Automated External Defibrillator Program

2016
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The University of Texas at Tyler

AUTOMATED EXTERNAL DEFIBRILLATOR PROGRAM

1. INTRODUCTION

People die of sudden cardiac arrest (SCA) every year and many of these deaths are preventable. The use of an Automated External Defibrillator (AED) in conjunction with cardio pulmonary resuscitation (CPR) can significantly increase survival rates.

2. PURPOSE

The University of Texas at Tyler has established an AED Program to enable targeted responders in the University setting to deliver early defibrillation to victims in the first critical moments after a sudden cardiac arrest. This program is designed to provide procedural guidance for properly maintaining and employing University owned AED devices to include training and equipment orientation.

3. DEFINITIONS

Automated External Defibrillator (AED) is an electronic device that delivers a shock to restore the rhythm of a fibrillating heart. An AED contains a microprocessor that analyzes and detects this type of heart rhythm through adhesive pads on a victim's chest, judges whether defibrillation is needed, and then recommends a shock be delivered. The shock stuns the heart muscle, which gives it the opportunity to resume beating effectively.

Sudden Cardiac Arrest (SCA) is a sudden, abrupt loss of heart function and the heart most often goes into uncoordinated electrical activity called ventricular fibrillation. During this condition the heart twitches ineffectively and can't pump blood, and death can occur within minutes. SCA is one of the leading causes of death in the United States. The American Heart Association estimates that at least 250,000 people suffer from SCA each year. The median age of victims is 65 but it can affect all ages.

4. PROGRAM REQUIREMENTS

Environmental Health and Safety (EH&S) is responsible for administering the University’s AED Program. The aspects of this program include AED procurement and deployment, employment procedures, inspection and maintenance, training, and program documentation and reporting.

AED devices are stationed inside buildings on the UT Tyler campuses and an AED is deployed in a designated police vehicle for response to incidents occurring on the main campus and at off-site activities. A complete list of the locations where University AEDs are currently stationed can be found in Appendix A.
A key component of the program is identifying designated individuals (responders) and providing them CPR training and specialized training in AED operations and inspections. This program is designed to enable designated responders in the University setting to deliver early defibrillation to victims in the first critical moments after a sudden cardiac arrest. Responders’ use of the AED should not replace the care provided by emergency medical services (EMS) providers, but is meant to provide a lifesaving bridge during the first few critical minutes it takes for advanced life support providers to arrive. Upon arrival of the EMS providers, patient care will be transferred to the EMS personnel.

**Program Implementation**
There are several documents related to implementing the UT Tyler AED Program which can be found in Appendix A.

5. **PROGRAM RESPONSIBILITIES**

**Medical Director**
The Medical Director has authority over the entire AED program and its participants. General responsibilities include the establishment and maintenance of the guidelines for care included in this protocol. In addition, the Medical Director also ensures quality assurance, compliance to protocols, proper training and provides positive reinforcement to individuals and the system, as well as corrective instruction.

Medical Director: Dudley Goulden, M.D., FACC, Professor of Medicine, Division of Cardiology
The University of Texas Health Center at Tyler
Phone Number: 903-877-7230

**AED Coordinator**
The AED Coordinator is an employee of the corporation who is the primary liaison between the company’s AED program and the Medical Director. This person has responsibility for maintaining all equipment and supplies, organizing training programs and regular re-training programs, forwarding any incident data to the Medical Director and holding post-incident debriefing sessions for any employees involved.

AED Coordinator: Paula Tate, Director
Environmental Health & Safety
The University of Texas at Tyler
Phone Number: 903-566-7011
Cell Phone Number: 903-530-6465

**Designated Responders**
Specific individuals are designated and trained to use an AED in a sudden cardiac arrest emergency. These individuals are trained and operate under the direction of the Medical Director. A list of designated responders is maintained by EH&S.
6. TRAINING

AED Training
The cornerstone of the AED Program is training. All designated responders are expected to operate an AED in the event of a medical emergency and must complete one of the following approved certification courses.

- American Heart Association Heartsaver First Aid, CPR/AED
  - 2 year certification
  - 4 hour Refresher class is required every two years to remain certified

- American Red Cross First Aid, CPR/AED
  - 2 year certification
  - 4 hour Refresher class is required every two years to remain certified

Additional Training and Testing Procedures
In addition to having a current CPR/AED certification, designated responders are required to be instructed in the following:

- The proper use, maintenance, and periodic inspection of the AED.
- Defibrillator safety precautions to enable the user to administer a shock without jeopardizing the safety of the patient, the user, or other persons.
- Assessment of an unconscious person to determine if cardiac arrest has occurred and the appropriateness of applying an AED.
- Recognizing that an electrical shock has been delivered to the patient and that the defibrillator is no longer charged.
- Rapid, accurate assessment of the patient’s post shock status to determine if further activation of the AED is necessary.
- The operations of the local emergency medical services system, including methods of access to the emergency response system, and interaction with emergency medical services personnel.
- The role of the user and coordination with other emergency medical service providers in the provision of CPR, defibrillation, basic life support, and advanced life support.
- The responsibility of the user to continue care until the arrival of medically qualified personnel.
EH&S coordinates training for UT Tyler employees that volunteer to be a designated responder. The goal is to have at least three trained designated responders in each building where an AED is stationed. Employees should contact EH&S at 903-566-7011 if they are interested in becoming a designated responder.

