

**UNIVERSITY OF ROCHESTER
ENVIRONMENTAL HEALTH & SAFETY**

Procedure No.: EM001	Approved by: Emergency Operations Steering Committee
Title: Public Automatic Defibrillator Inspection, Maintenance and Testing Procedure	Date: 1/25/16
Revision No.: 1	Page 1 of 11
Prepared by: Mark Cavanaugh	

I. PURPOSE

This procedure establishes the guidelines for inspecting, maintaining, and testing public Automatic External Defibrillators (AED) at the University of Rochester (UR), including Strong Memorial Hospital and its off-site locations (excludes in-patient units).

This procedure also identifies the process to follow if the AED is used.

II. PERSONNEL AFFECTED

This program applies to all UR properties, and UR sites where the University (including the clinical enterprise), and to those who have been designated by their department to be responsible for their AEDs.

III. DEFINITIONS

AED - An Automated External Defibrillator means a medical device, approved by the United States Food and Drug Administration, that:

(1) is capable of recognizing the presence or absence in a patient of ventricular fibrillation and rapid ventricular tachycardia;

(2) is capable of determining, without intervention by an operator, whether defibrillation should be performed on the patient;

(3) upon determining that defibrillation should be performed, automatically charges and requests delivery of an electrical impulse to the patient's heart; and

(4) then, upon action by an operator, delivers an appropriate electrical impulse to the patient's heart to perform defibrillation.

AED Locations – New York State Public Health Law 225 requires an AED in each public assembly with an occupancy capacity of at least 1,000 people and all stadiums, ballparks, gymnasiums, field houses, arenas, civic centers or similar sporting events, and concert recital halls, theaters, indoor or outdoor amphitheater or other auditoriums used for musical renditions or concerts.

**UNIVERSITY OF ROCHESTER
ENVIRONMENTAL HEALTH & SAFETY**

Procedure No.: EM001	Approved by: Emergency Operations Steering Committee
Title: Public Automatic Defibrillator Inspection, Maintenance and Testing Procedure	Date: 1/25/16
Revision No.: 1	Page 2 of 11
Prepared by: Mark Cavanaugh	

All other building managers or departments on campus have the option to install a public access AEDs and once an AED is installed, the building occupants/department shall be responsible for the unit and shall follow this public access AED policy.

AEDs should be located in public spaces, near a campus phone in a wall-mounted secured cabinet to prevent tampering. AEDs should be easily accessible and allow for facilitation of periodic inspections. It is suggested AED cabinets should be equipped with support equipment including: two pairs of disposable gloves, two disposable facemasks, extra electrode pads, safety razor, absorbent towels or trauma pads, a pair of scissors, a biohazard bag for infectious waste disposal, an AED incident report form and pen. In locations where children are likely to be present, there shall also be pediatric-sized electrode pads available.

The public access defibrillation provider (the department or area that purchased the AED) shall post a sign or notice at the main entrance to the facility or building in which the AED is stored, indicating the location where any such AED is stored or maintained in such building or facility on a regular basis. (See Attachment B for sample signs.)

IV. RESPONSIBILITIES

A. Departments

1. Designate a department AED Coordinator;
2. Purchase, install and maintain AEDs;
3. Have a written protocol for use of the AED that includes training requirements for AED users; a process to immediately notify Public Safety or 911; a process for identification of the location of the AED units; a process for routine inspection of the AED units as well as regular maintenance requirements as per manufactures recommendation;
4. Coordinate training for employees, as appropriate;
5. Oversee training of personnel associated with the program;
6. Place an AED back in service after use;
7. Train personnel on the location of AEDs and site specific Medical Response Plan;
8. Maintain records of maintenance and testing;
9. Retain copies of all AED training records as well as equipment maintenance and testing logs.

**UNIVERSITY OF ROCHESTER
ENVIRONMENTAL HEALTH & SAFETY**

Procedure No.: EM001	Approved by: Emergency Operations Steering Committee
Title: Public Automatic Defibrillator Inspection, Maintenance and Testing Procedure	Date: 1/25/16
Revision No.: 1	Page 3 of 11
Prepared by: Mark Cavanaugh	

B. AED Coordinator

1. Oversee the placement and maintenance of public access AED equipment;
2. Coordinate the inspection and maintenance of the AEDs under their area of responsibility;
3. Verify maintenance records and testing are being conducted and documented regularly;
4. Replace deteriorating, missing or used support equipment;
5. Complete the Public Access Defibrillation Event Form if the public access defibrillator was used. The form can be found at:
https://www.mlrems.org/media/7632/pad-eventformfillable2008_new.pdf.

