

# A JohnTaylorBabbitt Foundation Guide

## AUTOMATED EXTERNAL DEFIBRILLATION PROGRAM

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This is a step-by-step guide to implementing a comprehensive Automated External Defibrillator (AED) and training program in your town or within your community. This guide was prepared by the JohnTaylorBabbitt Foundation which is dedicated to saving lives by preventing sudden cardiac death (SCD); it is based on our successful local AED program. While our focus is on schools, campuses, and playing fields, the material in this guide is equally applicable to an office park, work place, or housing development.

According to the American Heart Association, there are an estimated 165,000 out-of-hospital deaths due to SCD each year in the United States. While typically less than 8% of sudden cardiac arrest (SCA) victims survive, communities with comprehensive AED programs can achieve survival rates of 40% or higher.<sup>1</sup> This guide is designed to facilitate the deployment of AEDs in both internal and external locations and to expand CPR/AED training in communities. The availability of weather-proof housing permits the installation of AEDs on playing fields in many climates and environments, and the combination of available AEDs and training saves lives.



Two complete AED installations, including protective cabinets and signage.



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<sup>1</sup> American Heart Association, see <http://www.americanheart.org/presenter.jhtml?identifier=3067010>.

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### 1) NEEDS ASSESSMENT

The first step is to assess the availability of AEDs and training in your community and to determine gaps. In which locations, internal and external, are AEDs currently available? What training programs are currently offered or required? In terms of AED placement, please consider the following locations and factors:

- Schools: We believe that all schools, public and private, should have both AEDs and trained staff. The American Heart Association and American Stroke Association have given their strong support to legislation such as the Josh Miller HEARTS Act which requires the installation of AEDs and CPR/AED training programs at schools.<sup>2</sup>
- Playing Fields: We believe that all playing fields should have AEDs. Each year in the United States approximately 7,000 young people die of SCA, many of them athletes.<sup>3</sup> The state of Illinois is leading the way with regulation passed earlier this year requiring AEDs on all playing fields, indoor and outdoor.<sup>4</sup>
- Time to Shock: Delivery of a shock from an AED within minutes is the key to survival from SCA. Consider locations where physical activity takes place or groups of people gather, and where it is difficult or unlikely that your existing emergency management system (EMS) can consistently achieve a “call-to-shock” interval of five minutes or less from the time of placing a 9-1-1 call to treating a victim with an AED.

### 2) DEVELOP A DETAILED PROJECT PLAN

The project plan should consider the following issues.

- Since the goal is to have an AED available for use on a victim within 3 to 5 minutes of collapse, devices should be placed where they can be reached within 90 seconds

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<sup>2</sup> See <http://www.americanheart.org/presenter.ihtml?identifier=3067010>.

<sup>3</sup> See <http://www.cardiacscience.com/cardiology-solutions/aed-schools-colleges-athletics/>.

<sup>4</sup> See <http://www.newswiretoday.com/news/47378/>.

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while walking at a fast clip. For device placement on large playing fields and multi-level buildings, this may necessitate multiple units. Coverage may be achieved with a combination of fixed and portable devices, keeping in mind the need to achieve the response time frame of 3 to 5 minutes.

- An immediate phone call to 9-1-1 is a necessary step in the response process. Consider whether phones need to be provided and also the cell phone reception in the area the device is placed, as cell phones are increasingly used for 9-1-1 calls.
- Public access AEDs are usually stored and mounted in cases, similar to fire extinguishers. Cases can be equipped with various features, such as alarms to deter theft. A cabinet/box that affords protection from the elements is used for outdoor installations. Waterproof carrying cases are also available as well as other equipment to protect against temperature fluctuations.<sup>5</sup>
- Signage and visibility are important factors. The devices should be placed where they are in plain view and signs are easily seen. Universal AED signs are readily available. Communities should consider mapping locations of all AEDs and distributing this information widely, including posting it on appropriate web-sites.
- Expanding training in CPR/AED is important. Determine current training requirements and available programs in your community. Training classes are offered by the American Red Cross and the American Heart Association and are often provided through local medical and emergency services organizations.
- AED laws vary from state to state and you will want to review your state's requirements regarding AED placement, usage, and liability. The trends across all states are to expand AED requirements and to support AED usage through Good Samaritan laws and related legislation.
- Maintenance of AEDs includes regular assessment of operating status to make sure the devices are in working order and that required supplies are available. Supplies

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<sup>5</sup> Proper functioning of an AED requires a temperature within the manufacturer's stated temperature range.

