



ADMINISTRATIVE DIRECTIVE

Title: **Automated External Defibrillator (AED) Program**
Issuing Department: Town Manager Safety Office
Effective Date: July 1, 2014
Approved: Gilbert Davidson, Town Manager
Type of Action: Revision (Original effective November 15, 2010)

1.0 PURPOSE

The Town of Marana is committed to the health and safety of all employees and visitors. An Automated External Defibrillator (AED) program allows for lay rescuers (i.e., non-health care professionals) to operate an AED to treat the victim of a sudden cardiac arrest. This administrative directive describes the requirements and responsibilities of the AED Program.

2.0 DEPARTMENTS AFFECTED

All Town of Marana departments and employees.

3.0 REFERENCES

- 3.1 A.R.S. §§ 36-2261 through 36-2263
- 3.2 Cardiac Arrest Survival Act of 2000
- 3.3 21 U.S.C. § 360

4.0 DEFINITIONS

- 4.1 AED: Automated External Defibrillators (AED) are computerized medical devices that analyze the heart rhythm of persons in cardiac arrest, determine if an electric shock is appropriate, advise the operator whether the rhythm should be shocked, and deliver electrical shock therapy to a cardiac arrest victim.
- 4.2 Bloodborne Pathogens: Pathogenic microorganisms that are present in human blood and can cause disease in humans. These pathogens include, but are not limited to, Hepatitis B Virus (HBV), Hepatitis C Virus (HCV), and Human Immunodeficiency Virus (HIV).

- 4.3 Cardiac Arrest: A life-threatening event when a person's heart stops or fails to produce a pulse, confirmed by unresponsiveness and the absence of normal respirations.
- 4.4 Continuous Chest Compressions-Cardiopulmonary Resuscitation (CCC-CPR): Continuous Chest Compressions-Cardiopulmonary Resuscitation (CCC-CPR) is a new method of resuscitation developed through extensive research at the University of Arizona SARVER Heart Center. In this method, continuous aggressive chest compressions are established and maintained to circulate the victim's blood through the brain and heart. Per standards set by the American Heart Association, the American Red Cross and/or the National Safety Council, no mouth to mouth breaths are necessary. This method allows oxygenated blood to circulate to vital organs such as the brain and heart. CCC-CPR can keep a person alive until more advanced procedures (such as defibrillation) can treat the cardiac arrest. CCC-CPR started by a bystander doubles the likelihood of survival for victims of cardiac arrest.
- 4.5 Defibrillation: Administration of an electrical impulse (shock) to an individual by a device such as an AED in order to convert an abnormal heart rhythm (such as ventricular fibrillation) to a normal rhythm.
- 4.6 Emergency Medical Services (EMS): Personnel trained to respond to medical emergencies in an official, professional capacity. EMS refers to both law enforcement and medical responders (Marana Police Department, Northwest Fire Department, and Pima County Sheriff's Department) and community responders.
- 4.7 Public Access Defibrillation Program (PAD): A public health initiative to train laypersons throughout the community to defibrillate patients with cardiac arrest through use of AEDs and to place AEDs in settings where large numbers of people are located to improve survival after cardiac arrest.
- 4.8 AED Program Medical Director: A physician who oversees the AED Program. The "Save Hearts in Arizona Registry & Education" (SHARE") Program was developed by the Arizona Department of Health Services Bureau of Emergency Medical Services & Trauma System (BEMSTS). The SHARE Program will provide, free of charge, medical oversight to the Town's AED Program through the BEMSTS Medical Director.
- 4.9 AED Program Manager: A person designated to conduct day-to-day duties associated with the AED Program. These duties shall include performing maintenance checks, ordering supplies, coordinating training and maintaining training records, serving as the physician's point of contact for the AED Program and coordinating the download and transmission of post-event data to the AED Program Medical Director. The AED Program Manager shall maintain all AED documentation, including copies of the AED procedures, protocols, maintenance and incident report documentation. The AED Program Manager shall ensure that all patient medical information is maintained securely and confidentially.
- 4.10 Trained AED User: A person who is the expected user of an AED and who has completed a state-approved course in cardiopulmonary resuscitation and the use of an AED for the lay rescuer and first responder, including the course adopted by the American Heart Association and in effect as of December 31, 1998.

