AUTOMATED EXTERNAL DEFIBRILLATOR

STANDARD OPERATING PROCEDURES

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This document and additional occupational safety and health information is available at www.phila.gov/risk
INTRODUCTION

This program brings together state and local regulations, policies, procedures, training requirements and standards, and medical direction required for establishment of the City of Philadelphia’s Automated External Defibrillator (AED) Program.

Medical Rationale
(Cardiac Arrest Survival Act of 1999)

- Over 700 lives are lost every day to sudden cardiac arrest (loss of pulse and breathing) in the United States alone.
- Two out of every three sudden cardiac arrest deaths occur before a victim can reach a hospital.
- More than 95 percent of these cardiac arrest victims will die, many because of the lack of readily available life saving medical equipment.
- With current medical technology, up to 30 percent of cardiac arrest victims could be saved if victims had access to immediate medical care, including defibrillation and cardiopulmonary resuscitation.
- Once a victim has suffered a cardiac arrest, every minute that passes before returning the heart to a normal rhythm decreases the chance of survival by 10 percent.
- Most cardiac arrests are caused by abnormal heart rhythms called ventricular fibrillation. Ventricular fibrillation occurs when the heart’s electrical system malfunctions, causing a chaotic rhythm that prevents the heart from pumping oxygen to the victim’s brain and body.
- Communities that have implemented programs ensuring widespread public access to defibrillators, combined with appropriate training, maintenance, and coordination with local emergency medical systems, have dramatically improved the survival rates from cardiac arrest.

In attempt to reduce the morbidity and mortality associated with sudden cardiac arrest, the City of Philadelphia has developed an early cardiac care protocol that clearly defines the requirements for the training, use, and support of AED units. It has been proven that defibrillation can be effective when delivered to the victim of sudden cardiac arrest as quickly as possible. Our goal is to have life-saving personnel and equipment at the side of a cardiac arrest victim in 3 minutes or less.

All employees expected to use AEDs (i.e. staff responders) will do so only after completing the initial AED training and retrain every two years. Staff responders must also be trained in first aid and cardiopulmonary resuscitation (CPR) in case the victim(s) do not require the use of an AED, but may still benefit significantly from the provision of first aid and CPR. Each department with AED(s) will receive medical direction from a designated PA licensed physician from a centralized group of Medical Directors to direct and monitor departmental AED programs. The Risk Management Medical Director must approve the program on the use and placement of the AED(s).
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SECTION 1
AED Program Components

PART 1: DEFINITIONS

Audits are a medical review conducted by the Medical Director for an AED use.

Automated External Defibrillator or “AED” means an external defibrillator that after user activation is capable of cardiac rhythm analysis and will charge and deliver a shock, either automatically or by user interaction, after electronically detecting and assessing ventricular fibrillation or rapid ventricular tachycardia. The AED will only deliver a shock when necessary.

AED Program Administrator is the individual who, in consultation with the program’s Medical Director for issues of medical control, will supervise day-to-day management of the AED program. This individual should be a health care, safety, or personnel professional trained in AED/CPR who will be responsible for this workplace emergency program.

AED Program Coordinator is an individual located at each using facility who has certain responsibilities delegated to him or her from the AED Program Administrator. The AED Coordinator ensures that all elements of the written program are followed at their facility. This individual must be trained in AED/CPR.

AED Response Team is any individual or group of individuals that have been trained in First Aid, CPR and Defibrillation and designated to act as a responder in the absence of advanced medical care.

Advanced Life Support or “ALS” means the functional provision of advanced airway management, including intubation, advanced cardiac monitoring, manual defibrillation, establishment and maintenance of intravenous access, and drug therapy.

Basic Life Support or “BLS” means a specific level of prehospital medical care performed to sustain life that utilizes techniques such as artificial ventilation, cardiac massage, positioning and transport of patients.

Cardiopulmonary Resuscitation or “CPR” means a basic emergency procedure for life support, consisting of artificial respiration, manual external cardiac massage, and maneuvers for relief of foreign body airway obstruction.

Case Reviews are a continuing education program conducted by the Medical Director in which actual run sheets of patient care are reviewed with AED providers. Pre-hospital care, in hospital care & patient outcomes is discussed.
Internal Emergency Response System means a plan of action which utilizes responders within a facility to activate the “9-1-1” emergency system, and which provides for the access, coordination, and management of immediate medical care to seriously ill or injured individuals.

Medical Protocols are the specific care protocols for the staff responders when using an AED.

Professional BCLS is Basic Cardiac Life Support training for health care providers that include one and two-person CPR.

Program Medical Director the Program Medical Director is a licensed physician who oversees the department’s AED program and works closely with the Program Administrator. The roles and responsibilities of the Program Medical Director are described in Part 2.

Response Time is the time from time of dispatch to arrival at scene.

Staff Responder is an authorized and designated individual who has met the training standards of this document.

Survival is discharge from the hospital with or without neurological deficit.

