



Annual Workplace Safety and Health Conference

Automatic External Defibrillators and Bleeding Control in the Workplace



AED Medical Direction Service and Provisioning

- Review and medical oversight of automatic external defibrillators (AEDs)
 - Medicus Telemedicine Group oversees the medical direction of more than 6,000 AEDs
 - AED Supply, AED training, AED medical oversight with physicians in 48 states



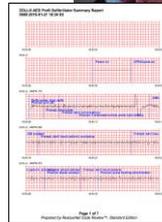
I. Purpose & Scope

II. Client's Background Information

III. Patient's Cardiac History (if known)

IV. Patient's Cardiac History (if known)

V. Incident Information



Sudden Cardiac Arrest

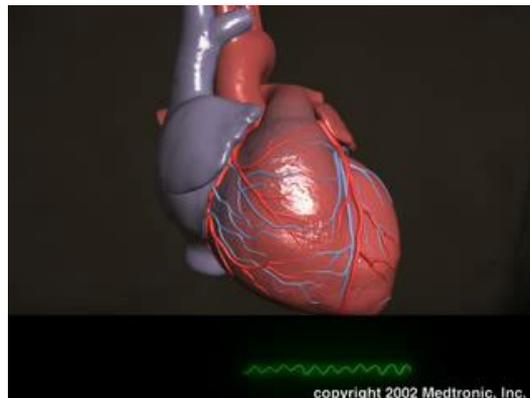
“Doctors say that sudden cardiac arrest is responsible for more deaths than breast cancer, lung cancer, and HIV combined. But unlike those diseases, they say we already have the technology to save those lives, we just aren’t using it enough.” -- Jim Vance & Doreen Gentzler, News 4 I-Team, NBC Washington

More than 450,000 Americans die from sudden cardiac arrest each year. For half of them, it was the first sign. Sudden cardiac arrest often comes with little or no warning.

A comprehensive action plan includes CPR and AED.



Sudden Cardiac Arrest



Sudden Cardiac Arrest



- Survival odds go up with a team approach to rescue:
 - someone calls 911, or
 - someone waits for EMS and brings them to scene.
- Multiple people perform CPR until:
 - the person regains consciousness, or
 - a person of higher level of training takes over (EMS, fire, doctor).



Automatic External Defibrillator (AED)

- Variety of makers of AEDs: Philips, Physio – Control, Zoll
- Defibrillation is not automatic. Assessment of need to shock is automatic. You still must press the button to deliver the shock.
- Device is so easy to use, even 6th graders figured it out with no instruction in an average of 2 minutes and 1 second.
- Batteries and pads should be checked at regular intervals.



Are Heart Attacks Different from SCA?

The answer is **YES**.

A heart attack happens when the flow of oxygen-rich blood to a section of heart muscle suddenly becomes blocked and the heart can't get oxygen. If blood flow isn't restored quickly, the section of heart muscle begins to die.

Some symptoms of a heart attack:
chest pains, discomfort in upper body, shortness of breath, cold sweats and anxiety, nausea, fatigue, racing heart, etc.



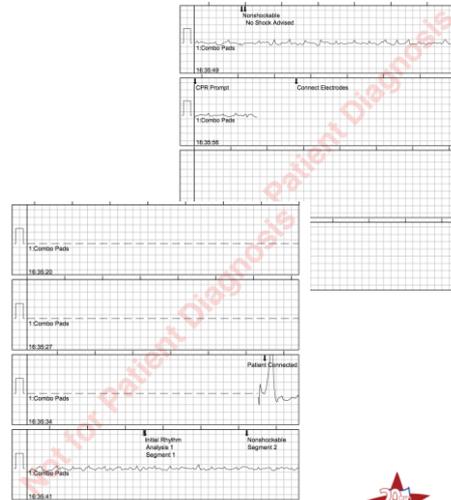
How Long until EMS Arrives?

- 9 minutes average in a metropolitan area; 27 minutes in a suburban area before 911 EMS can arrive.
- Every 1 minute that passes before defibrillation of the heart in cardiac arrest, you lose about 12 percent chance of saving someone.
- A comprehensive action plan includes CPR training, adequate placement of AED that is public access, and clear instructions to 911 operator as to the location of the emergency.