- 4.11 **Universal Precautions:** A method of infection control in which all human blood and certain human body fluids are treated as if known to be infectious for HIV, HBV, HCV, and other blood borne pathogens.

5.0 POLICIES AND PROCEDURES

- 5.1 **General.** The Town of Marana shall strategically place and maintain Automated External Defibrillators (AEDs) on Town premises. The ownership and maintenance of these devices shall be in compliance with the Cardiac Arrest Survival Act of 2000 and A.R.S. § 36-2261 *et seq.* The AEDs shall be used in emergency situations warranting use under the guidelines of this directive.
- 5.2 **Compliance with Laws.** The AED Program shall follow all applicable federal, state and local regulatory requirements. If any federal, state or local regulatory requirements are, or at any time become, more stringent than the requirements set forth in this administrative directive, the more stringent requirements shall take precedence.
- 5.3 **Approved Devices.** Only commercially available AEDs that have been approved by the United States Food and Drug Administration (FDA) pursuant to 21 U.S.C. § 360 will be considered for use in this AED Program.
- 5.4 **Training.** Persons using an AED pursuant to the AED Program must receive instruction in continuous chest compressions-cardiopulmonary resuscitation (CCC-CPR) and the use of an AED via a state-approved course. The AED Program Manager shall ensure that all trained users receive training annually.
- 5.5 **AED Response Protocol.** An AED Response Protocol shall be developed pursuant to the AED Program and shall be approved by the AED Program Medical Director. The protocol must include the following requirements:
- 5.5.1 Notification of the community emergency 911 system as soon as possible after use of an AED on a person in cardiac arrest.
 - 5.5.2 Assessment of the scene for safety and use of universal precautions
 - 5.5.3 Transfer of patient care responsibilities to the local EMS personnel upon their arrival
 - 5.5.4 Completion of an AED Use Data Form for submission to the Arizona Department of Health Services Bureau of Emergency Medical Services and Trauma System within five working days after the use of the AED.
- 5.6 **Event Data.** The user shall send an incident report to the AED Program Manager within 24 hours post-event in order to facilitate downloading data from the AED internal memory. The AED Program Manager shall ensure completion and submission of the AED Use Data Form as described in section 5.5.4, above. Event data stored in the AED must also be made available if requested by local EMS providers or the patient's physician.
- 5.7 **Maintenance.** All AEDs shall be maintained in good working order and shall be regularly tested according to the operation and maintenance guidelines set forth by the manufacturer and any other applicable regulations. The AED must also be checked for readiness after each use. Records of these periodic checks must be maintained by

the AED Program Manager.

- 5.8 Location. All AEDs shall be located in such a way as to ensure rapid access by potential users. Elements contributing to proper placement of an AED include an easily accessible position, a secure location that prevents or minimizes the potential for tampering, theft and/or misuse and a location that is well-marked and known to trained personnel.

6.0 RESPONSIBILITIES

- 6.1 The Town Manager's Office Safety Coordinator shall be primarily responsible for implementing, developing and maintaining the Town of Marana AED Program according to this directive, as well as federal, state and local regulations.
- 6.2 The Safety Coordinator shall serve as the AED Program Manager to conduct the day-to-day duties associated with the AED Program. In addition to those responsibilities mentioned elsewhere throughout this administrative directive, the AED Program Manager or his/her designee shall be responsible for the following:
- 6.2.1 Enlisting a licensed physician to serve as the AED Program Medical Director to provide physician oversight for the local AED Program and to establish medical direction for the AED use.
- 6.2.2 Review and provision of the recommended list of equipment to be placed with the AED to assist rescuers.
- 6.2.3 Maintenance of a training program, including initial training and periodic re-training, for employees. This shall include assessing the number of employees to be trained and providing approved training as defined in this directive.
- 6.2.4 Maintenance and testing of the AEDs in accordance with the manufacturer's operational guidelines.
- 6.2.5 Development of a process to ensure that the appropriate AED data is made available after an event when an AED is used for review by the AED Program Medical Director and as requested by local Emergency Medical Services or other healthcare providers.
- 6.2.6 Review of the AED Program and its components annually.
- 6.2.7 Distribution of the written AED Program requirements to the AED Program Medical Director and local EMS personnel. In addition, the local EMS providers shall be notified of the existence of all AEDs and their locations.