PART 2: ROLES AND RESPONSIBILITIES

Departmental AED Program Medical Director [herein referred to as Program Medical Director]

The Program Medical Director of each department oversees the AED program in that respective department and works closely with the Program Administrator. The responsibilities of the Program Medical Director include helping to develop and/or approving medical aspects of the program. Specific areas where medical direction is important include providing the written prescription required to acquire an AED, assuring provisions are made for appropriate initial and continued AED training, and performing a case-by-case written review each time an AED is used on-site (standard information form available in Attachment A – to be filed by the AED Program Administrator). Additional responsibilities include establishing or integrating the AED program with a quality control system, development and regular review of the AED program and operational protocols, compliance with regulatory requirements, and ensuring proper interface with EMS. Risk Management’s Medical Director must approve all programs.

Note: A Department can request that the Risk Management Division’s Medical Director serve as the Program Medical Director. All requests will be evaluated by
the City Risk Manager. If the request is approved, the Risk Management Division Medical Director will serve as the Program Medical Director.

Departmental AED Program Administrator
The Departmental AED Program Administrator, herein referred to as Program Administrator, has the responsibility of:

- Coordinating the implementation and maintenance of the AED program, ensuring that all legal requirements are met on all issues related to AED operations.

- Providing all initial and refresher training to employees who wish to pursue and/or maintain AED certification. All Program Administrators must be trained in CPR/AED and First Aid. This training must meet the AED training requirements as defined by the Commonwealth of Pennsylvania and to the satisfaction of the departmental AED Program Medical Director.

- Maintaining a list of certified individuals who have been successfully trained in the use of AEDs

- Ensuring that all AED equipment inspections are successfully completed and the AED equipment is operating properly

- Reporting to the Program Medical Director and Facility Coordinator(s) any changes in legal requirements related to AED training and use.

- Supervises the day-to-day management of the AED program with the Facility Coordinator(s) and in consultation with the Program Medical Director for issues of medical control.

Facility AED Program Coordinator(s) [herein referred to as Facility Coordinator(s)] Responsibilities of each facility/building’s Coordinator(s) include supporting the Departmental AED Program Administrator by ensuring the department’s written AED program is carried out in their respective facility. All Facility Coordinators must be trained in CPR/AED and First Aid.

Departmental Training Officer(s)
In coordination with the Program Administrator and facility Coordinator(s), the Training Officer(s) may provide all initial and refresher training to Employees who wish to pursue and/or maintain AED certification. This training must meet the AED training requirements as defined by the Pennsylvania Department of Health and to the satisfaction of the Program Medical Director and the Program Administrator.
Staff Responder
A Staff Responder is trained and responsible for conducting response, use, and inspection procedures of AED equipment as established in this AED Standard Operating Procedures Manual. Any discrepancies in the AED equipment itself must be reported to the Program Administrator immediately. The Staff Responder must ensure that his or her AED certification is kept current by coordinating with the departmental Program Administrator to receive any initial and refresher training that is required.

AED Response Team
The AED Response Team is composed of Staff Responders. Responders must be reachable by radio, pager, cellular phone, or public announcement (PA) system during their work hours. Response team member names and contact information must be listed in the written program. A trained responder should have the ability to respond to the scene of a medical emergency within 3 minutes of receiving the emergency call/notification to respond. The responder should pick up the AED en route. Alternatively, the AED can be separately dispatched to the scene.

Risk Management Division Medical Director
Risk Management Division’s Medical Director is responsible for reviewing the initial set up of each department’s AED program, reviewing and approving any changes made to the Citywide AED program in the future, and may occasionally conduct case reviews of AED usage to ensure that appropriate medical protocols have been followed. The Risk Management Division’s Medical Director is responsible for reviewing and approving all protocols to be added as an appendix to this AED Standard Operating Procedures Manual.

Philadelphia Fire Department EMS Medical Director
Philadelphia Fire Department’s EMS Medical Director is responsible for serving as an advisor to departments with AEDs and providing guidance for initial implementation of AED programs. Each department should notify the Regional EMS office of the location of all their AED units and the make and model of the units. The EMS Medical Director of the Philadelphia Fire Department will be consulted, when required, by the Risk Management Division’s Medical Director for reviewing and issuing recommendations for the approval of protocols to be added as an appendix to this AED Standard Operating Procedures Manual.

Citywide AED Program Administrator [herein referred to as Citywide Program Administrator]
The Citywide Program Administrator is centrally responsible for the overall coordination and implementation of the City of Philadelphia AED Program. The Citywide Program Administrator is responsible for the development and updating of the written Citywide AED program. Other responsibilities include coordination between Risk Management Medical Director, Managing Director Office, Philadelphia Fire Department, and Departmental Administrators to ensure...
departments’ compliance with the Citywide AED program, to conduct periodic audits/evaluations of system utilization. The Citywide Program Administrator would also request of departments the assignment of any additional duties as needed per AED use, support or technological enhancements. In addition, the Citywide Program Administrator must be trained in CPR/AED and First Aid.

PART 3: AED SKILLS COMPETENCY REQUIREMENTS

A. Every expected AED user must obtain CPR/AED certification from the American Red Cross, the American Heart Association, or equivalent course on instruction approved by the Pennsylvania Department of Health in consultation with a technical committee of the Pennsylvania Emergency Health Services Council.

B. CPR/AED certification must be renewed every two years (or as determined by current standards) by attending the current hours of training, currently 4 hours of instruction on CPR/AED by one of the authorized entities mentioned above.

