

University of Notre Dame

Automated External Defibrillator Policy

Revised: May 2005



Risk Management and Safety would like to thank University Health Services for their contributions to the Notre Dame Automated External Defibrillator Policy through research and benchmarking. Risk Management and Safety would also like to thank the Notre Dame Fire Department for their help in administering the Automated External Defibrillator Program since its launch.



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I. Introduction

An Automated External Defibrillator (AED) is used to treat victims who experience sudden cardiac arrest. The AED must only be applied to victims who are unconscious, without a pulse, and not breathing. The AED will analyze the heart rhythm and advise the operator if a shockable rhythm is detected. If a shockable rhythm is detected, the AED will charge to the appropriate energy level and advise the operator to deliver a shock.

II. Scope

An AED will be used in conjunction with Cardio-Pulmonary Resuscitation (CPR) in cases of sudden cardiac arrest on campus, in accordance with accepted protocols, including those developed by the American Red Cross and American Heart Association. Use of the AED and CPR will continue as appropriate during the course of emergency care, until the patient resumes pulse and respiration, and/or local Emergency Medical Services (EMS) arrive at the scene, and assume responsibility for emergency care of the patient. **The AED should not be used on victims weighing less than 55 pounds or less than 8 years of age.**

III. Responsibilities

- A. **University Health Services (UHS) Chief of Medicine:**
 - 1. Providing medical direction for use of the AED device;
 - 2. Writing a prescription for use of the AED device;
 - 3. Reviewing and approving guidelines for emergency procedures related to the use of AEDs and CPR;
 - 4. Evaluating post-event review forms and electronic files downloaded from the AED.
- B. **Risk Management and Safety's AED Program Coordinator:**
 - 1. Organizing the AED training for potential campus AED users;
 - 2. Maintaining records of AED training in accordance with accepted protocols including those developed by the American Red Cross and American Heart Association;
 - 3. Coordinating equipment and accessory maintenance;
 - 4. Reviewing and revising the AED Policies and Procedures annually as needed in conjunction with the Assistant Director for Medical Outreach at University Health Services, the University Fire Department, Risk Management and Safety, and the Campus Emergency Response Committee;
 - 5. Working as a liaison between the University and the AED manufacturer;
 - 6. Organizing meetings and working with the UHS Chief of Medicine to maintain records, AED guidelines, and protocols;
 - 7. Communicating with the UHS Chief of Medicine on issues related to this medical emergency response plan including post-event reviews.

D. Department AED Coordinator:

1. Daily (internally by machine) and monthly equipment maintenance per manufacturer's recommendations;
2. Sending all maintenance and training records to University AED Program Coordinator for review.

IV. Location

- A. Per the manufacturer's recommendations, the AED devices are placed in areas that are easily accessible and periodic inspection of the AED will be facilitated.
- B. AED locations (updated during annual review):

AED	SERIAL NUMBER	BUILDING	LOCATION
1	30356492	Rolf's Sports Recreation Center	Front Desk
2	30356493	Rolf's Aquatic Center	Lifeguard Office
3	30356490	Rockne Memorial	Front Desk
4	30356495	Joyce Center	First Aid Room
5	30356494	University Health Services	Room 136E
6	30356488	Loftus Center	Facility Manager's Office
7	30356489	Eck Tennis Pavilion	Front Desk
8	30881202	Administration Building	Room 415
9	31325523	University Plane	Rear of Cabin
10	30253226	Notre Dame Security Police	Security Vehicle
11	31248863	Notre Dame Security Police	Detective Vehicle
12	30252552	Notre Dame Security Police	Security Vehicle
13	30253227	Notre Dame Security Police	Security Vehicle
14	31248823	Notre Dame Security Police	Security Vehicle
15	11826724	Notre Dame Fire Department	Unit # 251
16	11826725	Notre Dame Fire Department	Unit # 255
17	31166285	Notre Dame Fire Department	Unit # 250
18	31166286	Notre Dame Fire Department	Unit # 252
19	31316921	Land O Lakes	UNDERC
20	31316922	Land O Lakes	Office

V. System Verification and Review

- A. Annual AED Program Review: Once each year, the Risk Management and Safety AED Program Coordinator shall conduct, document and send to the UHS Chief of Medicine a system readiness review, including the following elements:
 - 1. Training records;
 - 2. Equipment operation;
 - 3. Maintenance records.
- B. Periodic Systems Check: Once each calendar month, the Department AED Coordinator shall conduct and document a system check including the following elements:
 - 1. Emergency kit supplies;
 - 2. AED battery life;
 - 3. AED operation and status.