C. Owner, Operators and Administrators

1. Training shall be provided to each AED user and meet the requirements of New York State Department of Public Health Section 225-5-b (b). Whenever places of public assembly are used for public or private sponsored events the owner, operators and administrators shall ensure the presence of at least one staff person who is trained.

V. GENERAL PROCEDURES

Public AED devices on University properties shall be recorded on a list maintained by EH&S. Any new device installations are required to include a notification to EH&S of the building, floor, nearest room number, and department responsible for installation, testing, and maintenance of the device. You will also be required to provide the manufacturers name, model and serial number to EH&S. EH&S will then notify Monroe-Livingston Regional EMS Council of all new locations.

AED devices shall have signage at the building exterior, at the main entry door, indicating the location in the building. If multiple devices are located in the building, only the device nearest to the building entrance should be listed. The AED sign shall be affixed to the glass on the active leaf of double doors or of the central door set in buildings with a series of entry doors. This signage shall be affixed to the interior of the door, on the glass, at approximately handle height.

The sign shall include the international symbol for the AED and the text, "AED, Automatic External Defibrillator INSIDE" - this part of the sign shall be 5 inches wide by

**UNIVERSITY OF ROCHESTER
ENVIRONMENTAL HEALTH & SAFETY**

Procedure No.: EM001	Approved by: Emergency Operations Steering Committee
Title: Public Automatic Defibrillator Inspection, Maintenance and Testing Procedure	Date: 1/25/16
Revision No.: 1	Page 4 of 11
Prepared by: Mark Cavanaugh	

3 inches tall. Below this will include a brief, one or two-line description of the location for the device (see examples on the attached sheet). Orders for new signage shall be placed with the University sign shop; they will be responsible for fabrication & mounting of the signs on the designated entry doors. If a variation from the standard text or mounting is required, the sign shop shall contact Campus Planning for approval to proceed.

AED Coordinator Procedures

- A. The AED performs a self-test daily.
- B. The AED's extensive automatic self test feature eliminates the need for any manual calibration.
- C. Maintenance and testing of all AED units shall be conducted in accordance with the manufacturer's guidelines. At a minimum AEDs will be visually inspected at a frequency determined by the department, you may use attachment A for documentation.
- D. A green indicator means the AED is ready for service.
- E. If the indicator is red with a black X, the AED requires maintenance and is not ready for use. Contact Strong Clinical Engineering for servicing.
- F. If the AED is located in a secured cabinet, verify the cabinet alarm battery (9v Alkaline) is installed and replace it annually.
- G. Open the soft-case by un-snapping the two closures on each side of the unit.
- H. Examine AED case and cover for foreign substances, damages or cracks.
- I. Inspect the status indicator. If a red X is visible contact Clinical Engineering.
- J. Pads are located inside the cover of the unit.
- K. Make sure pads are pre-connected to the AED.
- L. Check the expiration dates. Verify the pads have not passed the expiration date (expiration date noted on foil pouch).
- M. Inspect package and make sure it is unopened.
- N. If package is opened or past its expiration date, replace the pads (contact the vendor where you purchased the AED) or pull the unit out of service. Place a sign on the AED cabinet or location where the AED was located stating it's out of service.
- O. Spare pads are not pre-connected (found in the case's back pouch)
- P. Verify presence of one set of spare adult pads and one set of pediatric pads (if applicable) are available.

**UNIVERSITY OF ROCHESTER
ENVIRONMENTAL HEALTH & SAFETY**

Procedure No.: EM001	Approved by: Emergency Operations Steering Committee
Title: Public Automatic Defibrillator Inspection, Maintenance and Testing Procedure	Date: 1/25/16
Revision No.: 1	Page 5 of 11
Prepared by: Mark Cavanaugh	

- Q. After each use, clean and disinfect the unit with a soft, damp cloth using 90% isopropyl alcohol, or soap and water, or chlorine bleach and water mixture.
- R. Do not immerse any part of the unit in water.
- S. Do not use ketones (MEK, acetone, etc.) to clean the unit
- T. Avoid using abrasives (i.e. paper towels) to clean the display window.
- U. Do not sterilize the device.
- V. After using an AED, follow the manufacturer’s instructions prior to placing the AED back into service.
- W. After using an AED, fill out a Monroe-Livingston Regional Public Access Defibrillation Event Form found at:
https://www.mlrems.org/media/7632/pad-eventformfillable2008_new.pdf.