7. **AED EMPLOYMENT**

University owned AED devices should normally be employed by trained and certified designated responders. Any person may, however, utilize an AED to treat a victim.

**Liability Issues**
Texas HB 580, Sec. 779 explicitly extends and broadens Good Samaritan protection for "citizen" AED providers, their medical director, AED manufacturers, and training providers. This protection is valid as long as an act of willful or wanton negligence is not performed, AED providers maintain the necessary training, and the AEDs are used in accordance with our medical standing orders.

**AED Protocol**
University employees should follow the Facility AED Protocol (see Appendix B) paying close attention to the Special Situations/Critical Concepts when employing an AED.

**AED Medical Standing Order**
University employees must employ AED devices in accordance with the Medical Standing Order (see Appendix C) guidelines.

**AED Post Event Procedures**
In the advent an AED is employed to treat a victim, the designated responder or other employee must notify EH&S. An after-action review of the incident should be accomplished using the AED Quality Review Procedures flowchart (see Appendix D). An AED Post Event Incident Report (see Appendix E) will also be required to be completed to document the incident.

**Questions**
Should you have any questions and/or would like additional information on UT Tyler’s AED Program, please feel free to contact EH&S at 566-7011.
## AUTOMATED EXTERNAL DEFIBRILLATOR PROGRAM
### AED Locations

<table>
<thead>
<tr>
<th>Building</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADM</td>
<td>3rd Floor Room 305</td>
</tr>
<tr>
<td>IA Bldg 1</td>
<td>1st Floor Front Lobby</td>
</tr>
<tr>
<td>IA Bldg 2</td>
<td>1st Floor by Room 100</td>
</tr>
<tr>
<td>IA Bldg 3</td>
<td>1st Floor Room 105</td>
</tr>
<tr>
<td>BPK</td>
<td>1st Floor in Room 109</td>
</tr>
<tr>
<td>BRB</td>
<td>2nd Floor next to elevator</td>
</tr>
<tr>
<td>BUS</td>
<td>1st Floor next to Room 101</td>
</tr>
<tr>
<td>FAC</td>
<td>1st Floor next to elevator</td>
</tr>
<tr>
<td>OAC</td>
<td>1st Floor next to Room 164</td>
</tr>
<tr>
<td>HPC</td>
<td>1st Floor Room 1047</td>
</tr>
<tr>
<td>HPC</td>
<td>1st Floor Athletics Training Room 1045</td>
</tr>
<tr>
<td>HPC</td>
<td>1st Floor Wellness Center Room 1270</td>
</tr>
<tr>
<td>HPC</td>
<td>2nd Floor Fitness Center Front Desk</td>
</tr>
<tr>
<td>HPC</td>
<td>2nd Floor Exercise Physiology Lab Room 2185</td>
</tr>
<tr>
<td>HPC</td>
<td>3rd Floor Kinesiology Reception Desk</td>
</tr>
<tr>
<td>HPR</td>
<td>1st Floor next to Room 101</td>
</tr>
<tr>
<td>LIB</td>
<td>2nd Floor Circulation Desk</td>
</tr>
<tr>
<td>LUC</td>
<td>1st Floor in Main Lobby</td>
</tr>
<tr>
<td>PMH</td>
<td>1st Floor by Restroom 106</td>
</tr>
<tr>
<td>PIEC</td>
<td>1st Floor Main Office</td>
</tr>
<tr>
<td>PHE</td>
<td>1st Floor Office in Gym Room 121</td>
</tr>
<tr>
<td>PHY</td>
<td>1st Floor Room 120</td>
</tr>
<tr>
<td>RBN</td>
<td>4th Floor next to Room 4004</td>
</tr>
<tr>
<td>RBS</td>
<td>2nd Floor next to Room 2011</td>
</tr>
<tr>
<td>UC</td>
<td>2nd Floor next to SW stairwell</td>
</tr>
<tr>
<td>UC</td>
<td>2nd Floor next to Subway</td>
</tr>
<tr>
<td>UC</td>
<td>3rd Floor by Restroom 3300D</td>
</tr>
<tr>
<td>USC</td>
<td>Police Department</td>
</tr>
<tr>
<td>WTB</td>
<td>2nd Floor by Restroom</td>
</tr>
</tbody>
</table>
AUTOMATED EXTERNAL DEFIBRILLATOR PROGRAM
Facility AED Protocol

**Indications:** AEDs should be used if a victim has signs of cardiac arrest:

- Unresponsive
- Not breathing
- No pulse or other signs of circulation

**Special Situations/Critical Concepts:**

- **Children:**
  
  **Actions:**
  - Do not use an AED if the victim is younger than 8 years (55 pounds).

- **Water:**
  
  **Actions:**
  - Remove the victim from contact with water.
  - Drag the victim gently by the arms or legs or use a blanket drag.
  - Quickly dry the victim’s chest before attaching the AED.