7.0 ATTACHMENTS

- 7.1 Appendix A - Automated External Defibrillator (AED) Response Protocol
- 7.2 Appendix B - Automated External Defibrillation Response Protocol Flow Chart
- 7.3 Appendix C - List of AED Locations
- 7.4 Appendix D - AED Relocation Form
- 7.5 Appendix E - AED Use Data Form

7.6 Appendix F - Summary of Lay Rescuer CPR for Adults, Children and Infants

7.7 Appendix G - AED Monthly Inspection Check sheet

Appendix A Automated External Defibrillation Response Protocol

Conduct an initial assessment:

- Assess for scene safety; use universal precautions.
- Assess patient for unresponsiveness and abnormal breathing.
- If unresponsive, activate EMS and in-house emergency plan.
- Call 911 and call for defibrillator.
- Provide CCC-CPR Compressions until defibrillator arrives.

Begin defibrillation treatment

- As soon as the defibrillator is available, turn it on and follow the prompts. If the patient is an infant or child that is less than 8 years old or 55 pounds use Infant/Child defibrillator pads if available.
- Take Universal Precautions by using response kit attached to pads packet. Shave chest with disposable razor if needed. Discard razor in a safe manner. Wipe chest if it is wet.
- Apply defibrillation pads. Look at the icons on the self-adhesive defibrillation pads, peel off adhesive from both pads and place it as shown in its illustration. Ensure pads are making good contact with the patient's chest. Do not place the pads over the nipple, medication patches, or visible implanted devices.
- Deliver a shock to the patient **when advised** by the defibrillator, after first clearing the patient area. Administer additional shocks as prompted by the defibrillator until it advises no shock and prompts the responder to check the patient.
- When advised by the defibrillator, check the patient's airway, breathing, and signs of circulation and initiate CCC-CPR if circulation is absent.
- Continue to perform CCC-CPR until otherwise prompted by the defibrillator or EMS personnel.
- Continue to follow the defibrillator prompts until EMS arrives.

When EMS arrives

Responders working on the victim should document and communicate important information to the EMS provider, such as:

- Victim's name

- Known medical problems, allergies or medical history
- Time the victim was found
- Initial and current condition of the victim
- Information from the AED+ Defibrillator's screen
- Number of shocks delivered
- Length of time defibrillator has been on
- Assist as requested by EMS providers

Post-Use Procedure

- The User shall send an incident report to the AED Program Manager within 24 hours post-event in order to facilitate downloading data from the AED internal memory.
- The AED Program Manager shall check the defibrillator and replace any used supplies as soon as possible following the event so that the defibrillator may be returned to service.
- The AED Program Manager shall also perform the after-patient-use maintenance on the defibrillator, as indicated below.
- The AED Program Manager shall conduct employee incident debriefing, as needed.
- The AED Program Manager shall notify the AED Program Medical Director of the use of the AED as soon as possible after use.
- The AED Program Manager shall complete the AED Use Data Form and forward it to the AED Program Medical Director within five working days after the use of the AED.

Defibrillator Maintenance after Each Patient Use (AED Program Manager)

- Inspect the exterior, pads connector port or pads cartridge well for dirt or contamination.
- Check supplies, accessories and spares for expiration dates and damage.
- Call Desert AED. Desert AED will replace pads and batteries and empty data from unit to send to SHARE and patient's medical provider.

Monthly Maintenance (AED Program Manager)

- Verify green blinking light is flashing
- Verify pads and batteries are not expired; pads shelf life is 2 years, battery shelf life is 4 years
 - Sign and date AED Check tag

Appendix B

Automated External Defibrillation Response Protocol Flow Chart

Immediately upon arrival:

- Assess scene for safety.
- Verify sudden cardiac arrest.

