



# **Tualatin Valley Fire & Rescue** **Community AED Program**

*Saving Lives Through Early Defibrillation*

Updated February 22, 2010

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## A. Overview

Heart disease is the single greatest cause of death in the United States. Every year, almost 500,000 adult Americans die of coronary heart disease. Of those, 250,000 die of sudden cardiac arrest *before they reach a hospital*. Ventricular fibrillation, a disturbance in the heart's electrical activity, is the most common initial form of sudden cardiac arrest. A fibrillating heart quivers with chaotic electrical energy but does not pump blood or generate a pulse. Ventricular fibrillation can be lethal, but it is treatable. If the heart can be shocked quickly with a defibrillator (i.e., "defibrillated"), a normal heart rhythm may be restored and many victims can survive. In other words, sudden cardiac arrest need not be fatal.

Time is the enemy. The survival rate for sudden cardiac arrest falls almost *10% every 60 seconds*; if a victim of sudden cardiac arrest can be defibrillated within a minute the survival rate can be close to 90%! Clinical research has determined that reducing the interval between onset of sudden cardiac arrest and delivery of defibrillation by even one or two minutes not only significantly increases survival rates, but that it does so *more than all other emergency cardiac care combined*.

Survival from sudden cardiac arrest typically depends upon a series of events. Someone has to immediately recognize the problem, call 9-1-1, and start CPR. CPR buys time, keeping oxygen in the blood flowing to vital organs to give the victim the best chance of survival until defibrillation is administered. Defibrillation as early in the sequence as possible is essential for survival. Finally, emergency medical personnel trained in advanced life support (paramedics) can provide advanced airway procedures and medications to maintain a restored heartbeat, increase the amount of oxygen in a victim's system, and minimize the chance of re-fibrillation. Tualatin Valley Fire and Rescue (TVF&R) has trained Firefighter/Paramedics that respond to every 9-1-1 medical call within our district. More important, every TVF&R fire apparatus and most non-response vehicles have a defibrillator on board ready to save someone's life.

The goal of our community AED (automated external defibrillator) program is to facilitate AED distribution as much as possible in order to shorten the interval from sudden cardiac arrest to defibrillation. This *does* save lives. Sudden cardiac arrest happens everywhere. Whether you are a large corporation, a small business, or a government entity, TVF&R is committed to helping you successfully meet all the requirements necessary to place one or more AEDs at your site. The following pages contain the information needed to guide you in establishing your own successful AED site. Please feel free to contact Linda Wert at 503-259-1687 with any questions or concerns not addressed within this packet. If Linda is unable to address your particular question one of TVF&R's AED Resource Managers will contact you as soon as possible.

## B. Common Questions

### *1. What exactly is an AED (Automatic External Defibrillator)?*

An AED is capable of identifying life-threatening cardiac rhythms (certain types of electrical activity in the heart) that can be converted by a metered electric shock. It analyzes the cardiac rhythm and determines whether a shock is needed, based on preprogrammed parameters in its internal computer. Shocks can be delivered according to one or more standardized, automated protocols, incorporating one of several modes, depending on the type of AED used. All modern AEDs have visual and/or verbal prompts that guide the user through the entire rescue process.

AEDs available to the public today are portable and can weigh less than four pounds; most are slightly larger than a laptop computer. They can hang on the wall or be carried in a small case. As AED designs and end-users have evolved, prices have dropped: the range is typically \$1100-1600, but promotional or contract prices may be lower. Maintenance requirements vary by manufacturer, but all currently available models are designed to be low-maintenance, with long-life batteries. Modern AEDs run their own internal self-tests automatically and indicate readiness by visual display. Typical requirements include checking the AEDs weekly to ensure operational status and presence of ancillary equipment.

