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Occupational Health Programs Manual – Chapter 18

Automated External Defibrillator (AED) w/Change 2 (9/30/2015)

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Change Record

Revision	Effective Date	Expiration Date	GRC25, Change Request #	Description
B	8/22/2012	8/31/2017	255	Biannual Review
Change 1	4/14/2014	8/31/2017	N/A	Administrative change to add front cover and change history log to comply with NPR 1400.1, added "The GRC shall follow the requirements of NPR 1800.1C" in Section 4.0 Policy.
Change 2	9/30/2015	8/31/2017	N/A	Administrative change to remove hyperlinks.

***Include all information for each revision. Do not remove old revision data. Add new rows to table when space runs out by pressing the tab key in the last row, far right column.*

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Chapter 18—AUTOMATED EXTERNAL DEFIBRILLATOR (AED) PROGRAM

NOTE: The current version of this chapter is maintained and approved by the Safety and Health Division (SHeD). The last revision date of this chapter was August 2012. The current version is located on the Glenn Research Center intranet within the BMS Library. Approved by Chief of Safety and Health Division.

1.0 PURPOSE

The purpose of this chapter is to establish the guidelines by which Glenn Research Center (GRC) shall establish an Automated External Defibrillator (AED) Program. The Office of the Chief, Health and Medical Officer (OCHMO) advocates the use of AEDs in conjunction with cardiopulmonary resuscitation (CPR) and rapid entry into the community emergency medical system (EMS) at all NASA Centers and facilities. The development and implementation of a Centerwide AED Program is a requirement for each NASA Center and facility.

2.0 APPLICABILITY

This chapter establishes procedures and practices for those personnel at Lewis Field and PBS as it applies to the use of AEDs. The Federal requirements for AEDs were established by the Food and Drug Administration (FDA), and The American Heart Association (AHA) established the guidance for the Public Access Defibrillator (PAD) Program in compliance with Federal regulations. The Department of Health and Human Services (HHS) and the General Services Administration (GSA) developed “Guidelines for Public Access Defibrillator Programs in Federal Facilities,” published in the Federal Register on May 23, 2001.

3.0 BACKGROUND

Coronary heart disease is the leading cause of death in the United States, and the AHA estimates that 250 000 Americans die each year from sudden cardiac arrest as a result of this disease. The Safety and Health Division (SHeD) supports the use of automatic external defibrillators (AEDs) at GRC to provide a timely response to victims of sudden cardiac arrest caused by ventricular fibrillation. Ventricular fibrillation is a treatable condition and is potentially survivable when immediate treatment is provided. The purpose and goal of this program are to provide a timely emergency response and treatment for sudden cardiac arrest while ensuring the rapid transfer of the individual into the community EMS. The ability to respond quickly not only increases the potential survival for the individual but it also provides the opportunity for the best possible medical outcome.

4.0 POLICY

SHeD shall adhere to the AED requirements issued by NASA Headquarters. This adherence requires that an AED Program be established at each Center. Thanks to advances in AED technology, the lifesaving shock can now be safely and effectively administered by nonmedical individuals, greatly increasing the victim’s chances of survival. SHeD has invested in a program that will make AEDs readily accessible in our workplace. The GRC shall follow the requirements of NPR 1800.1C.

5.0 RESPONSIBILITIES

5.1 Automated External Defibrillator (AED) Program Lead

The Chief of SHeD shall designate the program lead to coordinate activities and provide operational oversight of the program and to ensure that routine AED checks occur. The AED Program lead shall also coordinate program activities with the contracting officer technical representative (COTR) of the contractor security force who resides in another organization. These duties include, but are not limited to, the following:

- Maintaining equipment according to the manufacturer’s recommendations (except in GRC Medical Services and the Fitness Center)
- Maintaining adequate inventory of supplies and developing a process to ensure that proper levels of supplies be available at all times

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- Creating and maintaining a list of AED responders who are up to date in training requirements
- Participating in training programs, drills, and post-incident briefings
- Maintaining current training records as part of the Center’s Business Management System (BMS) process
- Ensuring that appropriate written documentation be completed after an incident
- Maintaining a record of equipment malfunction incidents
- Maintaining a data base to track all equipment and maintenance of AEDs
- Maintaining a data base of all employees who have been trained in the use of AEDs and updating the data base on an as-needed basis

5.2 **Medical Director, Occupational Medicine Services**

The Center medical director of the Occupational Medicine Services shall function in keeping with the statement of work for the Medical Services contract.