VI. REFERENCES

New York State Public Health Law 3000 (b)
 New York State Public Health Law 225-5(b)
 New York State Education Law 917
 General Business Law 627-A
 Chapter 552 of the Laws of 1998 authorizing Public Access Defibrillation

VII. APPENDICES/FORMS

Appendix A – Samples of AED Monthly Inspection Forms
 Appendix B – AED Sign Examples

VIII. REVISION HISTORY

Date	Revision No.	Description
7/1/15	New	New procedure on AED program
1/25/16	1	Update to procedure wording and clarified responsibilities and process

**UNIVERSITY OF ROCHESTER
ENVIRONMENTAL HEALTH & SAFETY**

Procedure No.: EM001	Approved by: Emergency Operations Steering Committee
Title: Public Automatic Defibrillator Inspection, Maintenance and Testing Procedure	Date: 1/25/16
Revision No.: 1	Page 6 of 11
Prepared by: Mark Cavanaugh	

APPENDIX A
Samples of AED Inspection Forms

AED Location (Bldg name & location)	
Inspected by:	Date:

Use the following maintenance checklist when you check your unit. Check the following as pass or fail. Any item failing inspection needs to be immediately corrected or the unit taken out of service. If an item does not pertain to your AED, please simply mark "N/A".

Inspection Criteria	Pass	Fail	Comments
If AED is in a secure cabinet, does alarm on AED box operate correctly? If not, replace cabinet battery. Replace operable batteries if they have been placed in service for over 1 year.			
Is the indicator light showing that the unit is ready for use? (No red X)			
Is the unit clean, undamaged, and free of excessive wear?			
Are there any cracks or loose parts in the housing?			
Verify the electrodes are within their expiration date			
Verify electrodes are connected to the unit and sealed in their package. Replace if expired			
Does the unit have one set of spare adult pads and one set of pediatric pads (if required)?			
Are all cables free of cracks, cuts and exposed or broken wires?			
Are AED batteries within expiration date? Contact Clinical Engineering if expired			

**UNIVERSITY OF ROCHESTER
ENVIRONMENTAL HEALTH & SAFETY**

Procedure No.: EM001	Approved by: Emergency Operations Steering Committee
Title: Public Automatic Defibrillator Inspection, Maintenance and Testing Procedure	Date: 1/25/16
Revision No.: 1	Page 7 of 11
Prepared by: Mark Cavanaugh	

STRONG MEMORIAL HOSPITAL
PHILIPS FR2 AUTOMATIC EXTERNAL DEFIBRILLATOR (AED) DAILY CHECK LOG
SMH 388A

Unit/Location or AED: _____ Month and Year: _____
 AED Pad expiration date: _____ replace with new pads upon expiration

Date	Daily						Only if Indicated				Signature
	Indicator: Solid Black Hourglass®		*Extra Pads Present (✓ Exp.)		**Spare Battery Present		***Battery Insertion Self-Test			Battery Changed	
	Y	N	Y	N	Y	N	OK	Low	N/A	✓ done	
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2											
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Note: Please see the back of this sheet for additional information
Rev 4/14

FACE; PUNCHING AS SHOWN

**UNIVERSITY OF ROCHESTER
ENVIRONMENTAL HEALTH & SAFETY**

Procedure No.: EM001	Approved by: Emergency Operations Steering Committee
Title: Public Automatic Defibrillator Inspection, Maintenance and Testing Procedure	Date: 1/25/16
Revision No.: 1	Page 8 of 11
Prepared by: Mark Cavanaugh	

STRONG MEMORIAL HOSPITAL

PHILIPS FR2 AUTOMATIC EXTERNAL
DEFIBRILLATOR (AED) DAILY CHECK LOG

SMH 388A

*Area should carry the appropriate sized AED pads to meet the patient population served. There should be a minimum of 2 sets of each size pad. Check AED pad expiration date and replace as needed. Do not store AED with pads connected.

**If spare battery is missing or utilized, a new spare battery must be procured immediately.

***Battery Insertion Self-Test is completed by taking the battery out of the AED for 5 seconds and putting it back in. Complete when:

- The indicator is showing a Red "X"
- The battery has been changed
- The AED has been used

After each use:

- Complete a battery self-check by taking it out for 5 seconds and putting it back in
- Clean and check connections
- Replace data card if used
- Make sure AED pads are not connected
- Check to make sure data card tray is installed even if there is no data card

The AED should be inspected for its integrity daily. If cracked or damaged, take out of use and follow hospital policy for tagging and contacting clinical engineering.

