UNIVERSITY OF TOLEDO

SUBJECT: AUTOMATED EXTERNAL DEFIBRILLATOR Procedure No: S-08-048

PROCEDURE STATEMENT

An automated external defibrillator (AED) is used to treat victims who experience sudden cardiac arrest (SCA). This policy applies to AED units listed in this procedure.

PURPOSE OF PROCEDURE

To provide access, ensure proper use, maintenance, registration, and training on AEDs at the University of Toledo.

AED DEPLOYMENT SITES

MAIN CAMPUS

Building	Location	Manufacturer	Model/ ID Number
Campus Police	Campus Police Vehicle 1	Medtronic	LIFEPAK 1000/ 0042635
Campus Police	Campus Police Vehicle 2	Medtronic	LIFEPAK 1000/ 0042634
Campus Police	Campus Police Vehicle 3	Medtronic	LIFEPAK 1000/ 0042625
Campus Police	Campus Police Vehicle 4	Medtronic	LIFEPAK 1000/ 0055133
Campus Police	Campus Police Vehicle 5	Medtronic	LIFEPAK 1000/0042633
Campus Police	Campus Police Vehicle 6	Medtronic	LIFEPAK 1000/0042633
Carlson Library	1st floor information commons, west wall, 1st green pillar from NE entrance	Medtronic	LIFEPAK 1000/0042631
Facilities and Construction	Near Main Entrance	Medtronic	LIFEPAK 1000/ 0037960
Field House	1st Floor Main Entrance	Zoll	AED PLUS/ 0040084
Glass Bowl	Stadium Operations Area in front of 3110E	Medtronic	LIFEPAK 1000/0042626
Glass Bowl	Across from 209 on the 2nd Floor	Cardiac Science	Power Heart AED G3/ 0055090
Glass Bowl	1st Floor	Cardiac Science	Power Heart AED G3 /0055091
Glass Bowl	3rd Floor	Cardiac Science	Power Heart AED G3/ 0055092
Health & Human Services	1st floor, on east wall around the corner from HH-1248	Medtronic	LIFEPAK 1000/0042622
Health Education	1st floor, west wall between elevator & fire extinguisher cabinet	Medtronic	LIFEPAK 1000/0042624
Larimer Athletic Complex (Adam Barta Contact)	In Training Room 1100 (Mobile Unit)	Medtronic/Biphasic	CR2 / 50502748
Larimer Athletic Complex	Outside of Weight room	Cardiac Science	Power Heart AED G3/ 0053682
Larimer Athletic Complex	Outside of Room 2350	Cardiac Science	Power Heart AED G3/0055093
Law Center	1st floor, by room 1006	Medtronic	LIFEPAK 1000/0042637
University Health Center	Behind helpdesk by 1240	Medtronic	LIFEPAK 1000/0049201
University Health Center	Pharmacy	Medtronic	LIFEPAK 1000/ 0042621
Nitschke Hall	Main floor across from SW entrance door	Cardiac Science	G3Plus9390A&E/0043958

Building	Location	Manufacturer	Model/ ID Number
Recreation Center	Poolside "natatorium"	Agilent	Heartstream FR2 M3860/0042378
Recreation Center	Main Office "intramural storage cage"	Philips	Heart Start A19C-08963
Recreation Center	Service Desk - lower level	Philips	Heart Start A15D-04141
Recreations Center	Entry Desk	Philips	Heart Start A15D-03777
Rocket Hall	Visitors Center	Medtronic	LIFEPAK CR Plus/ 0042257
Savage Arena	Athletic Training, room 1120	Cardiac Science	Power Heart AED G3/ 0043956
Savage Arena	Outside of the basketball court (1st Floor)	Cardiac Science	PowerHeart AED G3/0055175
Savage Arena	Outside of 1970 (Practice Field)	Cardiac Science	Power Heart AED G3/0043957
Savage Arena	Outside room 1120 (Athletic Training Room)	Medtronic/Biphasic	CR2 / 50502831
Savage Arena	4th floor lobby	Cardiac Science	Power Heart AED G3/ 0055094
Savage Arena	3rd floor by suite 508	Cardiac Science	Power Heart AED G3/ 0055095
Student Union	Outside room 2525	Medtronic	LIFEPAK 1000/0042632
University Hall	3rd floor, to the left of Doermann Theater, next to fire extinguisher cabinet	Medtronic	LIFEPAK 1000/0042629
University Hall	5th floor, on right side of elevator	Medtronic	LIFEPAK 1000/0042630
Wolfe Hall	1st floor, north wall at SE entrance	Medtronic	LIFEPAK 1000/0042627