C. Records of the completion of CPR/AED training and certification will be kept by the Program Administrator.

D. Any staff responder who fails to successfully demonstrate the above requirements will no longer be authorized to provide AED emergency response until the above requirements are met, and permission for reauthorization has been received by the Staff Responder from the Program Administrator or the Program Medical Director.

PART 4: AED UTILIZATION REVIEW

When electrodes are applied and the AED is turned on, together these shall constitute "Use of the AED." After any use of the AED, the Staff Responder or Facility Coordinator(s) will do the following:

1. Notify the Program Administrator within 24-hours of “use of AED”.

2. Complete and sign the "AED Information Collection Form", provided in Memorandum B, and fax/mail the form and data printout from AED unit to the attention of the Program Administrator within 24-hours of the “use of AED”.

3. Program Administrator will:
   a. Review received data or if necessary download data from the used AED unit to a computer and/or print out a hard copy of the report.
   b. Forward copies of all data to the Program Medical Director.
   c. Retain a copy of the medical services report form (trip sheet).
d. Retain and file a copy of the AED Information Collection Form with the Program Medical Director’s comments after his or her review.

4. Within 7 days of use of the AED, the Program Administrator and/or the Program Medical Director will contact the Facility Coordinator(s) and the Staff Responders involved to arrange for an AED review. The review is designed to give the Facility Coordinator(s) and Staff Responders feedback on performance of the crew and the AED. The patient outcome will also be discussed.

5. When determined necessary by the Program Medical Director with the assistance of the Program Administrator, a review in person with the Staff Responder(s) involved will be conducted on all information about the call. However, an AED review may be done by telephone for any AED use where protocol was followed, proper analysis was made, and **no shock** was advised. Additional training may be recommended based on the review.

**PART 5: AED POST INCIDENT REVIEW**

The Program Medical Director shall review each AED use for at least the following criteria:

- How was the call for help received?
- Response time to scene
- Appropriate use of the AED
- Equipment properly and quickly setup according to protocol
- Patient’s pulse was checked according to protocol
- Patient was checked for signs of circulation
- First shock delivered within 90 seconds of initiation of use
- Adequate Basic Life Support maintained
- Reassessment adequate following every shock
- All protocols followed
- Time care was transferred to Advanced Life Support (ALS) personnel noted
- Appropriate transfer of care to ALS
- Facility Coordinator(s) or Program Administrator properly completes the “AED Information Collection Form” upon debriefing with the Staff Responder
- Data properly transferred to the Program Medical Director
PART 6: CORRECTIVE ACTION FOR DEFICIENCIES

A. Any corrective action recommended by the Facility Coordinator(s) shall be promptly brought to the attention of the Program Administrator. The Program Administrator and the Program Medical Director will decide on a case-by-case basis the appropriate corrective measures to take.

B. Any staff difficulties identified during the AED use will be addressed during the post incident review. The Program Medical Director will make the final decision if retraining is necessary for any Staff Responders, and requirements of such training. Staff Responders are protected under the Good Samaritan Law when responding to a medical emergency as per their training.

C. All deficiencies in machine performance shall be handled on a case-by-case basis by the City department that purchased the AED unit with the assistance of the manufacturer's representative if necessary.

1. If the machine is found to be malfunctioning, the Program Administrator shall be contacted immediately.

2. If the machine is found to be malfunctioning, the Program Administrator will place the AED unit out of service until it can be repaired or replaced by the Service representative.

3. Each City department shall maintain a maintenance log of all service calls related to AED machine deficiencies that occur within their department. Each Program Administrator will review the log relating to machine performance monthly.

PART 7: MAINTENANCE OF AED EQUIPMENT

The Program Administrator and each Facility’s Coordinator(s) shall make a commitment to ensuring the equipment is in proper working order. Each site will maintain a detailed log of regular inspections and all maintenance of each AED unit. Each AED unit must be maintained according to the manufacturer’s operational guidelines.

Additionally, each AED station must have proper dialing instructions included/attached for dialing 9-1-1 and/or calling the main security/reception if available. (Note: Indicate to users to dial 1-911 from City owned facilities or 9-911 from leased facilities as appropriate, to call for emergency medical assistance.)
Weekly:
- **Check the status indicator.** Verify that LED light(s) or screen on AED indicates instrument’s good status and readiness for use. An inspection label will be attached to the AED storage cabinet and weekly checks must be documented on label. Notify departmental AED Program Administrator if AED unit is not in good status, e.g. a picture of a wrench is depicted on the screen or lights indicate poor status. Anything other than an “OK” indicator will result in a full diagnostic review of the AED unit by the Program Administrator. If the problem is not found, the unit will be taken out of service and an authorized service provider will be contacted immediately. All AED trained individuals will be informed by the Program Administrator and/or Facility Coordinator(s) that the AED is out of service and again notified when the unit is back in service.

Monthly:
- The full Automated External Defibrillator Operator’s Checklist shall be completed **monthly** and after each AED use.
- **Check the supplies.** Ensure all supplies, accessories and spares are present and are in operating condition (not past the expiration date, if applicable).
- Check to verify that nothing is blocking easy access to the AED.
- Cabinet alarm tested (if applicable). Any problem with the AED cabinet alarm will be brought to the attention of the Program Administrator or Facility Coordinator.