- Assess responsiveness
- Activate EMS and in-house Emergency Response Plan
- Open airway and assess breathing
- Assess for signs of circulation
- Absent? Proceed to CCC-CPR/defibrillation

After verification of sudden cardiac arrest:

- Perform CCC-CPR (Compressions) if there is a delay in obtaining or using the defibrillator; otherwise, use defibrillator immediately upon its arrival
- Turn on the defibrillator
- Apply defibrillation pads
- Follow voice and text prompts

Allow defibrillator to analyze heart rhythm (automatic)

Shock Advised

- “Clear” patient verbally and usually prior to shock delivery.
- Deliver shock.

- Defibrillate as advised by defibrillator.

- Check for signs of circulation.
 - If circulation absent, perform CCC-CPR for one (1) minute.

Continue prompts as directed by Defibrillator “no shock” prompt or external EMS arrives and instructs you to stop.

No Shock Advised

- Check for signs of circulation.
- Absent? Perform CCC- CPR.
 - Present? Support airway and breathing.

- Continue until defibrillator provides additional prompts or external EMS arrives and instructs you to stop.

- Leave the defibrillator attached to the patient until instructed to remove it by EMS personnel or higher medical authority.

Appendix C
AED Locations

UNIT

LOCATION

Phillips FRx Unit #3 (Child Key)
Serial # B09A-00475

Marana Municipal Complex
11555 W. Civic Center Drive, Bldg. B
Marana, Arizona 85653
1st floor public access lobby area of
Marana Police Department

Phillips FRx Unit #2 Serial #
B09A-01140

Marana Municipal Complex
11555 W. Civic Center Drive, Bldg. B
Marana, Arizona 85653
2nd floor public access area hallway near
restrooms, cafeteria and workout room

Phillips FRx Unit #1 Serial #
B09B-00090

Marana Municipal Complex
11555 W. Civic Center Drive, Bldg. A
Marana, Arizona 85653
1st floor public access lobby area of
Administration building

Phillips FRx Unit #4 Serial #
B09B-00089

Marana Operations Center
5100 W. Ina Road
Tucson, Arizona 85743
Public access lobby, near conference room
and small cafeteria area

Phillips FRx Unit #5 Serial #
B09B-00146

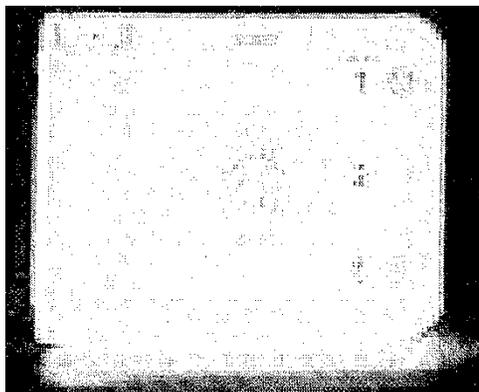
Marana Operations Center
5100 W. Ina Road
Tucson, Arizona 85743
Police offices area

Heartstart HS 1 Model # M5066A Serial
A08B-04274

Marana Community Center
13250 N. Lon Adams Road
Marana, Arizona 85653
Inside the foyer area from the Northeast
entrance of the center near the receptionist
area

Appendix D

AED RELOCATION FORM



AED unit removed from: _____

Location & AED Location Number

AED removed by: ---

Print Name with Signature

Date unit removed: _____

Month/Day/Year

Reason Unit Removed (i.e. Repair, Data removal, etc.)

New AED location: _____

Is this a permanent relocation: Yes No If

"No", give projected Date & Time of return.

**PLACE THIS FORM IN THE WINDOW AREA OF THE
AED STORAGE CABINET**

Forward this completed form to the Program Manager (Safety Department) after unit has been returned

Appendix E
SHARE PROGRAM AED USE DATA FORM
Bureau of Emergency Medical Services & Trauma System
Arizona Department of Health Services

Property/Business/Individual Name: _____

Incident Date: _____/_____/_____ Estimated Time of Collapse: _____

Patient Name: _____

Gender: M F Age: _____

Employee Customer Guest Employee Family

Other, please specify: _____

1. Where on your property did this incident occur? _____
(i.e. kitchen, lobby, single office, outdoor grounds, restroom, 6th hole, club house, etc.)

