

Northwestern

Automated External
Defibrillators

Environmental Health and Safety

Table of Contents

I. Purpose	2
II. Scope.....	2
III. Definitions.....	2
IV. Responsibilities	2
A. Environmental Health and Safety (EHS).....	2
B. Department Head or Unit Manager.....	3
C. Department AED Coordinator.....	3
D. Emergency Medical Services (EMS) System Resource Hospital	3
V. Selection and Approval of New AEDs	3
VI. AED Unit Maintenance.....	3
VII. Post-AED Event Procedures	4
VIII. Certification and Training.....	4
IX. Regulatory Authority and Related Information	4
X. Contact.....	4
Appendix 1 – New AED Request Form.....	5
Appendix 2 – Existing AED Certification Form	6
Appendix 3 – AED Inspection Form.....	7

I. Purpose

Automated external defibrillators (AED) enable responders to deliver early defibrillation to victims in the first critical moments after a sudden cardiac arrest. This program provides guidance for the selection, placement, use, and maintenance of AEDs used in Northwestern facilities, vehicles, and public areas.

II. Scope

The Illinois Physical Fitness Facility Medical Emergency Preparedness Act (210 ILCS 74) requires indoor and outdoor physical fitness facilities that serve a population of more than 100 people to have an AED on the facility premises. Physical fitness facilities (i.e., swimming pool, stadium, athletic field, stadium, soccer field, basketball court, volleyball court, baseball diamond, track and field facility, tennis court, or similar facility) that are covered under this Act include ones that are owned or operated by a public or private college or university and are supervised by one or more persons, other than maintenance or security personnel, who are employed by the college or university for the purpose of directly supervising the physical fitness activities taking place at any of these indoor or outdoor facilities.

Academic departments and administrative support facilities that voluntarily choose to purchase and install an AED must obtain approval from the Environmental Health and Safety (EHS) and follow the guidelines established in this program.

III. Definitions

- A. **Automated external defibrillator** – A medical heart monitor and defibrillator that:
 - i. Has received approval from the US Food and Drug Administration;
 - ii. Is capable of recognizing the presence or absence of ventricular fibrillation and rapid tachycardia;
 - iii. Is capable of determining, without intervention by an operator, whether defibrillation should be performed;
 - iv. Upon determining that defibrillation should be performed, either automatically charges and delivers an electrical impulse to the individual, or charges and delivers an electrical impulse at the command of the operator; and
 - v. In the case of a defibrillator that may be operated in either an automatic or manual mode, is set to operate in the automatic mode.
- B. **Defibrillation** – Administering an electrical impulse to an individual in order to stop ventricular fibrillation or rapid ventricular tachycardia.

IV. Responsibilities

- A. **Environmental Health and Safety (EHS)**
Responsible for the administrative oversight of Northwestern's AED Program, including:
 - i. Review and revise this program to reflect changes in regulatory requirements for the use, maintenance, and placement of AED units as necessary.
 - ii. Assist departments in the implementation of the AED Program.
 - iii. Work with departments to approve the purchase of new AEDs.
 - iv. In conjunction with Facilities Operations and departments, ensure AEDs are properly received, inventoried, delivered, installed, and maintained.
 - v. Review inspection records of AEDs.

- vi. Conduct annual inspections of AEDs as part of the annual building inspection.
- vii. Maintain and update the records regarding AED locations, AED responders, and Department AED Coordinators.
- viii. Provide University Police with updated locations of AEDs on an annual basis or upon the purchase of a new AED.
- ix. Liaise between the Emergency Medical Service (EMS) System Resource Hospital and Northwestern.

B. Department Head or Unit Manager

Responsible to ensure all components of this program are implemented when an AED is purchased, placed, or used within their areas of responsibility. Additional responsibilities include:

- i. Assign resources to support the AED Program, including financial resources to cover the cost to purchase, install, inspect, maintain, and train personnel.
- ii. Assign a Department AED Coordinator who is responsible for coordination and plan oversight within the department.

C. Department AED Coordinator

Responsible for the day-to-day management of their department's AED Program in consultation with EHS, including:

- i. Following Northwestern's AED Program.
- ii. Ensure AEDs are properly maintained, inspected, and tested in accordance with the manufacturer's guidelines (see **Appendix 3**).
- iii. Ensure department personnel are trained in accordance with this program's training guidelines, maintain a list of employee training, and provide that list to EHS.
- iv. Submit to EHS any substantial changes are made to existing AEDs, including:
 - a. Removal of an AED from service;
 - b. Change in Department AED Coordinator contact information;
 - c. Change in AED model/manufacturer information; or
 - d. Change in location of AED.
- v. Conduct regular inspections of AEDs.
- vi. Report any issues to EHS.