### *2. What are the liabilities and guidelines associated with purchasing and using an AED?*

There are detailed discussions on liability and other legal issues associated with AEDs from Richard Lazar on TVF&R's website ([www.tvfr.com/safetytips/docs/Lazar-Strategies for Modernizing US AED Laws 1206 upd.pdf](http://www.tvfr.com/safetytips/docs/Lazar-Strategies%20for%20Modernizing%20US%20AED%20Laws%201206%20upd.pdf)) and a useful summary from the American Heart Association (AHA) ([www.tvfr.com/safetytips/docs/AHA padlegal.pdf](http://www.tvfr.com/safetytips/docs/AHA_padlegal.pdf)).

Oregon House Bill (HB) 3482 (2005) established program guidelines and some liability protection for users and purchasers of AEDs within the state, as well as providing resources for school districts and mandating AEDs for health clubs. [Oregon Administrative Rules 333-030-0105](#) requires all residential camps with 100 or more on-site campers and staff to have at least one AED with pediatric capability, by June 1, 2009 ([excerpt with full text of OAR 333-030-0105\(8\)](#)). [Oregon Senate Joint Resolution 32 \(2001\)](#) strongly encouraged placing AEDs in public buildings.

**ORS 30.802 Liability for use of automated external defibrillator.** (Full text: Chapter 551 Oregon Laws, 2005)  
Relating to automated external defibrillators; creating new provisions; repealing ORS 30.801.

#### SECTION 1.

(1) As used in this section: (a) 'Automated external defibrillator' means an automated external defibrillator approved for sale by the federal Food and Drug Administration; (b) 'Public setting' means a location that is:

- (A) Accessible to members of the general public, employees, visitors and guests, but that is not a private residence;
- (B) A public school facility as defined in ORS 327.365; or
- (C) A health club as defined in [ORS 431.680](#).

(2) A person may not bring a cause of action against another person for damages for injury, death or loss that result from acts or omissions involving the use, attempted use or nonuse of an automated external defibrillator when the other person: (a) Used or attempted to use an automated external defibrillator; (b) Was present when an automated external defibrillator was used or should have been used; (c) Provided training in the use of an automated external defibrillator; (d) Is a physician and provided services related to the placement or use of an automated external defibrillator; or (e) Possesses or controls one or more automated external defibrillators placed in a public setting and reasonably complied with the following requirements:

(A) Maintained, inspected and serviced the automated external defibrillator, the battery for the automated external defibrillator and the electrodes for the automated external defibrillator in accordance with guidelines set forth by the manufacturer.

(B) Ensured that a sufficient number of employees received training in the use of an automated external defibrillator so that at least one trained employee may be reasonably expected to be present at the public setting during regular business hours.

(C) Stored the automated external defibrillator in a location from which the automated external defibrillator can be quickly retrieved during regular business hours.

(D) Clearly indicated the presence and location of each automated external defibrillator.

(E) Established a policy to call 9-1-1 to activate the emergency medical services system as soon as practicable after the potential need for the automated external defibrillator is recognized.

(3) The immunity provided by this section does not apply if: (a) The person against whom the action is brought acted with gross negligence or with reckless, wanton or intentional misconduct; (b) The use, attempted use or nonuse of an automated external defibrillator occurred at a location where emergency medical care is regularly available; or (c) The person against whom the action is brought possesses or controls one or more automated external defibrillators in a public setting and the person's failure to reasonably comply with the requirements described in subsection (2)(e) of this section caused the alleged injury, death or loss.

(4) Nothing in this section affects the liability of a manufacturer, designer, developer, distributor or supplier of an automated external defibrillator, or an accessory for an automated external defibrillator, under the provisions of ORS 30.900 to 30.920 or any other applicable state or federal law.

[Oregon Senate Bill \(SB\) 556](#) (2009) updates ORS 30.802, requiring certain "public assembly areas" to have AEDs and extending Good Samaritan protection to those facilities. Facilities 50,000 sq. ft. and larger and at least 25 people during business hours, including commercial, office, retail, deliberation, and transportation uses (e.g., shopping malls, large retail stores, office buildings, transportation terminals). The law is effective January 1, 2010.