Program responsibilities include the following and shall be adhered to:

- Reviewing the AED policy on a regular basis and making recommendations to reflect programmatic changes
- Ensuring compliance with the program’s processes and protocols
- Providing verbal notification to the AED Program lead following AED usage for emergency response
- Providing written followup notification, including case outcome, to the AED Program lead regarding AED usage

5.3 **Chief of Safety and Health Division (SHeD)**

The Chief of SHeD shall assign a member of SHeD to perform monthly documented maintenance checks on all AEDs at Lewis Field not assigned to other organizations. A similar arrangement shall be made for the AEDs assigned to be located at PBS.

5.4 **Office of Protective Services (PSO)**

The Chief of PSO shall ensure that monthly documented maintenance checks of the AEDs located in the security vehicles at GRC be performed. This policy also applies to the AEDs contained in the mobile units of Plant Protection at PBS.

Notify Medical Services and SHeD when an AED had been put into use.

5.5 **Supervisors**

The supervisors at GRC and PBS shall

- Support the implementation of the AED policy at their respective locations
- Support employees who are involved in the AED Program
- Report equipment malfunctions to the AED Program lead

5.6 **Employees Serving as Automated External Defibrillator (AED) Responders**

The employees at Lewis Field and PBS shall participate in all required training as required in this policy.

5.7 **Automated External Defibrillator (AED) Program Response Teams**

- AED Program response team members are responsible for completing the designated training, participating in drills, and following the established processes and protocols.
- Personnel recommended as team members to support the AED Program are physicians, nurses, Fitness Center staff, and emergency medical technicians.

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6.0 REQUIREMENTS

6.1 Training Requirements for Trained Automated External Defibrillator (AED) Responders (NPR 1800.1C)

- All trained AED responders are required to successfully complete AED and Basic Life Support or CPR training. The two recommended training courses are offered through the AHA and the American Red Cross.
- The AHA offers both Heartsaver AED and Basic Life Support courses. Certification through the AHA is valid for 2 years.
- The American Red Cross offers a CPR/AED course. Certification through the Red Cross is valid for 1 year.
- Team members shall maintain their certification at the intervals required by the AHA or the American Red Cross. When State training requirements differ from NASA recommendations, the more stringent requirements will apply.
- This is a voluntary assignment and is open to government and support service contractor personnel.
- Online drills are conducted to provide AED Program response teams and trained AED responders with practice using the established emergency procedures and response evaluations.

6.1 SATERN records can be reviewed to verify training.

6.2 Location of Automated External Defibrillators (AEDs) (NPR 1800.1C)

- AEDs shall be located or utilized in areas with high population density and in work areas with a potential risk of sudden cardiac death.
- The AEDs shall be placed in a readily accessible and secure location.
- The written AED process and protocols and the operator's manual and supplies shall be placed with the AED unit.

6.2 Verification: Field inspections

6.3 Maintenance of Automated External Defibrillators (AEDs) (NPR 1800.1C)

6.3.1 Periodic

- Monthly performance and logistics checks are performed on authorized AEDs throughout the Center. The AED supplier alerts the SHed specialist performing monthly inspections as to when they are due.
- The goal of these inspections is to ensure that the AED batteries are functioning properly, that the AED pads and batteries match the expiration date contained in the data base, and that cabinet alarms, as appropriate, are functioning as intended.
- The SHed specialist performing the AED monthly checks shall update the online AED maintenance data base managed by the AED supplier. As a result of this inspection, any expired AED equipment, such as AED pads or batteries, shall be ordered through the AED supplier.

6.3.2 Post-incident

- After every emergency response, equipment shall be replaced to its designated location, supplies restocked, and a written checklist completed. The AED supplier's maintenance data base will be updated and suppliers ordered as required.
- The medical director must be notified immediately if there are any issues associated with the proper operation of the authorized AEDs at the Center.

6.3 Verification Review of maintenance documents.

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6.4 Listing of Automated External Defibrillator (AED) Locations *(NPR 1800.1C)*

The actual AED locations are not contained within this document but can be found at the following Web site:
<http://smad-ext.grc.nasa.gov/shed/qsh.shtml>

6.5 Procurement and Installation of Automated External Defibrillators (AEDs) *(NPR 1800.1C)*

6.5.1 Glenn Research Center

Any organization that desires to purchase an AED for installation at GRC using organizational funds must first contact the AED Program lead to initiate the purchasing process. The organization shall factor in the costs of purchasing an AED cabinet, of installing the cabinet, and of hardwiring the cabinet so that when accessed an audible alarm is announced at emergency dispatch.