D. Emergency Medical Services (EMS) System Resource Hospital

Presence St. Francis Hospital provides AED support services, which may include general advice on use, placement, and evaluation of data recorded on an AED after its use.

V. Selection and Approval of New AEDs

- A. EHS will select an appropriate model for consistency.
- B. All new AEDs must be approved by EHS to ensure they meet selection criteria (see **Appendix 1** for a New AED Request Form).
- C. EHS will coordinate with Northwestern for purchasing to negotiate pricing of AED devices, including inspection and maintenance services.

VI. AED Unit Maintenance

- A. Department AED Coordinators (or a designate) are responsible for the monthly inspections and maintenance of the AEDs (see **Appendix 3**).
- B. AED inspections must be in accordance to the manufacturer's recommendations.

VII. Post-AED Event Procedures

When an AED is operated in a medical emergency, it must be removed from service. Typically University Police will respond to all emergency situations and provide a written report of activities to EHS. Actions to be taken after an AED is used include:

- A. Remove the AED from service until supplies are replaced and event documentation is retrieved.
- B. If the AED has an internal data storage of its events/use, the department is responsible for downloading and providing the data or data card (not the AED) to University Police immediately following the use of the AED.
- C. University Police will submit the data to EHS, who will submit the data to the EMS System Resources Hospital.
- D. Notify all building occupants when an AED is out of service.
- E. Decontaminate the AED, if necessary, and replace all necessary supplies.

VIII. Certification and Training

- A. AED responders must be trained AED users who are trained and certified in CPR (cardiopulmonary resuscitation) AED, and bloodborne pathogens.
- B. Training must be based on standards from a nationally-recognized training organization (i.e., American Red Cross or the American Heart Association) or a course of instruction in accordance with 410 ILCS 4/1 Automated External Defibrillator Act.

IX. Regulatory Authority and Related Information

Northwestern and contractors will comply with the Occupational Safety and Health Administration's (OSHA) standards and any other applicable codes and standards, including:

[410 ILCS 4/1 – Automated External Defibrillator Act](#)

[210 ILCS 74 – Physical Fitness Facility Medical Emergency Preparedness Act](#)

[Title 77, Chapter I, Subchapter f, Part 527 – Physical Fitness Facility Medical Emergency Preparedness Code](#)

[American Heart Association – Implementing an AED Program \(2018\)](#)

X. Contact

For questions, contact Gwen Butler, Director, Environmental Health and Safety, at gwen.butler@northwestern.edu or (847) 491-4936.

Appendix 1 – New AED Request Form

Before purchasing an AED, Departments must obtain approval from Environmental Health and Safety. The Department Head or Supervisor must complete this form, designate a Department AED Coordinator, and provide list of AED trained users. These individuals are required to participate in and stay current with AED, CPR, and Bloodborne Pathogens training. The Department AED Coordinator or designate is responsible for performing monthly inspections of each AED unit. For additional information, please review Northwestern’s Automated External Defibrillator Program.

Department:			
Department Head or Supervisor:		Job Title:	
Email Address:		Phone Number:	

Building Name:		Building Type:	
<i>(e.g., administrative, academic, residence hall, support facility)</i>			
Building Address:			

AED Details:

AED Manufacturer:		AED Model:	
Number of AEDs Requested:		AED Location(s):	
<i>(i.e., room number or nearest room)</i>			

Note: Provide a plan-view map of the building denoting the AED location.

Reason(s) for the AED: (check all that apply)

<input type="checkbox"/>	Athletic Facility (indoor and outdoor) serving more than 100 people	<input type="checkbox"/>	Regulatory requirement for grant funding or accreditation
<input type="checkbox"/>	Department interest	<input type="checkbox"/>	Activity in the building increases the likelihood of cardiac arrhythmias that are life threatening
<input type="checkbox"/>	Recommendation from Central Administration	<input type="checkbox"/>	Data indicates the population (i.e., visitors, faculty, staff, and students) have a significant proportion of people over the age of 55-60 years of age in the building

Training Plan:

Specify the Training Provider:	
---------------------------------------	--

(e.g., American Red Cross, American Heart Association, University Police)

Note: Attach a list of AED trained users and their job titles.

Certification:

By signing below, the department agrees to:

- Commit funds for the purchase of AEDs, training, and supplies such as additional electrode pads, batteries, and response kit (i.e., scissors, disposable gloves, disposable razor, pocket mask or face shield, towel or absorbent wipes).
- Appoint a Department AED Coordinator.
- Implement CPR/AED and Bloodborne Pathogens training prior to installation of AEDs.
- Provide a list of trained AED users to Environmental Health and Safety.
- Provide a list of AEDs, model numbers, and locations to Environmental Health and Safety.
- Conduct monthly AED inspections, and maintain documentation for future review by Environmental Health and Safety.