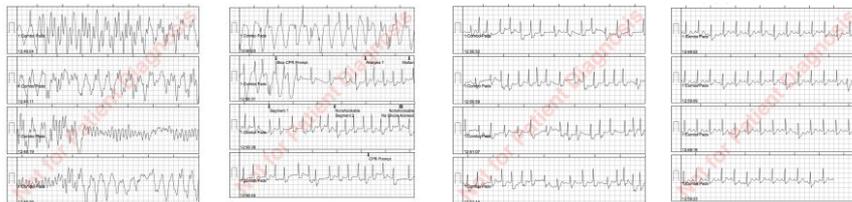
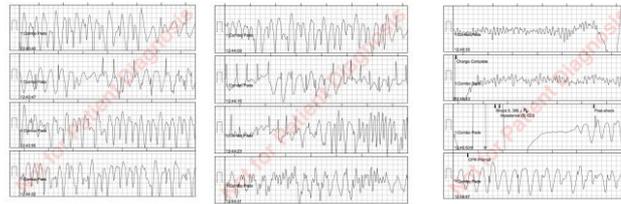
How Long until EMS Arrives?

Example #2



How Long until EMS Arrives?

Example #2 (6 shocks approx. over 25 minutes)

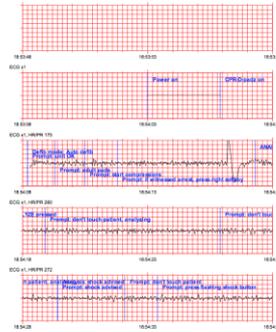


How Long until EMS Arrives?

Example #3



ZOLL® AED Pro® Defibrillator Summary Report
0689 2016-01-21 18:54:03



Page 1 of 7
Prepared by RescueNet Code Review™, Standard Edition

ZOLL® AED Pro® Defibrillator Summary Report
0689 2016-01-21 18:54:03



Page 2 of 7
Prepared by RescueNet Code Review™, Standard Edition



Where Should AEDs Be Placed?

- Placed in a good visible location
- Placed in a highly traveled location (break room, lobby, main hallway, etc.)
- Placed 1:30 apart (3-minute rule)
- Use good signage if placement of AED is not visible.
- Is IP rating high enough to hold up in elements?



Why Should AEDs Be Placed?



Trained Responders

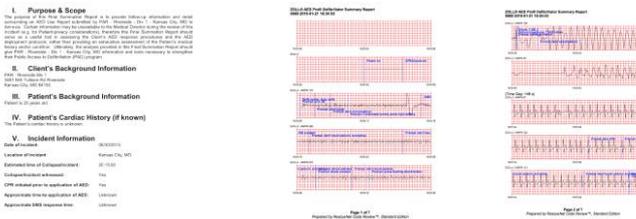
- These are employees in your organization who are trained to perform CPR and know how to operate the AED.
- Where should they be located? (multiple floors, separate building locations, etc.)
- Do I have responders on all my shifts?



Readiness Requires Solution

Questions to review before an emergency strikes:

- Will employees know what to do in a cardiac emergency? (your protocol)
- Where should the AEDs be placed?
- Are my trained responders certifications up to date?
- Who will oversee my program?
- (Administrator/s or site coordinator/s)
- Will the AEDs be ready for use when needed?
- How do I register my AEDs with the state?
- What do I do if an AED is used? (post-event information)



Why Implement a Program Management Solution

1. Readiness

- A well-managed AED program can save lives.
- 2016 AHA Guidelines recommends AED programs*.

2. Compliance

- Federal and state mandates require medical oversight, tracking, and maintenance.

3. Peace of mind

- Eliminates administrative burden of managing your own program.



An Overview of Texas Compliance Laws

- Prescription RX (federal law)
- Medical direction/physician oversight (class III medical device)
- AED routinely maintained or tested monthly
- CPR/AED training (trained responders)
- Notification to local EMS agency
- Good Samaritan protection for untrained users



Texas AED Legislation

Texas Civil Practice and Remedies Code § 74.151

a) A person who in good faith administers emergency care is not liable in civil damages for an act performed during the emergency unless the act is willfully or wantonly negligent, including a person who:

- 1) administers emergency care using an automated external defibrillator; or
- 2) administers emergency care as a volunteer who is a first responder as the term is defined under Section 421.095, Government Code.

b) This section does not apply to care administered:

- 1) for or in expectation of remuneration, provided that being legally entitled to receive remuneration for the emergency care rendered shall not determine whether or not the care was administered for or in anticipation of remuneration; or
- 2) by a person who was at the scene of the emergency because he or a person he represents as an agent was soliciting business or seeking to perform a service for remuneration.

(c), (d) Deleted by Acts 2003, 78th Leg., ch. 204, § 10.01.

(e) Except as provided by this subsection, this section does not apply to a person whose negligent act or omission was a producing cause of the emergency for which care is being administered. This subsection does not apply to liability of a school district or district school officer or employee arising from an act or omission under a program or policy or procedure adopted under Subchapter O-1, Chapter 161, Health and Safety Code, other than liability arising from willful or intentional misconduct.