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include: scissors, razor, gloves, small towel, CPR barrier (face shield, micro-mask, or pocket mask), extra adult pads, pediatric pads, and portable first aid kit.

- Operational plans for AEDs address not only ongoing maintenance, but also specific procedures following events in which the AEDs are used, as well as ongoing performance monitoring and quality management.

### **3) IDENTIFY FUNDING NEEDS AND OPTIONS**

Significant progress has been made in recent years in lowering the costs of AEDs. Devices can now be purchased for anywhere between \$1200.00 and \$2000.00 based upon type, durability, and accessories. There are many possible funding sources, such as local hospitals, foundations, and your local athletic organizations. Funds can typically be raised through a combination of matching grants, discounts, and local fund raising.

### **4) SELECT A DEVICE**

A number of companies manufacture AEDs and a variety of reliable, FDA-approved models are available. Consider what devices are already in use within your organization or town – by police, fire, paramedic and other emergency responders -- as compatibility can be an important factor.

### **5) SELECT LOCATIONS FOR AEDs**

Based upon the needs assessment, you may have a pretty good idea about where the devices should be located and stored. For portable devices, access is critical so units should not be locked up in an office, for example. For units placed on an athletic field, the unit should be easily visible from a distance, well marked, and unimpeded by trees, backstops, fences, etc. Consideration should be given to height of signage, color of the display unit, and the layout of the field.

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### 6) DEVELOP A RESPONSE PLAN

A response plan should be written and maintained with copies placed with each AED device. The response plan should typically address:

- How, when and who should call 9-1-1
- Information to be communicated in the 9-1-1 call such as: nature of the emergency, trained responders present, patient in sudden cardiac arrest, CPR currently being done , availability of AED, and exact location
- Access routes for emergency personnel and vehicles
- Emergency contact numbers and escalation protocol
- Map showing location of all AEDs in the community
- Post-use procedure and review forms, including:
  - Who gets notified of AED use, how and when?
  - Who is responsible for downloading event information from the device and when?
  - Who is responsible for maintenance of AED including replacement of used pads?

### 7) COORDINATE WITH LOCAL EMERGENCY MEDICAL SERVICES (EMS)

Local EMS are typically involved directly in the AED and training initiatives but, regardless of the level of involvement, make sure all local EMS organizations and personnel are aware of the exact location of all AEDs covered under your program.

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### **8) CONDUCT TRAINING**

Ideally, as many users of the facility or members of the group should be trained in CPR and AED use as feasible. For a school, this would include the faculty, staff and students and other users of the school. For playing fields, this would include coaching staff, trainers, and parent volunteers. If this is not possible, identify key people such as athletic directors, coaches, custodial staff, team managers, and health teachers to be trained.

### **9) CREATE PUBLIC AWARENESS**

Raising public awareness is critical to the success of any AED program. There are numerous medium to use in “getting the word” out such as newspapers, internet, flyers, and so on. Included in your message should be:

- AEDs save lives
- AEDs are simple and safe to use with voice prompts that guide users
- Training is important to recognizing and responding to sudden cardiac arrest (SCA)
- The location of all AEDs
- Requirements for using an AED (based upon current local, state or federal legislation) including “Good Samaritan” laws that provide indemnification for people who provide good faith emergency care or treatment in the event of a sudden cardiac arrest.

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Outdoor AED  
installation at a local  
baseball field.

### KEY “AED” PROGRAM ROLES

There are a number of roles and responsibilities which need to be covered by individuals or groups in your community in order to successfully launch and administer an AED program and we describe these below. More than one role can be held by one person where reasonable and some roles may be filled by a group of individuals. Some of these roles may be filled by employees and others by volunteers. Importantly, many of these roles will be naturally filled by existing employees responsible for health, safety, and emergency response within your community.