SCOTT PARK

Building	Location	Manufacturer	Model/ ID Number
Findlay Building	Outside of room 1100 (Athletic Training Room)	Medtronic/Biphasic	CR2 / 50218878

PRESIDENT'S HOUSE

Building	Location	Manufacturer	Model/ID Number
President's Office (U-Hall)	Out of Service	Medtronic	LIFPAK CR Plus/ 0052881

HEALTH SCIENCE CAMPUS

Building	Location	Manufacturer	Model/ ID Number
Block Health Science	Lobby	Medtronic	CR2/ 50225454
CCE	Lobby	Medtronic	CR Plus/ 042255
Collier	Buildings Front Entrance	Medtronic	CR2/ 50500154
Comprehensive Care Center	Lobby	Medtronic	LIFPAK CR Plus/ 0050383
Biomedical Engineering Department	Traveling	Medtronic	LIFPAK CR Plus/ 0042252
Health Education Building	Lobby (Main)	Medtronic	CR Plus/ 34112694
Health Education Building	Outside HEB 089	Medtronic	LIFPAK 1000/ 0044109
Health Education Building	Lobby (Wolfe Center)	Medtronic	LIFPAK CR Plus/0047496
Kobacker (Adolescent)	Patient Exam Room	Medtronic	LIFPAK CR Plus/0042253
Kobacker (Senior Behavioral Health)	Nurses Station	Medtronic	LIFEPAK CR Plus/0049535
Morse Center	Lobby	Medtronic	CR2/ 50295737
Mulford	Library 4th Floor	Medtronic	LIFPAK CR Plus/ 0037955
Ruppert Health Center	Lobby	Medtronic	LIFPAK CR Plus/ 0042252
Dana Center	Lobby	Medtronic	LIFPAK CR Plus/0046350

LAKE ERIE CENTER

Building	Location	Manufacturer	Model/ ID Number
Lake Erie Center	Hallway	Medtronic	CR2 /50244954

PRIMARY CARE CLINICS

Building	Location	Manufacturer	Model/ ID Number
Fallen Timbers Clinic	Nursing Station	Medtronic	LIFEPAK CR Plus/ 0046530
Regency	Rehab Clinic	Zoll	AED Plus/0051889
Regency	Radiology	Medtronic	LIFEPAK CR Plus/ 0045528

GENERAL CONSIDERATIONS

TRAINING

An AED operator must know how to recognize the signs of a sudden cardiac arrest, when to activate the EMS system (by calling x77 or 911), how to utilize the AED, and how to do CPR. After the AED is attached and delivers a shock, the typical AED will prompt the operator to continue CPR while the device continues to analyze the victim. It's also important for operators to receive formal training on the AED model they will use so that they become familiar with the device and are able to successfully operate it in an emergency. Those working in the vicinity of an AED on campus are encouraged to attend and maintain training through the American Red Cross or American Heart Association. Training should be repeated every 2 years or as recommended. It is the department/clinical areas responsibility to provide information on where the AED is located.

In addition to training courses offered by the American Red Cross and American Heart Association, the University of Toledo has several videos available on the LIFEPAK CR PLUS unit deployed on the Health Science Campus as well as a trainer AED to be used during training activities.

EMERGENCY RESPONSE

In the event of an emergency on campus, call 911 and University of Toledo Police will respond. They are trained in both CPR and AED use.

NOTE: The Sports Medicine Staff, in the Athletic Department, will follow the established Emergency Action Plan for Athletic venues.

ACQUISITION

AEDs that are acquired must be registered and included in this policy, when applicable. Biomedical Engineering Department in addition to Safety and Health must be notified of intent to purchase prior to buying any AED.

REGISTRATION

All AED units must be registered in a manner complying with local, state, and federal laws along with manufacturer requirements within the time defined by each authority. Registration of each device shall be performed by Biomedical Engineering Department.

INSPECTION

All units must be maintained according to the manufacturer instructions including monthly inspections and equipment replacement (pads and batteries). To maintain a state of readiness, the AED units listed in this procedure will be inspected monthly.

Pads on all units must be sealed properly and are to only be opened in case of emergency, breakage of any package means pads must be replaced.