For ordering additional AED pads from purchasing, please use the PMM #s below:

AED Model	Adult Pads	Pediatric Pads	Notes:
FR2	PMM # 195998	PMM # 195999	Uses different pads for adult & pediatrics

For ordering additional AED pads through another source, please see the order #s below:

		Pads		
		Adult	Pediatric	Battery
AED	FR2	989803158211	M3870A	M3863A

B-14
8/20/08 10:22

**UNIVERSITY OF ROCHESTER
ENVIRONMENTAL HEALTH & SAFETY**

Procedure No.: EM001	Approved by: Emergency Operations Steering Committee
Title: Public Automatic Defibrillator Inspection, Maintenance and Testing Procedure	Date: 1/25/16
Revision No.: 1	Page 9 of 11
Prepared by: Mark Cavanaugh	

STRONG MEMORIAL HOSPITAL
PHILIPS FRX AND ONSITE (HeartStart)
AUTOMATIC EXTERNAL DEFIBRILLATOR (AED)
DAILY CHECK LOG
SMH 388B

Unit/Location or AED: _____ Month and Year: _____

AED Pad expiration date: _____ replace with new pads upon expiration

Date	Daily								Only if Indicated			Signature	
	*Indicator: Flashing Green Light		**AED Pads Connected		**Extra Pads Present (√ Exp.)		***Spare Battery Present		***Battery Insertion Self-Test		Battery Changed		
	Y	N	Y	N	Y	N	Y	N	OK	Low	N/A		√done
1													
2													
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Note: Please see the back of this sheet for additional information
Rev 12/13

**UNIVERSITY OF ROCHESTER
ENVIRONMENTAL HEALTH & SAFETY**

Procedure No.: EM001	Approved by: Emergency Operations Steering Committee
Title: Public Automatic Defibrillator Inspection, Maintenance and Testing Procedure	Date: 1/25/16
Revision No.: 1	Page 10 of 11
Prepared by: Mark Cavanaugh	

STRONG MEMORIAL HOSPITAL
PHILIPS FRX AND ONSITE (HeartStart)
AUTOMATIC EXTERNAL DEFIBRILLATOR (AED)
DAILY CHECK LOG
SMH 388B

* If the light is off, the HeartStart is chirping, and the i-button is flashing: A self-test error has occurred, there is a problem with the pads or the battery power is low. Press the i-button for instructions. If unable to resolve, contact clinical engineering.

**AED pads must be connected to the AED at all times. Must have two (2) sets of adhesive pads at all times. If onsite AED, leave adult pads connected.

***If spare battery is missing or utilized, a new spare battery must be procured immediately. A Battery Insertion Self-Test is completed by taking the battery out of the AED for 5 seconds and putting it back in. Only complete when:

- The battery has been changed (automatic)
- The AED has been used

After each AED use:

- Check for integrity and clean with hospital recommended agent.
- Replace single-use AED pads. Ensure they are plugged into the AED. Record pads expiration date for the newly installed pads cartridge.
- Complete a battery insertion self-test. Do not push the green on/off button. The AED will go into Standby mode. Ensure the indicator light is flashing green.

The AED should be inspected for its integrity daily. If cracked or damaged, take out of use and follow hospital policy for tagging and contacting clinical engineering.

For ordering additional AED pads from purchasing, please use the PMM #s below:

AED Model	Adult Pads	Pediatric Pads	Notes:
FRx	PMM # 195997		Uses a universal pad for adult & pediatrics
OnSite	PMM # 196000	PMM # 196001	Uses different pads for adult & Pediatrics

For ordering additional AED pads through another source, please see the order list below:

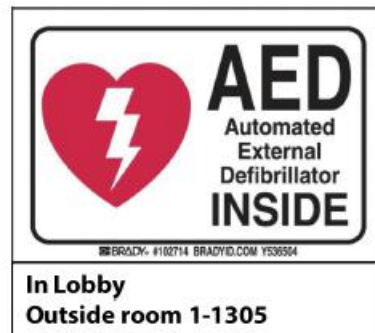
AED Model	Pads		
	Adult	Pediatric	Battery
FRx	989803139261		M5070A
OnSite	M5071A	M5072A	M5070A

**UNIVERSITY OF ROCHESTER
ENVIRONMENTAL HEALTH & SAFETY**

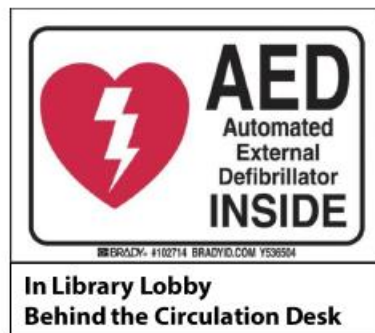
Procedure No.: EM001	Approved by: Emergency Operations Steering Committee
Title: Public Automatic Defibrillator Inspection, Maintenance and Testing Procedure	Date: 1/25/16
Revision No.: 1	Page 11 of 11
Prepared by: Mark Cavanaugh	

APPENDIX B

AED Signage Examples



Medical Center Signage



University / General Signage