Copies of the completed Automated External Defibrillator Operator's Checklist will be sent to the Program Administrator every thirty (30) days.

Every Two Years:
The Program Administrator or his or her designated representative will conduct site inspections of all AED equipment in conjunction with AED electrode pad replacement.

At a minimum, the Program Administrator or Facility Coordinator(s) replace all AED pads (electrodes).

The Program Administrator shall assess/review the appropriateness of each individual AED station location and identify any additional AED sites.

After Each Patient Use:
- The AED cabinet (if applicable) will be inspected for damage and the alarm tested.
- The AED unit will be inspected for damage, and/or contamination.
- The unit will be sanitized, as needed, using an antimicrobial cleaner according to the manufacturer’s directions. Universal Precautions will be used while cleaning the unit.
• Supplies will be checked and replaced as needed. Back up supplies will be ordered as needed.

• Ensure that directions instructing AED user(s) to immediately activate the EMS System by dialing 9-1-1 or calling the main security/reception desk to inform them of a medical emergency remain intact and are clearly visible.

PART 8: ANNUAL AED SYSTEM REVIEW

A. Once every year, the Program Administrator shall prepare a report for the Risk Management Medical Director that will contain at least the following:

1. Summary data on use and survivability.
2. Response times on all cardiac arrests and AED uses (including drills/exercises).
3. Personnel deficiencies in the operation of the AED.
4. AED machine deficiencies.
5. Any trends identified through the AED Program.
6. All deviations/changes from the citywide AED protocol.

B. Once every year, the Program Administrator shall review and modify as appropriate their written AED protocol as personnel and work practices evolve. A written report will be issued to the Citywide Program Administrator that addresses the following:

   1. How to improve survivability and patient outcome.
   2. Recommendations for changes to the program.
   3. Review other issues that may impact the program (i.e. program efficacy, outcome measures, additional training needs, security, etc.)

C. Once every year, the Citywide Program Administrator in collaboration with the Risk Management Medical Director shall review all components of the departmental AED program to assess the need to change location, means of access or protocols used to implement the AED equipment at its designated placement location.

D. Once every two years (while replacing AED electrodes), the Program Administrator or Facility Coordinator(s) shall administer a site review of each individual site. Determination of the need for any additional AED sites shall be included in the report.

PART 9: RECORD KEEPING

The Program Administrator will keep all recorded information on file for their department. All records will be readily available to the Program Medical Director.
The Program Administrator will maintain records of all trained Staff Responders that are currently participating in the AED program in their respective department as well as copies being maintained by departmental AED Facility Coordinator(s). The record shall include the Staff Responder’s:

1. Name
2. Work Address
3. Work Telephone Number
4. Work E-mail Address
5. Copy of CPR/AED certificate
6. Date of initial training
7. Dates of refresher training
8. Date of certification renewal
9. Dates of skill practice classes
10. Names of courses completed

Records will be kept of all instructors’ names and affiliations.

Records will be kept regarding the exact placement of all AED units, their serial numbers, dates of service/maintenance, any equipment replacements, and the expiration dates for the pads and batteries of these units by the Facility Coordinator(s).

The Automated External Defibrillator Operator's Checklist must be kept for 5 years.

The Program Medical Director must review every event in which an AED is used (or could have been used). The event must be reviewed to establish whether the patient was treated according to the established protocol. Other aspects of performance that can be evaluated include scene safety, efficiency, speed, ability to troubleshoot and interactions with professionals and bystanders.

Documentation and records of all dates of AED use and medical reviews of AED implementation must be kept by the Program Administrator. Documentation with details about each incident and AED report for each incident should be forwarded by the Facility Coordinator(s) to the Program Medical Director and Program Administrator.

PART 10: PROTOCOLS FOR DEPARTMENTAL PROGRAM APPROVAL AND IMPLEMENTATION

Any changes to the departmental AED program shall continue to comply with the Citywide AED program. Any identified deviations from the Citywide AED program shall be reported to and approved by the AED Program Medical Director prior to any implementation. If the noted deviations may possibly impact or
warrant changes to the written program, the Citywide Program Administrator must be notified of the issues in writing.

- Develop departmental AED program details per Appendix A
- Initial implementation: This will occur after review and approval of program by Risk Management Division
- Communicate aspects of program to all affected program personnel and employees
- Changes to the approved program: this will occur after review and re-approval by the Citywide Program Administrator
SECTION 2
TRAINING GUIDELINES

- **Initial Training Requirements**
  Each Program Administrator, Facility Coordinator and Staff Responder will receive 4 hours of initial training based on American Heart Association, American Red Cross, or an equivalent course of instruction approved by the Pennsylvania Department of Health in consultation with a technical committee of the Pennsylvania Emergency Health Services Council and the AED manufacturer's training and implementation operator guidelines. The didactic and practical training will emphasize hands-on skill practice.

- **Annual Refresher Trainings**
  Each Department will offer at least one refresher training for each CPR/AED trained Program Administrator, Facility Coordinator and Staff Responder every year.