### ***3. What is the process for establishing ourselves as an AED site?***

The following steps are necessary to establish a recognized AED site within TVF&R's response area. If you're not sure whether you are located within TVF&R's response area please contact us. We'll be happy to point you in the right direction

1. Initial interest:
  - A. Potential site contacts Linda Wert at 503-259-1687; Linda is the AED program contact for TVF&R.
  - B. TVF&R enters potential site contact information is entered into AED Database
  - C. A Community AED Program Packet is mailed to the potential site
2. Potential site determines that they want to be an AED site:
  - A. They must contact Linda Wert at 503-259-1687 and state that they wish to be an AED site. They will be asked to name an AED Site Coordinator.
  - B. At this point in the process one of two routes will be taken:
    - i. AED sites within Washington County that have no physician willing to serve as AED site Medical Director may contact Louisa Partain of Washington County EMS: 503-846-8699, [cpr-aed@co.washington.or.us](mailto:cpr-aed@co.washington.or.us). Washington County EMS will then become the AED Program Administrator and provide guidance through the rest of the process, along with support for initial training.
    - ii. All other sites that don't meet the criteria stated above must continue with the following steps:
3. The AED site must obtain initial AED training from an Oregon State Health Division approved course. The following is a list of currently approved courses:
  - A. American Heart Association Heartsaver (AHA) AED
  - B. American Red Cross AED
  - C. EMP First Aid AED

Most of these courses last 4 hours or less and include CPR. Prices differ depending on the course and whether it is taught on-site. Tualatin Valley Fire and Rescue provides CPR and AED training through Lifeline Health & Safety. For more information, call Lifeline at 503-243-2277 or visit their website at [www.cprlifeline.com](http://www.cprlifeline.com).

4. The AED site must purchase one or more AEDs. Most users can find AEDs that meet their site needs for less than \$1500; prices vary considerably and may be far less. The manufacturer you choose should give you an on-site orientation to their particular machine and recommend how many AEDs you should purchase based on the size of

your site. In addition, the manufacturer should provide you with the maintenance schedule and requirements for your particular AED. Examine more than one brand, and do so with a critical eye; neither the least nor the most expensive machine may be best suited to your needs. The following is a list of manufacturers currently selling AEDs to the public. Several manufacturers have had recalls over the past few years. The FDA's Medical Device Recall website, [www.fda.gov/MedicalDevices/Safety/RecallsCorrectionsRemovals/ListofRecalls/default.htm](http://www.fda.gov/MedicalDevices/Safety/RecallsCorrectionsRemovals/ListofRecalls/default.htm), hosts current and previous recall information; additional voluntary recall information may be posted on manufacturer websites. TVF&R posts AED recall information at [www.tvfr.com/safetytips/cpr/aed.aspx](http://www.tvfr.com/safetytips/cpr/aed.aspx). **AEDs should be programmed with current AHA CPR/AED protocols.**