VI. Equipment

- A. Lifepak® 500 Automated External Defibrillator has been approved for this program and conforms to all state and local standards.
- B. Each AED will have:
 - 1. One set of defibrillation electrodes connected to the device;
 - 2. One spare set of electrodes;
 - 3. One extension cable;
 - 4. One resuscitation kit containing two pairs of gloves, one razor, one pair of trauma shears, one towel, and one facemask barrier device.
- C. Procedures for purchasing equipment:
 - 1. Notify Notre Dame Fire Department of need;
 - 2. Notre Dame Fire Department receives approval from Assistant Director for Medical Outreach at University Health Services;
 - 3. Notre Dame Fire Department orders AED unit.

VII. Equipment Maintenance

- A. All AED equipment and accessories shall be maintained in a state of readiness and per manufacturer guidelines:
 - 1. The Risk Management and Safety AED Program Coordinator shall be informed of changes in availability of emergency medical response equipment (i.e.; taken out of/returned to service);
 - 2. The Department AED Coordinator shall ensure all daily and monthly maintenance tasks (Appendix II) are performed according to equipment maintenance procedures outlined in the operating instruction for detailed maintenance and testing. Reports of maintenance and inspection are due to the Risk Management and Safety AED Program Coordinator at the annual AED Program Review;

3. Following use of emergency response equipment, all equipment shall be cleaned and/or decontaminated. After use, the AED is to be cleaned with a soft cloth dampened with one of the following agents: ammonia-based cleaners, isopropyl alcohol (70%), or hydrogen peroxide.
4. The Risk Management and Safety AED Program Coordinator will contract with Medtronic for annual maintenance/operations inspections of each unit. This annual inspection shall include: calibration of energy output and impedance, performance check to ensure machine properly detects when to shock a patient, check for physical damage to machine, battery and electrode dates are checked – if more than two years old they are replaced.

VIII. Authorized Users

- A. Trained University Responders:
 1. Any Notre Dame responder who has successfully completed an approved CPR and AED training program through the American Red Cross or the American Heart Association;
 2. Trained University Responders must have a record of current successful course completion with the Risk Management and Safety AED Program Coordinator.
- B. Trained Volunteer Responders:
 1. Any Volunteer responder who has successfully completed an approved CPR and AED training program through the American Red Cross or American Heart Association and has a current successful course completion card;
 2. Anyone can, at their discretion, provide voluntary assistance to victims of medical emergencies. The extent to which these individuals respond shall be appropriate to their training and experience. These responders are encouraged to contribute to emergency response only to the extent they are comfortable. The emergency medical response of these individuals may include CPR, AED or medical first aid.

IX. Training

- A. Certification Training:
 1. University Responders must complete training adequate to provide basic first-aid, CPR and AED. Training on the Lifepak® 500 Automated External Defibrillator is required and must be a course approved by the state. University Responders will also be trained in universal precautions against bloodborne pathogens and shall be offered hepatitis B vaccination free of charge. Individual departments are responsible for ensuring that training records are kept up to date with the Risk Management and Safety AED Program Coordinator.

2. Volunteer Responders will possess various amounts of training in emergency medical response and their training may be supplied by sources outside of the University. Volunteer Responders may have training adequate to administer first aid, CPR and use the AEDs deployed throughout campus. Any Volunteer Responder wishing to potentially use one of the AEDs deployed on campus should have a current course completion card for a state approved AED course including CPR. The University will not maintain training records for the Volunteer Responders.
- B. Recertification Training:
1. University Responders will renew first-aid and AED training in accordance with the American Red Cross or American Heart Association guidelines.
 2. Volunteer Responders should obtain documented renewal training in first-aid and AED in accordance with the American Heart Association or American Red Cross guidelines.

X. Medical Response Documentation

- A. Post-Incident Internal Documentation:
1. When an AED is used by Notre Dame Security Police (NDSP), the event report should be filed with the NDSP as per current protocol and with the UHS Chief of Medicine.
 2. If an AED is used by University Health Services, a copy of the event report should be placed in the patient's chart and a copy sent to the UHS Chief of Medicine.
 3. If an AED is used by a University Responder, the event report should be filed with Risk Management and Safety and with the UHS Chief of Medicine.
- B. Post-Incident External Documentation:
1. AED Incident Report Form (Appendix I): Completed by a Trained Responder for each event using the AED. Form shall be forwarded to the UHS Chief of Medicine within 24 hours of a medical event.
 2. Any and all patient information generated during AED use must be collected and placed in the patient's confidential medical file in the University Health Services Medical Records Department and stored for *seven* years.

XI. Post-Event Review

- A. A review of each medical event using an AED shall be conducted by the Risk Management and Safety AED Program Coordinator.
- B. All key participants in the medical event shall participate in a review that includes:
 - 1. Actions that went well during the medical event;
 - 2. Opportunities for improvement;
 - 3. Critical incident stress debriefing.
- C. A summary of the post-event review shall be sent to Risk Management and Safety for maintenance according to the record retention policy.