- **Record Keeping and Training Documentation**
  Records will be maintained for initial training, retraining, and instructor training. All training records will be kept for a minimum of five years.
SECTION 3
INTERNAL RESPONSE & OPERATIONAL PLAN

INTERNAL RESPONSE

In case of Sudden Cardiac Arrest (SCA), initiate the Chain of Survival:

- Early access (9-1-1)
- Early CPR
- Early Defibrillation (AED)
- Early Advanced Care

- Develop and implement an AED Response System as part of the Departmental AED Program Detail Form (Appendix A) to ensure the coordination of a timely response by trained responders with an operable AED to the victim within 3 minutes. The AED Response Plan must include:
  - how emergency medical services will be contacted;
  - how the departmental AED Staff Responders will be activated; and
  - how building security (where available) will be notified.

- Upon ANY request for medical assistance, take closest AED to scene of emergency.

- Call 9-1-1 IMMEDIATELY (instructions to do so should be printed clearly on every AED unit).

- Quickly review proper steps for AED and CPR Procedures – see instructions.

- There should be as little delay as possible in responding to a medical call for help.

- Upon arriving on the scene, make sure the scene is safe. If not safe, either make it safe or wait for Emergency Medical Services (EMS) to arrive.

- Prior to assessing the patient, the AED operators shall protect themselves by putting on medical gloves. 2 pairs of gloves are to be kept with each AED. Eye protection should be worn in the presence of blood or other bodily fluids.

- Assess the patient.
If the patient meets defibrillation criteria, immediately proceed according to the operational plans.

Note: At the scene, all Trained Staff Responders and on-site patrons who follow the specified conditions in administering AED assistance are protected under the PA State Code Title 42, Section 11 (Good Samaritan Civil Immunity for Use of AED, Memorandum A) and shall not be liable for any civil damages resulting from rendering emergency care.

OPERATIONAL PLAN

Patient Criteria for AED Equipment Use:

- Patient assessment, care and treatment are to be used in conjunction with the AED equipment and actions. If obvious death criteria are present, resuscitation should not be started and the AED operator equipment should not be applied.

- If the victim has no signs of life (not breathing, moving or coughing) from an obvious traumatic situation, CPR should be initiated and the AED should be used. Transport to the nearest emergency room should not be delayed.

- If the patient meets all the following patient criteria, the trained Staff Responder shall apply the AED equipment to the patient for analysis:
  - Unconscious
  - Pulseless – If unclear, apply the AED.
  - No signs of circulation (no normal breathing, coughing, or movement in response to rescue breaths) – If unclear, apply AED.
  - If the patient is a child,
    - The child must be 8 years of age or over and 60lbs or more in order to use the standard adult issued pads with the AED.
    - If the child is less than 8 years of age or 55 lbs or less, the AED can only be used if it has been supplied with infant/child pads and the AED has the option to be used on an infant/child. The infant/child pads are available by prescription only.

If the patient does not meet all of the patient criteria, the AED equipment shall not be applied; standard care (the level of care, skill and treatment that a reasonable person in light of all relevant circumstances would exercise) shall be provided.

Do not spend a great deal of time attempting to find a pulse or evaluating signs of circulation. If unclear, apply the AED.
AED Operator Treatment Procedures:

1. If the patient is found in cardiac arrest and all patient criteria are met, or the patient develops cardiac arrest (witnessed cardiac arrest) and the patient criteria are met, the AED operator shall take the following actions after placing AED next to patient’s left ear.
   
   a. Establish unresponsiveness.
   b. Call 9-1-1 (instructions to do so should be printed clearly on every AED unit). NOTE: Dial 1-911 from City owned facilities or 9-911 from leased facilities. (This should be specific to each facility)
   c. Position the patient properly, ensure the patient is in a position/location for safe defibrillation, open the airway. (Remove patient from any standing water before attempting to use the AED)
   d. Establish breathlessness and give two full ventilations.
   e. Establish no signs of life. If patient is down for 4 minutes or more do 2 minutes of CPR.
   f. If available, assign someone to provide CPR. If no one can provide CPR, go directly to AED use.
   g. Remove the AED from its case and turn on power.
   h. Open adhesive defibrillator pads and cable set.
   i. Attach defibrillator pads (electrodes) to the patient in the proper locations (according to diagram on AED unit); stop all CPR and patient contact.
   j. Wait for equipment analysis.
   k. Follow AED voice prompts.

2. If the AED equipment indicates defibrillation is necessary, the AED will charge fully with an audible tone when ready for defibrillation. Ensure that the patient is in a position and location for safe defibrillation, move the patient to a better location if potentially unsafe for defibrillation. Designate individuals to physically hold arms shoulders’ length up and out to prevent contact with patient from by-standers. Proceed as follows and in compliance with AED treatment protocol:
   
   a. Follow voice and display commands. Clear yourself and anyone in contact with the patient or in contact with the electrically conductive material attached to the patient by announcing loudly “stand clear, stand clear, we’re all clear”. Visually ensure that no one has contact with the patient and press the shock button if unit instructs to do so. For AED units that deliver the electric shock automatically, physically ensure no one has contact with the patient when the machine indicates it will deliver a shock and that all persons stand clear of the patient when the machine indicates such through voice or visual
commands. After shock follow any voice and display commands.

b. If the patient is not in an EKG rhythm that is shockable check for signs of circulation. If no signs of circulation, start or continue CPR. After 2 minutes of CPR re-check for signs of circulation. Follow voice and display commands.

c. If at any time the patient returns to a state of exhibiting no signs of circulation, continue CPR.

d. Once applied to a patient, the AED equipment shall remain applied until EMS personnel with necessary defibrillation equipment assume care.

