TEMPLE UNIVERSITY
Environmental Health and Radiation Safety

Automated External Defibrillator Program

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Summary: The Temple University Automated External Defibrillator (AED) Program provides the framework for managing and continually improving the public access use of AEDs within Temple University (TU).

1. Program Description

Temple University (TU) Environmental Health & Radiation Safety (EHRS) has developed the Automated External Defibrillator (AED) Program to increase the rate of survival of people who experience sudden cardiac arrest (SCA). AEDs make it possible for lay responders to administer defibrillation prior to the arrival of Emergency Medical Services (EMS).

Temple University is committed to the health and safety of its students, faculty, staff, and visitors. This document establishes an AED policy and program for TU that will:

- Implement enhanced life safety response measures,
- Meet regulatory compliance, and,
- Provide continuity and consistency in AED installation, maintenance, and use across campuses.

2. Scope

This program and related procedures set forth the standards and responsibilities for AED installation, modification, replacement, repair, inspection, maintenance, and non-medical response on all Temple University domestic campuses. Patient care areas are not covered by this program.

3. Definitions

3.1. Automated External Defibrillator (AED): A computerized medical device that will assess a person's heart rhythm and deliver an electrical shock to a heart in ventricular fibrillation.

3.2. Cardiopulmonary Resuscitation (CPR): An emergency medical procedure using artificial blood circulation and respiration to maintain the flow of oxygenated blood through the body, thereby delaying tissue death and increasing the opportunity for successful resuscitation without brain damage.

3.3. Chain of Survival: Optimizing a patient's chance for survival of sudden cardiac arrest. There are four links in the chain: early recognition, early CPR, early defibrillation, and timely access to advanced cardiac life support.

3.4. Emergency Medical Services (EMS): Typically, a non-University ambulance service that provides acute medical care and transports patients to a medical facility for more advanced treatment.

3.5. Sudden Cardiac Arrest (SCA): A condition caused by ventricular fibrillation which is characterized by unorganized electrical activity of the heart, resulting in producing no blood flow or pulse, which will lead to death.

4. Responsibilities

The following employees or groups have specific responsibilities assigned to them in this program as appropriate.

4.1. Temple University Safety and Security Committee

The University Safety and Security Committee is comprised of more than a dozen stakeholders. Stakeholders who are included on this committee include representatives from EHRS, Public Safety, University Counsel, Facilities Management, Risk Management, Human Resources, University Health Services.

- Reviews the ongoing compliance with the program and appropriate standards including the priority, risk-based application for the addition of AEDs.

4.2. Environmental Health and Radiation Safety (EHRS)

A designated AED Program Manager within Environmental Heath and Radiation Safety (EHRS) oversees the administration of the AED Program. EHRS specifically:

- Develops, maintains, and updates the written AED Program for the University.
- In conjunction with the Safety and Security Committee, establishes criteria for the required placement of AEDs.
- Ensures the required inspections and maintenance activities are completed, as noted by the AED manufacturer or University procedure.
- Reviews submittals of "AED Request Form."
- Maintains the EHRS AED Asset database and contact information for all Temple University owned AEDs.
- Updates the EHRS AED webpage as needed, including maps with AED locations.
- Maintains updates by the American Heart Association and others to benefit from advances in Public Access Defibrillator program.
- Provides appropriate University Public Safety and other applicable public safety agencies with updated listing of AEDs on a regular basis.

4.3. Temple University Public Safety (TUPS)

Temple University Public Safety plays a key role in the AED Program as emergency responders. TUPSA personnel respond to calls at Temple University. They work with Emergency Medical Services (EMS) on responses as appropriate. Primary responsibilities include:

- Responds to SCA events.
- Informing EHRS of an AED use, and
- If requested, assist EHRS and EMS in the recovery of data from an AED after an incident resulting in use.

4.4. Deans, Directors, and Department Heads

Responsible to ensure that all components of this program are implemented when an AED(s) is/are purchased and installed within areas of their authority. Additional responsibilities include:

- Assigns resources to support the AED program, including financial resources to cover the cost to purchase, install, inspect, maintain, and train personnel (if applicable)
- Assigns a department AED Coordinator who is responsible for coordination and plan oversight within the department.

4.5. AED Coordinator

Responsible for the day-to-day management of their department's AEDs in consultation with EHRS, including:

- Adhere to all the component of the Temple University AED Program
- Ensure AEDs are properly maintained and inspected in accordance with the manufacturer's guidelines.
- Notify EHRS
    - Within 24 hours of an incident involving the use of an AED at Temple University.
    - On the removal of an AED from service
    - Change in Department AED coordinator contact information.

- If there are any issues related to an AED.

5. Program Components

5.1. Purchasing of AEDs

No AED may be purchased or installed without written approval from the University AED Coordinator. All AEDs must be purchased through EHRS.

Request for AED purchases must be made through EHRS.

- Submit a completed "AED Request Form" to EHRS via ehrs@temple.edu.
- The University AED Coordinator will review all requests and conduct an assessment to determine the need for an AED.
- The Temple University Safety and Security Committee must approve any exception.

5.2. Selection, Location and Placement of AEDs

5.2.1. Selection Criteria for AEDs

The Food and Drug Administration (FDA) provides approval for the sale of medical devices, including AEDs. All AEDs selected will be an FDA approved model and meet the minimum following criteria:

- Meet the Food and Drug Administration guidelines.
- Intended to be used by the public.
- Ability to be used on infants, children, and adults.
- Ability of the unit to perform automated self-unit checks for battery and pad integrity.
- Ability of the unit to record, store and download data when it has been used in a medical event.