Texas AED Legislation

Texas Health and Safety Code § 779.002

- (a) A person or entity that acquires an automated external defibrillator shall ensure that:
 - (1) each user of the automated external defibrillator receives training given or approved by the Texas Department of Health in:
 - (A) cardiopulmonary resuscitation; and
 - (B) use of the automated external defibrillator; and
 - (2) a licensed physician is involved in the training program to ensure compliance with the requirements of this chapter.
- (b) The executive commissioner of the Health and Human Services Commission shall adopt rules establishing the minimum requirements for the training required by this section. In adopting rules under this section, the executive commissioner shall consider the guidelines for automated external defibrillator training approved by the American Heart Association, the American Red Cross, or another nationally recognized association.



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Texas Health and Safety Code § 779.003

A person or entity that owns or leases an automated external defibrillator shall maintain and test the automated external defibrillator according to the manufacturer's guidelines.

Texas Health and Safety Code § 779.004

A person or entity that provides emergency care to a person in cardiac arrest by using an automated external defibrillator shall promptly notify the local emergency medical services provider.

Texas Health and Safety Code § 779.005

When a person or entity acquires an automated external defibrillator, the person or entity shall notify the local emergency medical services provider of the existence, location, and type of automated external defibrillator.



Texas AED Legislation

Texas Health and Safety Code § 779.006

The prescribing physician who authorizes the acquisition of an automated external defibrillator in accordance with this chapter, a person or entity that provides approved training in the use of an automated external defibrillator in accordance with this chapter, and the person or entity that acquires the automated external defibrillator and meets the requirements of this chapter are not liable for civil damages for such prescription, training, or acquisition unless the conduct is willfully or wantonly negligent. Any person or entity that acquires an automated external defibrillator and negligently fails to comply with the requirements of this chapter is liable for civil damages caused by such negligence.

Texas Health and Safety Code § 779.007

Each person or entity, other than a licensed practitioner, that acquires an automated external defibrillator that has not been approved by the United States Food and Drug Administration for over-the-counter sale shall ensure that:

- (1) the automated external defibrillator has been delivered to that person or entity by a licensed practitioner in the course of his professional practice or upon a prescription or other order lawfully issued in the course of his professional practice; or
- (2) if the automated external defibrillator is acquired for the purpose of sale or lease, the person or entity shall be in conformance with the applicable requirements found in Section 483.041, Health and Safety Code.



Texas AED Legislation

Texas Education Code § 38.017

- (a) Each school district shall make available at each campus in the district at least one automated external defibrillator, as defined by Section 779.001, Health and Safety Code. A campus defibrillator must be readily available during any University Interscholastic League athletic competition held on the campus. In determining the location at which to store a campus defibrillator, the principal of the campus shall consider the primary location on campus where students engage in athletic activities.
- (b) To the extent practicable, each school district, in cooperation with the University Interscholastic League, shall make reasonable efforts to ensure that an automated external defibrillator is available at each University Interscholastic League athletic practice held at a district campus. If a school district is not able to make an automated external defibrillator available in the manner provided by this subsection, the district shall determine the extent to which an automated external defibrillator must be available at each University Interscholastic League athletic practice held at a district campus. The determination must be based, in addition to any other appropriate considerations, on relevant medical information.
- (c) Each school district, in cooperation with the University Interscholastic League, shall determine the extent to which an automated external defibrillator must be available at each University Interscholastic League athletic competition held at a location other than a district campus. The determination must be based, in addition to any other appropriate considerations, on relevant medical information and whether emergency services personnel are present at the athletic competition under a contract with the school district.
- (d) Each school district shall ensure the presence at each location at which an automated external defibrillator is required under Subsection (a), (b), or (c) of at least one campus or district employee trained in the proper use of the defibrillator at any time a substantial number of district students are present at the location.



Texas AED Legislation

Texas Education Code § 38.017 (continued)

(e) A school district shall ensure that an automated external defibrillator is used and maintained in accordance with standards established under Chapter [779](#), Health and Safety Code.

(f) This section does not:

- (1) waive any immunity from liability of a school district or its officers or employees;
- (2) create any liability for or a cause of action against a school district or its officers or employees; or
- (3) waive any immunity from liability under Section [74.151](#), Civil Practice and Remedies Code.

(g) This subsection applies only to a private school that receives an automated external defibrillator from the agency or receives funding from the agency to purchase or lease an automated external defibrillator. A private school shall:

- (1) make available at the school at least one automated external defibrillator; and
- (2) in coordination with the Texas Association of Private and Parochial Schools, adopt a policy concerning the availability of an automated external defibrillator at athletic competitions and practices in a manner consistent with the requirements prescribed by this section, including the training and maintenance requirements prescribed by this section.