3. Arrival of Emergency Medical Services

When either the Fire Department or ambulance personnel arrive, transition care by:

a. Completion of current shock and analysis sequence, if applicable.

b. Give a report of initial condition of patient, actions taken, amount of shocks delivered (displayed on screen), changes in patient’s condition, etc.

c. If the Fire Department’s firefighters/EMS arrive prior to the Fire’s Medic Unit or private Company, **do not turn equipment OFF**. Give verbal report. Leave the equipment on and attached to the patient. The Fire Dept personnel will then either take over operation of the AED or instruct you to continue with care under their supervision.

d. When the ambulance company arrives, the paramedic or EMT will either detach the plug-in connector and attach to their equipment or remove defibrillator pads and attach their own equipment.

e. Follow instructions of any arriving EMS personnel.

4. Post-Event Procedure

The Staff Responder and Facility Coordinator(s) should document the SCA event on the AED Information Collection Form no more than 24 hours following the event and fax/mail all documentation to the Program Administrator of their department.
SECTION 4

ACKNOWLEDGEMENT STATEMENT TEMPLATE

FOR

AUTHORIZED AED STAFF RESPONDERS
City of Philadelphia Employee
Automated External Defibrillator Operator
Acknowledgement Statement

As a volunteer to participate in the City of Philadelphia Automated External Defibrillator (AED) Program as an AED Staff Responder, I agree to the following:

I have participated in and received certification in an American Heart Association, American Red Cross, or equivalent CPR training course.

I have participated in and received certification in an American Heart Association, American Red Cross, or equivalent AED training course.

Every two years (or as required by current standards), I will participate in, complete, and pass the required hours for CPR/AED certification course.

I will be required to receive the initial training course and one refresher training course each year when offered.

I have provided the Facility Coordinator or Program Administrator current contact information to be contacted with and to respond during a workplace medical emergency.

________________________
NAME

________________________
SIGNATURE

________________________
DATE

Please sign and return to the Program Administrator.
SECTION 5
LOCATION OF AEDS IN CITY FACILITIES

LOCATION OF AEDS IN FACILITIES

The current location of all AEDs in the Department will be documented and included as part of the Departmental AED Program Detail Form. Departments can use the table in Appendix B or something equivalent.

NOTE: A listing of City owned AEDs can be obtained from the Risk Management Division

AED Placement Criteria

The following criteria shall be followed for prioritizing placement locations in the event that multiple phases of AED placement are required:

1. Number of persons per day (employees and public) at the identified location;

2. Nature of work and duties being performed at the location (e.g. remote location, working around high voltage or hazardous materials); and

3. Presences of factors inherent in the reason members of the public are visiting specified City locations, (i.e. medical needs).

4. Access to an AED unit from anywhere in the facility can be accomplished within 3 minutes of initial emergency response.

The placement of AED(s) at each facility should meet the following guidelines:

• Number and placement of AEDs will allow for a response time of three minutes or less to retrieve an AED from anywhere within the facility.
• Placed in an accessible and secure location. This can also be accomplished by placement in a locked cabinet with a breakaway glass or a cabinet with a door alarm.
• Placement in accessible areas must be well marked and preferably near telephones. Ideal locations may be: mounted on the wall in the front lobby, at security/receptionist desk, by exits, near elevators, and near fire extinguishers.

All employees actively involved with the AED Program are required to know the location of the AED unit(s) located within their facility. The site(s) where the AED(s) have been placed are listed in the appendix relative to each department.

A list of trained volunteers at each facility will be stored with the AED.
Instructions to AED user(s) to immediately activate the EMS System by dialing 9-1-1 or calling the main security/reception desk to notify them of the occurrence of a medical emergency **MUST** accompany EVERY AED unit.
SECTION 6
PROGRAM FUNDING AND BUDGET SUMMARY

It is the responsibility of any Department that wishes to have an AED in the workplace to purchase and maintain the AED and be in compliance with the City Wide Automated External Defibrillator Standard Operating Procedure. Having an AED in the workplace has associated costs. Below is an example (as of October 2016) of the initial and on-going costs for having and maintaining an AED. Your costs may vary. This information is provided to provide an estimate of initial and on-going costs. Departments will have to budget for the initial and ongoing costs.