5.2.2. Placement Criteria for AEDs

Placement criteria for AEDs at Temple University have been established by the Temple University Safety and Security Committee. A risk assessment conducted by the University AED Coordinator will determine need and placement based on the following:

- Athletic, fitness or recreational programs, including swimming pools.
- Presence of high-risk populations- Locations with extremely high volumes of employee or visitor traffic such as sports venues, performing arts centers, and meeting/conference facilities.
- Locations conducting research, teaching, or other activities requiring significant exertion or with higher risk for sudden cardiac arrest.
- The presence of a large number of people, but not necessarily at-risk population, as determined by the University AED Program Coordinator.
- Location is more than a three-minute response time for an AED to arrive from TUPS or EMS.
- University designated vehicles (example-TUPS).

5.2.3. Location Criteria for AEDs

For ease of use and security, AEDs will be installed at:

- Main entrance/lobby/reception areas
- Near emergency phones/elevators/stair towers
- First Aid/Security stations
- Main building corridors
- Areas of risk (i.e., gym, public gathering spaces)
- Located in a well-marked area.
- Area accessible for use, with consideration for the potential for tampering and theft.
- Optimal height for potential responders with accessibility and ADA (Americans with Disabilities Act) guidelines, including height considerations, and a four inch or less protrusion from the wall.

5.3. Funding of AEDs

5.3.1. University Centrally Funded AEDs

The University will purchase and install at least one AED unit in the lobby of all buildings across the University. These AEDs are centrally funded through EHRS, including installation and maintenance. These locations were selected to cover as large of a geographical footprint as possible and provide optimal response to cardiac health emergencies.

5.3.2. Department funded AEDs.

The Temple University Safety and Security Committee must approve any exception. Start-up costs include the unit itself and associated costs such as storage cabinet, signage and installation, plus additional annual costs. The department purchasing additional AEDs is responsible for all maintenance, initial and ongoing costs associated with their additional AED units if approved by the committee.

5.4. Signage

Buildings equipped with AED units will be identified with signage indicating the availability of the unit. Universally recognized signage will be placed at entrance areas and at the unit location.

5.5. Equipment Information

As of 7/1/2022, the manufacturer and model of AEDs will be standardized across all University locations. All newly acquired AEDs will be purchased and installed though EHRS. Only approved items will be installed in an AED cabinet. The Temple University Safety and Security Committee must approve any exception.

5.5.1. Additional items to be placed with AEDs.

- CPR and AED instructions
- Spare electrode pads
- Nitrile gloves
- CPR barrier masks
- Scissors to easily remove clothing.
- Toweling to wipe hair for moisture form skin.

5.6. AED Unit Inspections and Maintenance

All AEDs must be inspected and maintained according to the manufacturer's recommendations.

- EHRS is responsible for the routine inspection and maintenance of the University centrally funded AEDs. The battery packs and pads will be replaced prior to their expiration dates and other supplies replaced as needed.

- Department AED Coordinators (or a designee) are responsible for the inspection, supplies, and maintenance of AEDs that are not part of the initial baseline and centrally funded AEDs.

- An annual survey of all AEDs will be coordinated by EHRS with the AED vendor to assure appropriate placement and maintenance of the units.

- Inspection and maintenance records must be readily available for review when requested.

5.7. Training

CPR and AED training is voluntary unless it is part of a written job description. Departments with AED units are strongly encouraged to provide training for staff. The availability of AED unit and trained personnel in the work environment allow for greater survival rates from a SCA events.

Combined CPR and AED training can be provided by recognized training programs such as, the American Heart Association or the American Red Cross.

5.8. Post Event Procedures

When an AED has been utilized in a rescue situation it is imperative to return the unit to service as soon as possible. It is assumed that TUPS will be involved in all situations involving the use of an AED and provide a written report of activities to EHRS.

The following actions must be taken after an AED unit has been used in an emergency:

- Remove the AED from service until supplies are replaced and the event documentation retrieved (if requested).
- Notify EHRS and all building occupants when a unit is out of service.
- Decontaminate the AED

6. PROGRAM EVALUATION & IMPLEMENTATION

The Automated External Defibrillator (AED) program at Temple University is continually evaluated to determine if areas for improvement exists. This program on the campuses continues to expand with the work and efforts of the Temple University Safety and Security Committee.

6.1. Implementation

EHRS will assess existing AEDs and identify opportunities for the placement of new and/or updated AEDs. EHRS will work with Departments throughout the University in the implementation phase of the program.

6.2. Performance Measures

- Document AEDs audits and inspection. These records are available in the EHRS department for review and inspection. A summary of these efforts will be made available on the EHRS website.

- Review AED events results on an annual basis.

6.3. Program Review

- This program will be reviewed annually and amended, as necessary. When it becomes apparent that the plan is deficient, it will be revised.

- Performance measures will be monitored at least annually.

7. RECORDKEEPING

EHRS will keep a record of AED Audits and associated documentation for at least 5 years.

8. REFERENCES

- American Heart Association, *2020 Guidelines for CPR and AED Use*, 2020.
- National Conference of State Legislatures, *State Laws on Cardiac Arrest and Defibrillators*, 2020.
- The Good Samaritan and Related Acts, 42 PA CSA § 8331-8338.
- U.S. Department of Health and Human Services and General Services Administration, "Guidelines for Public Access Defibrillation Programs in Federal Facilities," Federal Register 74, no. 156, 2009.
- U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Division for Heart Disease and Stroke Prevention, "Public Access Defibrillation (PAD) Interventions Addressed in State Law, in Effect June 2017," Centers for Disease Control and Prevention, 2017.
- U.S. Congress, House of Representatives, *Cardiac Arrest Survival Act of 2000*, 106th Cong., 2nd sess., 2000.
- U.S. Food and Drug Administration, *Product Classification: Automated External Defibrillators (Non-wearable)*, 2021.
- U.S. Food and Drug Administration, *FDA approved AEDs*, 2019.