



**Purpose:** The purpose of the Automated External Defibrillator policy is to reduce deaths due to sudden cardiac arrest through the implementation of access to AEDs in key campus buildings and training, and to meet all applicable federal, state, and local regulations.

**Background:** Per the Pennsylvania Health Department, heart disease is the leading cause of death in Pennsylvania, resulting 31,353 deaths from diseases of the heart in 2014. Sudden cardiac arrest is an often-fatal form of heart disease. For each minute that passes in cardiac arrest without return to a normal rhythm, a person's chance of survival drops 10 percent. Ventricular fibrillation, a frequent cause of sudden cardiac arrest, is a condition in which the heart's electrical activity becomes disordered. When this happens, the heart's lower (pumping) chambers contract in a rapid, unsynchronized way. (The ventricles "flutter" rather than beat.) The heart pumps little or no blood to the brain and other vital organs. Early cardiopulmonary resuscitation (CPR) and rapid defibrillation are the two major contributors to survival of adult victims of sudden cardiac arrest. Automatic external defibrillation is one of the most promising methods for achieving rapid defibrillation and potentially decreasing mortality due to sudden cardiac arrest. The time to the first defibrillation shock is the most critical factor in determining survival rates for sudden cardiac arrest (SCA). Survival rates decrease by about 10% for every passing minute. On average, it takes EMS teams 6-12 minutes to arrive.

**Regulations:** Pennsylvania's Public Access Automated External Defibrillator Guidelines summarize the Pennsylvania AED Law or [AED Good Samaritan Law](#). Those persons not regulated under the Emergency Medical Services (EMS) Act and who acquire and maintain an AED for the planned use by one or more individuals are protected from civil liability if the AED is used providing the following criteria is met:

- Expected AED user or users receive training in the use of AEDs in a course provided by the American National Red Cross or the American Heart Association, or through an equivalent course of instruction approved by the PA Department of Health.
- AEDs maintained and tested per the manufacturer's operational guidelines.
- Instruction provided to the user of the AED to utilize available means to immediately contact and activate the EMS system.
- Appropriate data or information made available to EMS personnel or other health care providers as requested.

*A lay person who receives training* and uses an AED in good faith in an emergency will not be liable for damages or harm done to the individual receiving the AED treatment, unless the harm is the result of acts or omissions by the individual using the AED, that are intentionally designed to harm or constitute grossly negligent acts or omissions.

*A lay person, who does not receive the training* and uses an AED in good faith in an emergency, will not be liable for damages or harm done to the individual receiving the



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AED treatment, unless the harm is caused by the AED user acting contrary to how a reasonably prudent individual would act under the same or similar circumstances.

**Responsibilities:**

**Medical Advisor (Wellness Center Doctor):** a qualified physician who prescribes equipment purchases, advises the Program Coordinator, and reviews any events using the AED.

**Program Coordinator (Environmental Health & Safety/Risk Manager and Emergency Management Coordinator):** oversees the AED program and

- Develops and maintains a written AED program.
- Coordinates annual training for AED users.
- Orders and coordinates the placement of AEDs.
- Ensures AED units are properly maintained and tested per manufacturer's instructions.
- Keeps AED locations and checklist current.
- Orders supplies as needed.
- Provides written notification to the local emergency medical services about the purchase of AED units, the types acquired, and locations.
- Identifies and communicates relevant federal, state and local regulations.
- Maintains all documentation including training records and maintenance and testing records.
- Notifies Medical Advisor of use of any AED on campus.
- Reviews program annually.

**AED User:** trained or untrained lay person

- Calls "911" and Campus Safety, 610-409-3333 or ext 3333 to report the emergency.
- Follows emergency procedures. (Appendix A)
- If trained, keeps certification up-to-date.

**Maintenance:**

Philips Heartstart FRx, Heartstart Onsite, and Heartstream FR2 Defibrillators – performs an automatic self-test every day and a battery insertion self-test run whenever a battery is installed in the device. On occasion, the unit may emit a "chirp" or a series of "3 chirps –

- A single "chirp" indicates the battery or pads may need replacement.
- Three "chirps" indicates an internal issue.