Example Initial Costs *(valuated as of October 2016)*

**Physio-Control LIFEPAK EXPRESS AED Small Business Value Package - $1835**

This package includes the following:

- Physio-Control AED LIFEPAK CR Plus with 8-Year Warranty
- LifePak CR Plus Carrying Case
- One Set of Adult Electrode Pads
- CHARGE-PAK Battery Installed
- Owner's Manual, Training DVD, and Quick-Start Guide
- Responder Premium CPR/AED Pack
  - *Quality Responder® CPR Mask* - a tough pocket-style mask with a one-way valve when flimsy face shields just won't do. Includes oxygen inlet valve.
  - *Two Pairs of Protective Gloves* - nitrile gloves (not made with natural rubber latex) for one with an extra pair for peace-of-mind.
  - *Heavy-Duty Emergency Shears* - real trauma shears just like those used by medical professionals to cut away clothing.
  - *Medical Prep Razor* – the same tool used in hospitals and ambulances for patient prep. Consumer twin blade disposable razors weren't designed for rescues in the field so we don't use them. Our prep razor is ideal.
  - *Absorbent Dry Towel* - an enormous 10 X 13-inch towel to dry your patient or use as an extra dry wipe.
  - *Antiseptic Towelette* - a high-quality, brand name antiseptic wipe, not just alcohol pads as found elsewhere.
  - *Equipment Towelette* - to clean and disinfect your AED or other equipment.
  - *Biohazard Bag* - to help you dispose of everything properly.

- "AED Equipped" Window/Wall Decal
- AED Check® Tag
- Physician's Prescription
- AED sign
- Wall Cabinet
Medical Direction and Program Management ($150)

On-Going Costs
- Departmental Medical Oversite $150 per year
- Training (Red Cross - Adult First Aid, CPR, AED) $81 per person every 2 years
- AED battery/AED Pads $120 every four years
- Responder Premium CPR/AED Pack $30 as necessary
- 9-volt battery for the cabinet alarm $4.00 per year

There are potentially unplanned costs for the repair of a malfunctioning AED.
SECTION 7
MEMORANDUMS
SECTION 7 – A

Good Samaritan Civil Immunity for Use of AED

Pennsylvania House Bill No. 1897

Approved and filed in December 15, 1998

Supplements Section 11 of Title 42 of the Pennsylvania Code

And as amended by Senate in July 2012
JUDICIAL CODE (42 PA.C.S.) - GOOD SAMARITAN CIVIL IMMUNITY FOR USE OF AUTOMATED EXTERNAL DEFIBRILLATOR AND NONMEDICAL GOOD SAMARITAN CIVIL IMMUNITY

Act of Jul. 5, 2012, P.L. 1081, No. 125
Session of 2012
No. 2012-125

SB 351

AN ACT

Amending Title 42 (Judiciary and Judicial Procedure) of the Pennsylvania Consolidated Statutes, in particular rights and immunities, further providing for Good Samaritan civil immunity for use of automated external defibrillator and fonnomedical good Samaritan civil immunity.

The General Assembly of the Commonwealth of Pennsylvaniagreeby enacts as follows:

Section 1. Sections 8331.2 and 8332 of Title 42 of the Pennsylvania Consolidated statutes are amended to read:

§ 8331.2. Good Samaritan civil immunity for use of automated external defibrillator.

(a) General rule: Any person who in good faith acquires and maintains an AED or uses an AED in an emergency shall not be liable for any civil damages as a result of any acts or omissions by an individual using the AED, except if acts or omissions intentionally designed to harm or any grossly negligent acts or omissions result in harm to the individual receiving the AED treatment.

(b) Requirements - Any person who acquires and maintains an AED for use in accordance with this section shall:

(1) Ensure that expected AED users receive training pursuant to subsection (c).

(2) Maintain and test the AED according to the manufacturer's operational guidelines.

(3) Provide instruction requiring the user of the AED to utilize available means to immediately contact and activate the emergency medical services system.

(4) Assure that any appropriate data or information is made available to emergency medical services personnel or other health care providers as requested.

(c) Training - For purposes of this section, expected AED users shall complete training in the use of an AED consistent with American Red Cross, American Heart Association or other national standards as identified and approved by the Department of Health in consultation with the Pennsylvania Emergency Health Services Council.

(d) Obstruction of emergency medical services personnel - Nothing in this section shall relieve a person who uses an AED from civil damages when that person obstructs or interferes with care and treatment being provided by emergency medical services personnel or a health professional.

(e) Definitions - As used in this section, the following words and phrases shall have the meanings given to them in this subsection:
Automated external defibrillator (AED). A portable device that uses electric shock to restore a stable heart rhythm to an individual in cardiac arrest.

"Emergency." A situation where an individual is believed to be in cardiac arrest and is in need of immediate medical attention to prevent death or serious injury.

"Good faith." Includes a reasonable opinion that the immediacy of the situation is such that the use of an AED should not be postponed until emergency medical services personnel arrive or the person is hospitalized.

§ 8332. Emergency response provider and bystander good Samaritan civil immunity.

(a) General rule.--Any person, including an emergency response provider, whether or not trained to practice medicine, who in good faith renders emergency care, treatment, first aid or rescue at the scene of an emergency event or crime or who moves the person receiving such care, first aid or rescue to a hospital or other place of medical care shall not be liable for any civil damages as a result of rendering such care, except in any act or omission intentionally designed to harm or any grossly negligent acts or omissions which result in harm to the person receiving emergency care or being moved to a hospital or other place of medical care.