The Department Head and Department AED Coordinator are responsible for operating and maintaining AED devices in accordance with Northwestern’s Automated External Defibrillator Program, including maintenance, inspection, and training. I agree to abide by the program and procedures for the purchase, maintenance, and training as set forth in Northwestern’s AED Program.

Department Head Signature: _____ Date: _____

Department AED Coordinator Signature: _____ Date: _____

To be completed by Environmental Health and Safety (EHS):

Approved Not Approved

EHS Signature: _____ Date: _____

Appendix 2 – Existing AED Certification Form

Departments or administrative units that previously purchased or requested AEDs must certify they will maintain their AEDs as outlined in the AED Program. The Department Head or Supervisor must designate a Department AED Coordinator and provide a list of AED-trained users. These individuals are required to participate in and stay current with AED, CPR, and Bloodborne Pathogens training. The Department AED Coordinator or designate is responsible for performing monthly inspections of each AED unit.

Per Illinois Statutes, Departments, with the exception of Physical Fitness Facilities, are not required to have an AED. However, if Departments have an AED, it must be maintain according to Northwestern's AED Program. If a Department (with the exception of Physical Fitness Facility) no longer chooses to maintain their AED, the AED must be removed, including all signage, and all building occupants must be notified.

Department:			
Department Head or Supervisor:		Job Title:	
Email Address:		Phone Number:	
Building Name:		Building Type:	
(e.g., administrative, academic, residence hall, support facility)			
Building Address:			

This department is opting-out of Northwestern's Automated External Defibrillator Program. <i>Do not fill out the rest of this form; sign the bottom of the form.</i>	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No
The department will maintain existing AEDs. <i>Continue completing this form.</i>	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No

AED Details:

AED Manufacturer:		AED Model:	
Number of AEDs Requested:		AED Location(s):	
(i.e., room number or nearest room)			

Note: Provide a plan-view map of the building denoting the AED location.

Reason(s) for the AED: (check all that apply)

<input type="checkbox"/>	Athletic Facility (indoor and outdoor) serving more than 100 people	<input type="checkbox"/>	Regulatory requirement for grant funding or accreditation
<input type="checkbox"/>	Department interest	<input type="checkbox"/>	Activity in the building increases the likelihood of cardiac arrhythmias that are life threatening
<input type="checkbox"/>	Recommendation from Central Administration	<input type="checkbox"/>	Data indicates the population (i.e., visitors, faculty, staff, and students) have a significant proportion of people over the age of 55-60 years of age in the building

Training Plan:

Specify the Training Provider:	
(e.g., American Red Cross, American Heart Association, University Police)	

Note: Attach a list of AED trained users and their job titles.

Certification:

By signing below, the department agrees to:

- Commit funds for the purchase of AEDs, training, and supplies such as additional electrode pads, batteries, and response kit (i.e., scissors, disposable gloves, disposable razor, pocket mask or face shield, towel or absorbent wipes).
- Appoint a Department AED Coordinator.
- Implement CPR/AED and Bloodborne Pathogens training prior to installation of AEDs.
- Provide a list of trained AED users to Environmental Health and Safety.
- Provide a list of AEDs, model numbers, and locations to Environmental Health and Safety.
- Conduct monthly AED inspections, and maintain documentation for future review by Environmental Health and Safety.

Department Head Signature: _____ Date: _____

Department AED Coordinator Signature: _____ Date: _____

To be completed by the Environmental Health and Safety (EHS):

Approved Not Approved

EHS Signature: _____ Date: _____

Appendix 3 – AED Inspection Form

Department:			
Department AED Coordinator/Inspector:		Job Title:	
Email Address:		Phone Number:	

Building Name:		Building Type:	
<i>(e.g., administrative, academic, residence hall, support facility)</i>			
Building Address:			

AED Details:

AED Manufacturer:		AED Model:	
AED Serial Number:		AED Location(s):	

Check the Following:	Pass	Fail
Is the unit clean, undamaged, and free of excessive wear?		
Are there any cracks or loose parts in the housing?		
Verify pads are within expiration date. Replace if expired.		
Is the instruction manual available? Acquire manual.		
Batteries within expiration date. Replace if expired.		
Check for adequate supplies. (spare battery and pads, 2 pairs of gloves, CPR mask, paramedic scissors, razor, absorbent wipes)		
Missing supplies replaced?		
Perform Manual Self-Test, per instruction manual.		

Note: Maintain inspection records for three years.