline.com/articles/44642/
Occupational Health and Safety: It's a Matter of Time
http://www.ohsonline.com/articles/44626/
Occupational Health & Safety Administration (OSHA) Guidelines on AEDs
http://www.osha.gov/SLTC/aed/solutions.html
Occupational Health & Safety Administration (OSHA) Statement on AEDs in the Workplace
Sample Policy and Procedures Statement for AED Programs
http://policy.iastate.edu/policy/defibrillator/
http://www.northwestern.edu/risk/defib.htm

Follow these links from the SCAA website for more info!