2. Was this incident witnessed by anyone? YES NO

3. Who witnessed? Employee/Co-worker Friend Family Stranger
Doctor/Nurse/Paramedic Other: _____

4. Was conventional CPR or Hands-Only (Compression-Only) CPR performed before the AED was connected to the patient?

Conventional CPR Hands-Only

5. Did the AED instruct you to shock? YES NO If yes, number of shocks _____

6. Was the patient transported from your property by ambulance? YES NO
If yes, which Fire Department or Ambulance Company: _____

7. Name of destination hospital, if known: _____

8. Did the patient exhibit any of the following after collapse and prior to departure from your property?

Pulse Breathing on own Eye opening Confusion/combativeness
Vomiting Moving arms/legs Talking

9. Do you have any questions or would you like to review this AED use with the Bureau of EMS & Trauma System medical direction representative? YES NO

Person completing form: _____

Telephone Number: _____ Best time to call you: _____

Please FAX completed form to: Paula Brazil at (602) 364-3568

This data is the property of the Arizona Department of Health Services/Bureau of Emergency Medical Services & Trauma System.
Revised: 3/24/10

Appendix F

Summary of Lay Rescuer CPR for Adults, Children and Infants

Component	Recommendations		
	Adults	Children	Infants
Recognition	Unresponsive (for all ages)		
	No breathing or no normal breathing (ie, only gasping)	No breathing or only gasping	
	No pulse palpated within 10 seconds for all ages (HCP only)		
CPR sequence	C-A-B		
Compression rate	At least 100/min		
Compression depth	At least 2 inches (5 cm)	At least $\frac{1}{2}$ AP diameter About 2 inches (5 cm)	At least $\frac{1}{2}$ AP diameter About 1½ inches (4 cm)
Chest wall recoil	Allow complete recoil between compressions HCPs rotate compressors every 2 minutes		
Compression interruptions	Minimize interruptions in chest compressions Attempt to limit interruptions to <10 seconds		
Airway	Head tilt–chin lift (HCP suspected trauma: jaw thrust)		
Compression-to-ventilation ratio (until advanced airway placed)	30:2 1 or 2 rescuers	30:2 Single rescuer 15:2 2 HCP rescuers	
Ventilations: when rescuer untrained or trained and not proficient	Compressions only		
Ventilations with advanced airway (HCP)	1 breath every 6-8 seconds (8-10 breaths/min) Asynchronous with chest compressions About 1 second per breath Visible chest rise		
Defibrillation	Attach and use AED as soon as available. Minimize interruptions in chest compressions before and after shock; resume CPR beginning with compressions immediately after each shock.		

Appendix G



AED Monthly Inspection Check sheet

Below are the instructions on how to make sure your facility has a working AED. Your facility should have one of the listed, but will possibly have both.

Check your AED monthly.

Heart Start HS 1

Unit Serial Number: Battery Expiration Date: Electrode Expiration Date:	Location:	Year:										
MONTH	J	F	M	A	M	J	J	A	S	O	N	D
Check to make sure "OK" is visible on the handle												
IF "OK" is not visible on the handle refer to the Trouble Shooting Table												

PHILIPS

Heart Start FRx Defibrillator

Unit Serial Number: Battery Expiration Date: Electrode Expiration Date:	Location:	Year:										
MONTH	J	F	M	A	M	J	J	A	S	O	N	D
Open Unit and check to make sure "green light" is blinking												
If green light is not blinking refer to the Trouble Shooting Table												

For Troubleshooting call:

Manuel Carbajal
Manager's Office, AED Program Manager
Emergency Mgt. & Safety Coordinator
(520) 382-1972 office
(520) 360-8795 cell
mcarbajal@marana.com

TROUBLESHOOTING