- A. Cardiac Science: [www.cardiacscience.com/cardiology-products/aed-defibrillator](http://www.cardiacscience.com/cardiology-products/aed-defibrillator)  
Brian McKinney: (503) 367-7368 or [bmckinney@cardiacscience.com](mailto:bmckinney@cardiacscience.com)
- B. Defibtech: [www.defibtech.com](http://www.defibtech.com)  
(866) 333-4248 or [sales@defibtech.com](mailto:sales@defibtech.com)
- C. Heartsine Technologies: [www.heartsine.com](http://www.heartsine.com)  
(866) 478-7463 or [sales@heartsine.com](mailto:sales@heartsine.com)
- D. Philips Medical: [www.medical.philips.com/main/products/resuscitation/products/aeds/index.wpd](http://www.medical.philips.com/main/products/resuscitation/products/aeds/index.wpd)  
Kory Brown: (503) 222-5574 or [kbro@sprintmail.com](mailto:kbro@sprintmail.com)
- E. Physio-Control: [www.physiocontrol.com](http://www.physiocontrol.com)  
Jon Cole: (800) 442-1142 x72844 or [www.physio-control.com/products/sales](http://www.physio-control.com/products/sales)
- F. Welch Allyn:  
[www.welchallyn.com/apps/products/product\\_category.jsp?catcode=DEFIB&subcatcode=DEFIB-AED](http://www.welchallyn.com/apps/products/product_category.jsp?catcode=DEFIB&subcatcode=DEFIB-AED)  
Jerry Brennan Rounds: (503) 710-7000 or [brennanj@welchallyn.com](mailto:brennanj@welchallyn.com)
- G. Zoll Medical: [www.zoll.com/AED.htm](http://www.zoll.com/AED.htm)  
John Phelps: (541) 729-0412 or [jphelps@zoll.com](mailto:jphelps@zoll.com)

More information about legislation, standards of care, training, and AED technology is available from TVF&R ([www.tvfr.com/safetytips/cpr/aed.aspx](http://www.tvfr.com/safetytips/cpr/aed.aspx)) and AHA ([www.americanheart.org/presenter.jhtml?identifier=3011859](http://www.americanheart.org/presenter.jhtml?identifier=3011859)).

- 5. The site must have a licensed physician sign a prescription for the AED(s) and assume the responsibility of being the site's Medical Director. You have multiple resources in obtaining a medical director. Your physician is the head of your AED program and approves the medical protocols for the operation of your AED. See Appendix B for an example of medical protocols for AED operation.
  - A. The manufacturer from whom you buy your AED may provide you with a physician medical director. Ask them when you purchase your AED.
  - B. Your business or parent company may have a physician that they already employ for health services.
  - C. Your county's EMS office may be able to provide physician oversight
  - D. TVF&R may be able to help you obtain a medical director if you are otherwise unable to do so.
- 6. Your AED Site Coordinator must submit the following documentation to TVF&R:
  - A. A completed AED Site Checklist (Appendix A) with the attached documentation:
    - i. **Training / Retraining policy:** a paragraph or two that outlines how many employees you initially trained and through whom you received the training, and your commitment to keep their AED training current (must be retrained *at least* every two years).  
TVF&R will provide on-site drills annually for free, but it is the responsibility of your AED Site Coordinator to contact Linda Wert at 503-259-1687 approximately a month ahead of the date and time you would like our crew to arrive and conduct a 30-minute training session. The exact time may change if the crew is running emergency calls. NOTE: these sessions do not provide any certification.
    - ii. **Maintenance and testing policy and procedures:** based on the manufacturer's recommendations
    - iii. **Copy of physician's signed prescription for an AED**
    - iv. **Copy of your physician-approved AED medical protocol** (examples may be available through the AHA or your local EMS office)
- 7. Final Approval: TVF&R approves your documentation and enters you into the 911 database.
  - A. Once you receive notification from TVF&R you may place your AED(s) in service.
  - B. Your AED Site Coordinator must notify Linda Wert at 503-259-1687 of any future changes in your contact information or changes to your AED program
  - C. Most importantly, if you have an event where your AED is used please contact Linda Wert at 503-259-1687 and report the date, time, and circumstances. If anyone at your workplace experiences stress or anxiety related to the event you can also contact TVF&R as a resource for Critical Incident Stress Debriefing.

Use the AED Site Checklist (Appendix A) as a guide. The numbers of the checklist correspond with the more detailed explanations listed above. The requirements may sound complex, but the process actually can be completed in a month or less. If any questions arise during the process contact Linda Wert at 503-259-1687. If Linda is unable to answer your questions you will be contacted by a TVF&R Firefighter/Paramedic serving as an AED resource manager.