Batteries shall be replaced upon one of the following conditions:

1.) The shelf life of the battery is about to be reached; this is the listed expiration date on the battery.
2.) The “Active Life or service life” of the battery is about to be reached; this is per manufacturer from the date the battery is installed and IS NOT the date listed on the battery.
3.) Biomedical Engineering Department determines a new battery is necessary after AED usage.
4.) The battery shows signs of being damaged or is not functioning properly.

Purchasing of Pads and Batteries used must be approved equipment by the manufacturer for their AEDs and hold a pre-market approval with the FDA.

Contact the Biomedical Engineering Department Engineering, 419-383-4899, if a problem exists; a more thorough inspection will be conducted by Biomedical Engineering Department. Due dates for inspections on AEDs shall be indicated on the equipment and follow biomedical procedure ME-08-000.

CLEANING

AEDs shall only be cleaned when necessary and per manufacturer guidelines. Cleaning shall only be done by a competent person who is trained to perform the task. Caution shall be used to not use cleaners that can damage equipment.

USAGE

AED units must be serviced immediately after use and should be dropped off to the Biomedical Engineering Departmenton the Health Science Campus. If an AED unit is used on staff/faculty/an employee of the university an injury/illness report must be completed. AEDs will be made available to EMS upon request. If the caregiver was exposed to blood or other infectious material(s) a report must be filed and submitted to the EHRS Director. Usage of any AED must be reported to the Biomedical Engineering Department Director, in addition to the Director of Environmental Health and Radiation Safety. All applicable forms are to be filled out by the clinical area manager or building/department manager and to be submitted within 24 hours of incident.

AEDs may not be used in areas where flammable gases may be present nor in direct contact with flammable material. AEDs shall not be used in MRI areas unless indicated safe by manufacturer.

Pads may only be used on their intended audience per manufacturer guidelines; adult pads cannot be used as pediatric pads on children (typically individuals who weigh less than 55 pounds or are under 8 years old).

The responsibility of ensuring clinical staff can utilize the AED properly in the event of an emergency is the responsibility of the clinical operating area. In non-clinical areas it is recommended that departments encourage non-clinical staff to attend training. However, UTPD Officers are currently trained and act as first responders for the University of Toledo.

STORAGE

AEDs must comply with manufacturer recommendations as not to expose the equipment to excess heat, cold, or humidity as it will damage the equipment and supplies.

INVENTORY MANAGEMENT

EHRS shall maintain information on the AED fleet and provide recommendations on when to purchase supplies for maintenance. Information kept shall be the location of the AED, the manufacturer and model, when the annual inspection by Biomedical Engineering Department was conducted, expiration date of pads, expiration date of batteries, install date of batteries, and the end date of the “active-life” for the battery per manufacturer recommendations.

RELOCATION/TERMINATION OF PARTS OR AEDS

AEDs shall only be removed from areas after permission is given by Environmental Health and Radiation Safety. Until permission is granted the relocation or termination of any AED listed in this procedure is not allowed. EHRS shall notify the building/clinical manager and it shall be henceforth the responsibility of that individual to notify employees of the change.

When an AED is relocated, purchased or removed notifications must be sent to the manufacturer *and/or* U.S. Food and Drug Administration for the tracking of the defibrillators. The primary contact for each AED must be registered as the Biomedical Engineering department. This responsibility shall fall upon Biomedical Engineering Department.

AED supplies and the AED itself shall be returned to the Biomedical Engineering Department Engineering Department when being thrown away. EHRS shall assist in the waste-removal of supplies in accordance with local, state, and federal law.

Medtronic LIFEPAK CR PLUS

The AED unit has a readiness indicator located on the front of the unit. When the readiness indicator reads “OK”, the unit is in good condition. If a problem exists the unit will read “CHARGE-PAK”, “ATTENTION”, or a wrench symbol will appear depending on the type of condition detected.

Heartstream FR2 and Heartstart Forerunner

The AED unit has a readiness indicator located on the front of the unit. When the readiness indicator is a flashing hourglass, the battery is in good condition.

Zoll AED PLUS and Cardiac Science

The AED unit has a readiness indicator located on the front of the unit. When the readiness indicator is a green checkmark, the battery is in good condition.

Medtronic LIFEPAK CR2

The Readiness indicator flashes every 6 seconds to indicate the defibrillator is ready for use.
If the defibrillator needs attention, the Readiness indicator does not flash and an alert tone sounds every 15 minutes until turned off.

OTHER

If the AED does not have a battery light indicator, the unit is turned on and the battery life is checked.

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