In either case, contact Campus Safety immediately.

Medtronic Lifepak CR Plus Defibrillators - performs an automatic self-test once a week and every time it's turned on



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To further ensure proper operation of the unit, quarterly checks will be performed by designated personnel in the building containing the AED or by Campus Safety. (Appendix B and C) Quarterly checks include the following:

- Placement – visible, unobstructed and near phone.
- Battery installed.
- Status Indicator – Unit Ready for Use
  - FRx, Onsite - green Ready light blinking
  - FR2 – flashing black hourglass
  - Medtronic – the word “OK” visible
- Unit clean, no damage or cracks.
- Alarm sounds when cabinet door ajar.
- Pads in place and within expiration date.
- Infant/child key in place, if applicable
- Gloves, razor, antiseptic wipes, and CPR mask/barrier in place.

**Training:** Expected AED user or users receive training in the use of AEDs in a course provided by the American National Red Cross or the American Heart Association, or through an equivalent course of instruction approved by the PA Department of Health.

**Recordkeeping:** The Program Coordinator maintains all documents related to the use of AEDs including training, quarterly checks, and testing records for 3 years.



## **Appendix A - Emergency Procedures for Sudden Cardiac Arrest (SCA)**

### **CHECK and CALL**

1. **CHECK** the scene, then **CHECK** the person.
2. Tap on the shoulder and shout, “Are you okay?”
3. **Call “911”** and Campus Safety @ 610-409- 3333 or ext 3333 to report the incident.
4. If person unresponsive and not breathing or only gasping, **BEGIN CHEST COMPRESSIONS.**

### **GIVE CHEST COMPRESSIONS**

1. Remove all clothing from chest area.
2. Place the heel of one hand on the center of the chest.
3. Place the heel of the other hand on top of the first hand, lacing your fingers together.
4. Keep your arms straight - position your shoulders directly over your hands.
5. Push hard, push fast.
  - Compress the chest at least 2 inches.
  - Compress at least 100 - 120 times per minute.
  - Let the chest rise completely before pushing down again.
6. Continue the chest compressions

### **DO NOT STOP except in one of these situations:**

- You see an obvious sign of life (breathing)
- Another trained responder arrives and takes over.
- EMS personnel arrive and take over.
- You are too exhausted to continue.
- An AED is ready to use.
- The scene becomes unsafe.

### **USE OF AED AUTOMATED EXTERNAL DEFIBRILLATOR**

1. Turn on AED
2. Wipe chest dry –remove clothing and shave chest if necessary.
3. Attach pads.
4. Plug in connector, if necessary.
5. Make sure no one is touching the individual.
6. Push the “Analyze” button, if necessary.
7. If a shock advised, push the “Shock” button. If no shock is advised, continue with chest compressions.
8. Immediately perform compressions and follow AED prompts.

Notify the Program Coordinator of the use of the AED so that replacement pads may be obtained.

(Portions taken from the “Hands-Only CPR” American Red Cross document)



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**Appendix B - AED Locations**