- **Implanted pacemakers or defibrillators:**
  
  **Actions:**
  - Do not place and AED electrode pad directly over an implanted device.
  - Place an AED electrode pad at least 1 inch to the side of any implanted device.

- **Transdermal medications:**
  
  **Actions:**
  - Remove the patch and wipe the area clean before attaching the AED.

- **Metal Surfaces:**
  
  **Actions:**
  - Unnecessary to move the victim from a metal surface.
APPENDIX C
AUTOMATED EXTERNAL DEFIBRILLATOR PROGRAM
AED Medical Standing Order

***Patient must be unresponsive, have no pulse, no breathing, and weigh
55 lbs or more for AED application***

1. If patient is unresponsive, call 9-1-1 (as necessary) and call for AED if it is not already at
   scene
2. Assess ABCs
   - If patient is pulseless and apneic (no pulse, no breathing), follow steps # 3-14:
3. Begin CPR until AED can be applied
4. Turn on AED
5. Attach electrode pads appropriately
6. Recite provider information during setup for voice-recorder (if applicable for device):
   - Provider name
   - Provider agency/institution
   - Patient age (or best estimate) and sex
   - Witnessed or non-witnessed arrest
   - Bystander CPR prior to AED application (yes or no)
   - Additional information if known
   - DO NOT DELAY AED APPLICATION OR OPERATION FOR THIS SEQUENCE
   - If sequence is not provided when machine is turned on, provide it as soon as possible
     thereafter
7. Stop CPR
8. Allow AED to analyze rhythm; follow machine’s prompts
9. Deliver up to 3 successive shocks if AED so advises; if no shock advised, go to #10
10. Reassess patient: if no pulse, perform CPR for 1 minute
11. Allow AED to analyze rhythm: deliver up to 3 additional shocks if AED so advises; if no
    shock advised, go to #12
12. Reassess patient: if no pulse, perform CPR for 1 minute
13. As long as AED advises to deliver shocks, repeat steps #11-12 until Advanced Life
    Support arrives
14. Transfer data cassette/card to transporting EMS agency prior to ambulance departure
APPENDIX D
AUTOMATED EXTERNAL DEFIBRILLATOR PROGRAM
Quality Review Procedures

AED Operated

Review Incident with Program Sponsoring Physician

The AED Operation Was Appropriate

YES

- Keep Original Report on File
- Send Copies to Tyler EMS and receiving hospital

NO

- Keep Original Report On File
- Send Copies to Tyler EMS and receiving hospital

Device Failed

- Keep Original Report on File
- Send Copies to Tyler EMS and receiving hospital
- Notify Manufacturer
- Notify FDA via “MedWatch” Form

Conference with:
- UT Tyler User
- AED Coordinator
- Sponsoring Physician
# AUTOMATED EXTERNAL DEFIBRILLATOR PROGRAM

## AED Post Event Incident Report

<table>
<thead>
<tr>
<th>Location:</th>
<th>Date:</th>
<th>Time:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Name of victim:</th>
<th>Student ☐ Employee ☐ Visitor ☐</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Address:</th>
<th>Phone #:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Description of Event:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Witnesses of the Event:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Description of the first aid that was administered and other actions taken:</th>
</tr>
</thead>
<tbody>
<tr>
<td>________________________________________________________________________</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Names of personnel involved:</th>
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<tbody>
<tr>
<td>------------------------------</td>
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<td>------------------------------</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Responding EMS unit and team members:</th>
</tr>
</thead>
<tbody>
<tr>
<td>---------------------------------------</td>
</tr>
<tr>
<td>---------------------------------------</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Name of hospital where victim was transported:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Outcome after using AED: Successful ☐ Unsuccessful ☐</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Indicate if AED equipment was replaced after usage: Yes ☐ No ☐</th>
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</thead>
</table>

<table>
<thead>
<tr>
<th>Was data from the AED sent to the responding EMS Department within 48 hours? Yes ☐ No ☐</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Witness Signature:</th>
<th>Date:</th>
</tr>
</thead>
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<table>
<thead>
<tr>
<th>Director EH&amp;S Signature:</th>
<th>Date:</th>
</tr>
</thead>
</table>