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**AED PROGRAM COORDINATOR** – Responsible for the day-to-day activities and implementation of the AED and training program. This role is often filled by a community employee who has a leadership position in emergency response services.

- Communicates with key decision makers, responders, employees, and the public
- Identifies and resolves potential barriers to establishing the program
- Coordinates CPR/AED training of responders
- Acts as a liaison to the Project Manager to insure all resources and equipment are readily available
- Coordinates the Emergency Response Plan, including policies and procedures.
- Communicates with local Emergency Medical Services
- Maintains AEDs and related supplies and cabinets
  - Conducts periodic inspections according to AED vendor specifications
  - Maintains AED check and usage log
  - Performs battery and pad changes per vendor recommendations
  - Stocks adequate and accessible back-up pads and batteries
- Participates with the program coordinator in a joint review with the program each time an AED is used and notifies appropriate personnel after each such incident
- Maintains initial and renewal training record

**PROJECT FACILITATOR** – Responsible for acting as an advocate for the launch of the program. This role may be filled by a parent, parent organization, foundation or other community group committed to improving community safety.

- Often acts as the initial contact person; i.e. the advocate for pursuing the program, and works to raise awareness of the value and benefits of AEDs and training

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- Investigates and provides options for funding and may lead fundraising activities as needed
- Works to get key personnel on board and also to resolve potential issues
- Serves as a resource of information
- Coordinates outreach activities including press releases, as needed

**MEDICAL DIRECTOR** – Responsible for medical oversight and quality improvement. This role is often filled by a local physician affiliated with your local hospital or Emergency Service organization. In most locations, a Medical Director responsible for overseeing AED programs in your area is already in place.

- Provides support and guidance for the initial implementation process
- Serves as a medical advocate for the program
- Provides prescription for use of the AED, if needed
- Conducts a joint review with the program coordinator each time an AED is used and provides feedback and suggestions for improvement

**AED PROJECT MANAGER** - Responsible for providing detailed knowledge on the placement, use and maintenance of AEDs. This role may be filled by a representative from the selected AED vendor company or a knowledgeable medical profession (i.e. nurse or EMT professional).

- Provides expert advice about placement of AEDs
- Makes recommendations for purchase of devices, supplies, and cabinets to ensure the equipment is appropriate for the intended use
- Actively participates in all aspects of the planning and implementation process

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L to R: JTB Foundation Board Member Andrew Babbitt, Chatham Twp Deputy Mayor Nicole Hanger, Chatham Twp Mayor Kevin Tubbs, Vice President JTB Foundation JoAnne Babbitt, Committeeman Bill O' Connor, Maryann Villone, RN, Assistant Chatham Twp DPW Director John Pacelli, JTB Board member Kate Donovan, Chatham Twp Police Chief John Paton.

### FOR ADDITIONAL INFORMATION

Please contact the JohnTaylorBabbitt Foundation at [info@jtbfoundation.org](mailto:info@jtbfoundation.org) or 973-722-1212 for additional information on this guide and on starting a Defibrillator Initiative in your Community. Copies of this guide are available on our website at [www.jtbfoundation.org](http://www.jtbfoundation.org). We welcome your comments, questions, and input.

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- The Hypertrophic Cardiomyopathy Association and Lisa Salberg, Founder and President, <http://www.4hcm.org/>
- Phillips Healthcare, <http://www.medical.philips.com/us/>
- The Sudden Cardiac Arrest Association, [http://associationdatabase.com/aws/SCAA/pt/sp/Home\\_Page](http://associationdatabase.com/aws/SCAA/pt/sp/Home_Page)



L to R: JTB Foundation Board Member Kate Donovan, Chatham Borough Mayor Nelson Vaughn, JTB Foundation Vice President JoAnne Babbitt, Maryanne Villone, RN, and Bill Nauta, Chatham Borough Emergency Management Coordinator, pose with a defibrillator.