<b>Building</b>	<b>Location</b>	<b>Type of AED</b>
Bakes Center	Basement - Across from Athletic Training Room	Medtronic Lifepak CR Plus
Bakes Center	Field House by Campus Safety call button	Philips Heartstart Onsite
Bakes Center	1 <sup>st</sup> floor – Outside Fitness Center	Medtronic Lifepak CR Plus
Bakes Center	Athletic Training room – portable, used on fields	
Bakes Center	Natorium (pool) – right of white board	Philips Heartstart FRx
Berman	1 <sup>st</sup> Floor – Reception Desk	Philips Heartstart FRx
Bomberger Hall	1 <sup>st</sup> Floor – Lobby outside Career Services	Philips Heartstart FRx
BPS	Main entrance of Paisley Hall by the door	Philips Heartstart FRx
BWC	Wilkinson Hall common room	Philips Heartstart FRx
Corson Hall	1 <sup>st</sup> Floor – outside Student Financial Services Office	Philips Heartstart FRx
Facilities Services	Shop – under First Aid Kit	Philips Heartstart FRx
IDC	1 <sup>st</sup> floor – main entrance	Philips Heartstart Onsite
Kaleidoscope	By box office	Philips Heartstream FR2
Musser Hall	Main Entrance - in vestibule	Philips Heartstart FRx
Myrin	Main Entrance – to the right of the Main inside doors	Philips Heartstart FRx
New Hall	Main Entrance – in lobby	Philips Heartstart FRx
Olin Hall	Main Entrance – Wismer plaza side	Philips Heartstart FRx
Pfahler Hall	1 <sup>st</sup> floor – North entrance (BWC/Reimert side)	Philips Heartstart FRx
Reimert Hall	Next to the Assistant Director Apartment	Philips Heartstart FRx
Richter/North Hall	Main entrance	Philips Heartstart FRx
Ritter Hall	Parking lot entrance	Philips Heartstart FRx
Thomas Hall	Main Entrance – lobby	Philips Heartstart FRx
Wellness & Counseling Center	Main Entrance	Philips Heartstart FRx
Wismer	Campus Safety Office	Philips Heartstart Onsite
Wismer	Lower level –near Dining Services offices	Philips Heartstart FRx
UCEMS Vehicle	In vehicle/Brodbeck office during summer	Philips Heartstart



**Appendix C - Quarterly Checklist**

The defibrillator performs a self-test every day or weekly. In addition, a battery insertion self-test is run whenever a battery is installed in the device. Please do not disconnect the pads from the AED while performing quarterly checks as the AED will chirp and i-button will start flashing (for the Philips AEDs).

**Date** \_\_\_\_\_ **Location** \_\_\_\_\_

**Inspector Name** \_\_\_\_\_ **Unit Serial Number** \_\_\_\_\_

Items to Check	Yes or No	If no, Corrective Action Required	Date Corrected
Placement – visible, unobstructed and near phone		Remove obstructions.	
Battery installed		Install new battery.	
<b>FRx and Onsite</b> - Service indicator light (green Ready light) blinking		<ul style="list-style-type: none"> <li>- If light solid, FRx is in use or running a self-test. Wait for self-test to complete.</li> <li>- If light off, FRx is chirping and i-button flashing, press i-button for instructions.</li> <li>- If light off, FRx is not chirping and i-button not flashing, the battery is depleted or AED needs repair. Insert new battery and run self-test. If test fails, contact dealer for repair.</li> </ul>	
<b>FR2</b> Status Indicator – flashing black hourglass present		If flashing black hourglass absent, remove and reinstall battery to run selftest. <ul style="list-style-type: none"> <li>- If flashing black hourglass present, unit okay.</li> <li>- If still no hourglass, install new battery and run selftest. If no hourglass, contact manufacturer.</li> </ul>	
<b>Medtronic</b> Status Indicator – word “OK” visible		<ul style="list-style-type: none"> <li>- If battery Charge Pak symbol present, replace battery pak</li> <li>- Attention indicator symbol (red triangle w/exclamation mark inside) present – 6 shocks or 42 minutes remain in battery. Replace battery pack.</li> <li>- Red wrench symbol present – contact manufacturer</li> </ul>	
Unit clean, no damage or cracks		Clean outside with damp, soapy cloth or rubbing alcohol.	
Alarm sounds when cabinet door ajar		Insert key and turn to correct position for alarm to sound.	
Pads in place and within expiration date.		If pads missing or expired, contact the Program Coordinator for replacement.	
Infant/child key in place		If missing, contact the Program Coordinator for replacement.	
Gloves, razor, antiseptic wipes, and CPR mask/barrier in place		If any supplies are missing, contact the Program Coordinator for replacement.	

Return completed form to the Program Coordinator, Carol P. McMillin, EH/Risk Manager.