## TVF&R's AED Program Components

1. **Public AED Awareness and Education Goals:** through mass media, including; television, radio, newspapers, journals, pamphlets, and word of mouth
  - A. Raise awareness of our AED program and the benefits of having AEDs in the community
  - B. Educate the community in AED use and how it is an integral part of our EMS system
  - C. Encourage all potential AED sites within our District to purchase AEDs and meet the requirements to put them in service.
    - i. Large corporations, jails, non-hospital medical facilities, shopping malls, recreational facilities, golf courses, retirement communities, small businesses, municipal facilities
2. **Act as a resource and guide for potential AED sites:**
  - A. By having an established TVF&R AED program with the following roles:
    - i. Program Medical Director: Dr. Mohamud Daya
      - a. provides all medical direction and oversees the entire program
      - b. resource for connecting potential AED sites with a physician for medical direction
    - ii. Program Chief: Mark Stevens (EMS Chief)
      - a. oversees the administration of the program and related training
      - b. oversees all other positions
    - iii. Program Coordinator: Scott Malone
      - a. enters all pertinent information into the AED Database
      - b. acts as the district contact for all engine companies
    - iv. TVF&R Technical Support: Jeff Rubin (Emergency Manager)
      - a. Maintains TVF&R's AED website and Community Guide
      - b. Provides program information, technical information, and public education
    - v. Program Contact Manager: Linda Wert
      - a. manages contact information
      - b. refers questions to AED resource managers
    - vi. Washington County 9-1-1 Liaison: Shirlee O'Conner
      - a. sends approved AED site information to WCCCA to be entered into the 9-1-1 Database
    - vii. AED resource managers:
      - a. three Firefighter/Paramedics, one on each shift, who are able to answer questions and guide potential AED sites that have contacted the Program Contact Manager with questions
  - B. By making this Community AED Program Packet readily available by requests and by posting it on the internet
  - C. By having a contact number 503-259-1687 for potential AED sites to start the process and call if they have questions that are not answered by the Community AED Program Packet
  - D. By maintaining a list of resources (located within this packet)
3. **Provide initial and continuing training:**
  - A. Provide AHA AED courses through CPR Lifeline (503-243-2277)
  - B. Provide on-site refresher training at least annually at AED sites via a 30 minute session taught by a TVF&R duty crew (NOTE: this does not serve as formal refresher training)
  - C. Notify AED sites when their training needs to be updated by keeping track of training dates on the TVF&R AED Database
4. **Maintain information on all AED Sites within TVF&R's boundaries:**
  - A. By maintaining up to date information on the TVF&R AED Database
  - B. By corresponding with local government agencies, AED manufacturers, and the public to ensure we have a list of all AED sites within TVF&R's boundaries.

## Appendix A

### AED Site Checklist

1. Contact Linda Wert at 503-259-1687 to obtain a TVF&R Community AED Program Packet or access the entire document on the internet at [www.tvfr.com/safetytips/cpr/aed\\_guide.aspx](http://www.tvfr.com/safetytips/cpr/aed_guide.aspx)
2. After reading the entire Community AED Program Packet and choosing to save lives by becoming an AED site, contact Linda Wert and give her the name and contact information of the person your AED site has chosen as their AED Site Coordinator.
3. Obtain approved AED training for all employees that have the potential for operating the AED or AEDs.
4. Purchase an AED or AEDs.
5. Obtain a prescription from a physician who has agreed to be your AED site Medical Director.
6. Document your AED site's program components:
  - a. Training / Retraining Policy
  - b. Maintenance Testing Policy and Procedures
  - c. Physician approved AED Medical Protocols
  - d. Copy of your Medical Director's prescription for an AED
7. Place a copy of this packet with your AED site's documentation and plan for future training. Arrange with TVF&R at least annually for practice, and keep all employees current – train new employees as part of their orientation and existing employees at least every 2 years.
8. Send copies of your documents and this completed checklist to TVF&R for final approval.