6.5.2 Plum Brook Station

Any organization that desires to purchase an AED for installation at PBS using organizational funds shall first contact the AED Program lead to initiate the purchasing process. The organization shall also factor in the cost of purchasing an AED cabinet. The AED cabinets at PBS will be locally alarmed and when accessed will provide an audible alarm that will alert building occupants that an AED cabinet has been accessed.

6.5.3 Mobile Use

Any organization that resides at GRC or PBS and desires to purchase an AED for mobile use, such as in a Plant Protection or in a security force vehicle, shall contact the AED Program lead to initiate the purchase.

7.0 RECORDS

All records related to this program shall be maintained by the program lead in accordance with BMS requirements.

The Medical Services contractor shall maintain written records of training for AED Program response team members and drills that are conducted. All documentation on training and drills shall be retained for 5 years.

- Organizational Development and Training Office (civil service personnel)
- Employee's management (contractor personnel)

7.1 Automated External Defibrillator (AED) Responders

- Training of AED responders is tracked and recorded in the Agency online data base, System for Administration, Training, and Education Resources for NASA (SATERN).

7.2 Maintenance and Performance (Malfunctioning and Other Abnormalities) Records for Automated External Defibrillators (AEDs)

- SHed: Maintenance and performance records are retained for 5 years.

7.3 Incident Response Reports (When Automated External Defibrillator (AED) Involved)

- Written documentation shall be completed immediately following each response involving the use of the AED.
- The GRC medical director shall be notified verbally immediately following an incident and should receive the written documentation prior to the close of business on the day of the incident, but no later than the beginning of the next business day.
- The GRC medical director shall retain the original written response and send a copy to the Chief of SHed.
- The GRC medical director is also responsible for verbally notifying the AED Program lead regarding AED usage for emergency response and then forwarding all written documentation, including case outcome, to the program lead within one business day of the incident.
- Documentation of emergency responses must be retained indefinitely.

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8.0 REFERENCES

Document number	Document name
NPD 1800.2A	NASA Occupational Health Program
NPD 1820.1	NASA Environmental Health Program
NPR 8621.1	NASA Procedural Requirements for Mishap Reporting, Investigating, and Recordkeeping
NPD 8700.1	NASA Policy for Safety and Mission Success
NPD 8710.1	Emergency Preparedness Program
NPR 1800.1	NASA Occupational Health Program Procedures
NPR 8715.1	NASA Safety and Health Handbook Occupational Safety and Health Programs
NPR 8715.3	NASA Safety Manual
ORC 5101.02	Authority of Director of Job and Family Services
ORC 2305.23	Liability for Emergency Care
	Medtronic Lifepak CPR Plus Manual, Medtronic Emergency Response Systems
	American Red Cross First Aid/CPR/AED Program Training Guide
	Federal Cardiac Arrest Survival Act (CASA)

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APPENDIX A.—DEFINITIONS AND ACRONYMS

American Heart Association (AHA)

Automated external defibrillator (AED).—A device used to assist in the attempt to save the life of someone in sudden cardiac arrest

Business management system (BMS)

Cardiac Arrest Survival Act (CASA)

Cardiopulmonary resuscitation (CPR).—Life-saving procedure consisting of mouth-to-mouth respiration and chest compression. CPR allows oxygenated blood to circulate to vital organs, such as the brain and heart. CPR can keep a person alive in the short term until more advanced procedures (such as defibrillation) can be initiated.

Contracting officer's technical representative (COTR)

Department of Health and Human Services (HHS)

Emergency medical system (EMS)

Food and Drug Administration (FDA)

General Services Administration (GSA)

Glenn Research Center (GRC)

NASA Policy Directive (NPD)

NASA Procedural Requirements (NPR)

Office of the Chief, Health and Medical Officer (OCHMO)

Office of Protective Services (PSO)

Ohio Revised Code (ORC)

Plum Brook Station (PBS)

Public access defibrillator (PAD)

Safety and Health Division (SHeD)

System for Administration, Training, and Education Resources for NASA (SATERN)

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