(h) A school district may seek and accept gifts, grants, or other donations to pay the district's cost of purchasing automated external defibrillators required under this section.



Texas AED Legislation

Texas Education Code § 38.018

(a) Each school district and private school shall develop safety procedures for a district or school employee or student to follow in responding to a medical emergency involving cardiac arrest, including the appropriate response time in administering cardiopulmonary resuscitation, using an automated external defibrillator, as defined by Section 779.001, Health and Safety Code, or calling a local emergency medical services provider.

(b) A private school is required to develop safety procedures under this section only if the school receives an automated external defibrillator from the agency or receives funding from the agency to purchase or lease an automated external defibrillator.

Texas Education Code § 28.0023

(a) Repealed by Acts 2013, 83rd Leg., R.S., Ch. 1269, Sec. 3, eff. June 14, 2013.

(b) The State Board of Education by rule shall require instruction in cardiopulmonary resuscitation for students in grades 7 through 12.

(c) A school district or open-enrollment charter school shall provide instruction to students in grades 7 through 12 in cardiopulmonary resuscitation in a manner consistent with the requirements of this section and State Board of Education rules adopted under this section. The instruction may be provided as a part of any course. A student shall receive the instruction at least once before graduation. A school administrator may waive the curriculum requirement under this section for an eligible student who has a disability.

(d) A school administrator may waive the curriculum requirement under this section for an eligible student who has a disability.



Texas AED Legislation

Texas Education Code § 28.0023 (continued)

(e) Cardiopulmonary resuscitation instruction must include training that has been developed:

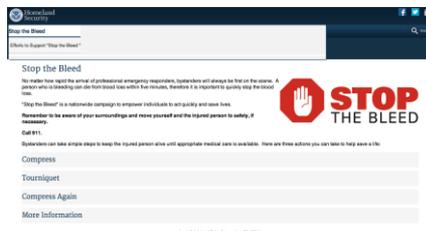
- (1) by the American Heart Association or the American Red Cross; or
- (2) using nationally recognized, evidence-based guidelines for emergency cardiovascular care and incorporating psychomotor skills to support the instruction.

(f) For purposes of Subsection (e), "psychomotor skills" means hands-on practice to support cognitive learning. The term does not include cognitive-only instruction and training.

(g) A school district or open-enrollment charter school may use emergency medical technicians, paramedics, police officers, firefighters, representatives of the American Heart Association or the American Red Cross, teachers, other school employees, or other similarly qualified individuals to provide instruction and training under this section. Instruction provided under this section is not required to result in certification in cardiopulmonary resuscitation. If instruction is intended to result in certification in cardiopulmonary resuscitation, the course instructor must be authorized to provide the instruction by the American Heart Association, the American Red Cross, or a similar nationally recognized association.



Stop The Bleed Campaign

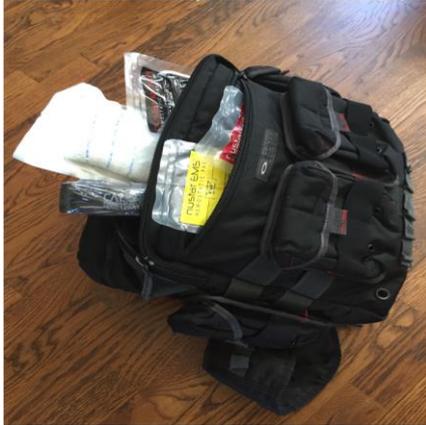


- Bleeding-control response must happen before 911 EMS can arrive.
- In every mass casualty response in recent years, people have bled to death because bleeding control devices were not already on hand and utilized before EMS could get there.
- A comprehensive action plan includes bleeding-control kits in place prior to an event. Both the Department of Homeland Security and the White House advocate bleeding-control kits in such public locations as places of worship, public gatherings, and anywhere there could already be an AED.



Bleeding-Control Kits

**BLEEDING-CONTROL KITS INCLUDING
FOURTH-GENERATION HEMOSTATIC
GAUZE AND TOURNIQUETS.**



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- A comprehensive action plan includes having bleeding-control kits in place prior to an event. Both the Department of Homeland Security and the White House advocate bleeding-control kits in such public locations as places of worship, public gatherings, and anywhere there could already be an AED.



Bleeding Control



- Tourniquets
- Gauze
- Cutting device
- Gloves
- Easily accessible
- Alarm system
- Provisioned for multiple casualties



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