XII. AED Use

- A. Assess the scene for safety;
- B. Determine the victim's unresponsiveness;
- C. Activate the emergency response system (Dial 911);
- D. Open airway (A);
- E. Check for breathing (B). If no breathing, give two breaths;
- F. Check for pulse and/or signs of circulation such as normal breathing, coughing, or movement (C);
- G. If no pulse and/or signs of circulation, apply AED (D) immediately. If AED is not immediately available, perform CPR until the AED arrives on the scene;
- H. Press the ON/OFF button to turn on the AED;
- I. Remove clothing from the patient's chest. Wipe moisture from the patient's chest and shave excessive chest hair as necessary. Supplies are located in the resuscitation kit with the AED;
- J. Apply defibrillator pads to patient's bare chest per diagram instructions;
- K. Connect the pads to the AED. Insert the defibrillation pad connector firmly in the connector socket. Socket is located at the bottom left of AED;
- L. Stand clear of victim while the machine analyzes the heart rhythm. The Electrocardiogram (ECG) display and patient's heart rate are enabled. Follow the instructions provided by the voice and screen prompts;
- M. If voice and screen prompts confirm "**SHOCK ADVISED**", the AED will charge to prepare for shock delivery. Make sure no one is touching the victim as directed by the AED voice prompt;
- N. Push the orange "**SHOCK**" button to deliver the shock. If "**NO SHOCK ADVISED**", proceed with steps Q – S;
- O. After you press the "**SHOCK**" button, a voice prompt tells the rescuer the shock was delivered. The AED goes back to analyzing the patient's heart rhythm to see if the shock was successful. The AED continues to provide voice and text prompts to guide the rescuer through additional shocks, if appropriate. The device will analyze and shock up to three times;

- P. After three shocks, the AED will prompt the rescuer to check pulse (or for breathing and movement) and, if absent, start CPR. If pulse and/or signs of circulation such as normal breathing and movement are absent, perform CPR for one minute. Device will countdown one minute of CPR and will analyze when CPR time is over;
- Q. Voice and screen prompts confirm, “**NO SHOCK ADVISED**”. The AED instructs the rescuer to perform CPR if needed, and performs background ECG monitoring while rescuer gives appropriate care to the patient. The AED will prompt to check pulse (or for breathing and movement) and, if absent, prompt the rescuer to start CPR.
- R. If pulse and/or signs of circulation such as normal breathing and movement are absent, the responder should perform CPR for one minute. If pulse/signs of circulation such as breathing or movement are present, check for normal breathing. If victim is not breathing normally, give rescue breathing at a rate of 12 per minute. AED will reanalyze after one minute.
- S. Continue cycles of analyses, shocks (if advised) and CPR until professional help arrives. Victim must be transported to hospital. Leave AED attached to victim until EMS arrives and disconnects AED.

XIII. Data Storage and Retrieval

- A. Every time the AED is used on a patient, data is automatically stored in the internal memory of the AED. This allows for post-incident review for quality control and training purposes.
 - 1. Internal Memory: summary data for an incident is automatically recorded in internal memory while you are using the AED.
- B. Reviewing Incident Data (Internal Memory):
 - 1. Remove the data card, if one is installed, and unplug the pads;
 - 2. Remove and reinstall the battery;
 - 3. Select **REVIEW INCIDENT** from the menu;
 - 4. Observe and record the amount of time the incident lasted and the number of shocks delivered.

AED INCIDENT REPORT

Complete this form with every incident necessitating AED use, submitting within 24 hours of use.

PATIENT'S NAME: _____

STUDENT'S ID NUMBER (If applicable): _____

DOB: _____ **AGE:** _____ **SEX:** F M **PHONE:** _____

ALLERGIES: _____

CURRENT MEDICATIONS: _____

PERTINENT MEDICAL HISTORY: _____

DATE & TIME OF AED USE: _____ **AED SERIAL NUMBER:** _____

EXACT LOCATION OF INCIDENT: _____

DESCRIPTION OF INCIDENT: _____

WITNESSES: _____

PHONE NUMBER: _____

NAME OF AED OPERATOR: _____

OTHER ASSISTING RESPONDERS: _____

EMS UNIT RECEIVING PERSON: _____

TIME AND LOCATION OF TRANSPORT: _____

REPORTED BY: _____ **DATE:** _____

PHONE NUMBER: _____

MEDICAL DIRECTOR'S COMMENTS: _____

AED OPERATOR'S CHECKLIST

YEAR: _____ SERIAL NUMBER: _____

TASK	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
MONTHLY												
Battery Status Indicator												
Care Status Indicator												
Two Sets of Pads												
Face Mask												
Scissors												
Razor												
Gloves												
Towel												
Data Card												
INSPECTED BY:												
Remarks, Problems:												
Corrective Actions:												