(c) Exception.--This section shall not relieve a driver of a vehicle, including an ambulance or other emergency rescue vehicle, from liability arising from an operation or use of such vehicle pursuant to subsection (a).

(d) Definition.--For the purposes of this section, the term "emergency response provider" includes Federal, State and local emergency public safety, law enforcement, emergency response, emergency medical services personnel, response teams, agencies and authorities, excluding hospital emergency facilities and related personnel.

Section 2. This act shall take effect in 60 days.

APPROVED--The 5th day of July, A.D. 2012. TOM CORBETT
SECTION 7 – B

AED Information Collection Form
CITY OF PHILADELPHIA
[ENTER DEPT. NAME HERE]
AED INFORMATION COLLECTION FORM

Patient’s Name: __________________________________ Date of Medical Incident: ____________________

Date of Birth/Approximate Age: ________________________  □ Male       □ Female

Date of Medical Incident: _____________________________

AED used within 3-5 minutes of initial collapse?  □ Yes  □ No

Name of the AED Staff Responder(s): ____________________________

□ AED user was: □ Untrained Bystander □ Trained Bystander □ Trained First Responder

Local EMS called to the scene?  □ Yes  □ No

If “Yes”, provide approximate RESPONSE time for EMS to arrive on scene: _________(Minutes)

If you answered “no”, please state the reason(s) why EMS was not called.

________________________________________
________________________________________

Victim transported to a medical facility?  □ Yes  □ No

If you answered “yes”, please state the name of the facility.

________________________________________
________________________________________

If you answered “no”, please indicate why the victim was not transported.

________________________________________
________________________________________

Medical Outcome of Patient (if available): ____________________________

Name & Title of Individual Completing Form (Print): ____________________________

Signature: ____________________________________________________________

Contact phone number and email address: ________________________________

Date: ____________________________

Program Medical Director to Complete Section Below

AED Print Out Review/Comments:

________________________________________
________________________________________

Additional Comments/Recommendations:
Medical Director's Name (print): 

Medical Director's Signature: 

Date: 


SECTION 7 – C

Operator’s Monthly Checklist
### Automated External Defibrillator

**OPERATOR’S MONTHLY CHECKLIST**

- **Facility/Address:** [Name, Street, City, State, Zip Code]
- **Specific Location of AED:**
- **AED #:** [Dept.# - 00X, unique identifier]
- **Battery Expiration Date:**
- **Pads/Cartridge Use-By-Date (Adult):**
- **(Child – if available):**
- **Name:** ______________________ **Signature**_____________________________

<table>
<thead>
<tr>
<th>Instruction</th>
<th>Recommended Corrective Action</th>
<th>Put “√” in box after completing each instruction.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Confirm that the &quot;Status Indicator&quot; on the handle indicates &quot;OK&quot; (or Green Confirm Daily Automatics Self tests).</td>
<td>If a wrench or battery indicator is displayed, contact the Program Administrator immediately.</td>
<td></td>
</tr>
<tr>
<td>2. Examine the AED for foreign substances.</td>
<td>Clean the device.</td>
<td></td>
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<tr>
<td>3. Examine the AED for cracks or other damage.</td>
<td>Contact Program Administrator.</td>
<td></td>
</tr>
<tr>
<td>4. Confirm that the packet of defib pads has not been opened. Check for damage or wear to the cables. Verify the cables are securely connected to the AED.</td>
<td>Contact Program Administrator.</td>
<td></td>
</tr>
<tr>
<td>5. Confirm that the following supplies are present: Responder kit (scissors, razor, protective device for CPR, antiseptic wipe, 2 sets of gloves), Operating Instructions, Spare set of defib pads,</td>
<td>Contact Program Administrator.</td>
<td></td>
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<tr>
<td>6. If AED is stored in an alarmed cabinet: Test that cabinet alarm is working</td>
<td>Contact Program Administrator.</td>
<td></td>
</tr>
<tr>
<td>7. Check that nothing is blocking easy access to AED.</td>
<td>Remove obstructions.</td>
<td></td>
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<tr>
<td>8. Out of Service Recommended</td>
<td>YES / NO</td>
<td>Date</td>
</tr>
</tbody>
</table>

Fax or mail copy of this form for each month by the 5th of following month to Attention of: AED Program Administrator at: ____________________
APPENDIX A
Departmental AED Program Personnel

[Enter the Following Information for Each Person i.e. Program Administrator, Facility Coordinator, Medical Director and Response Team Members]

Name:
Title:
Work Address:
Work Telephone Number:
Work E-mail Address:

Departmental Variances to Citywide Program

[List in Detail Here]

Placement of AEDs within Facility

See APPENDIX B

Training Program

[Enter Training Source Details Here]

Maintenance/Inspection Responsibilities

[Enter Details on Who Will Perform All Maintenance/Inspections Functions]

AED Response System

[Provide the steps for initiating and responding to an emergency potentially requiring the use of an AED Note: Below is an example AED Response Plan]
EXAMPLE AED RESPONSE PLAN

AED Response Plan for the Office of the Director of Finance, Risk Management Division, 1515 Arch Street 14th Floor

A. BACKGROUND
The Risk Management AED SOP requires that an AED Response Plan be developed. The purpose of the AED Response Plan is to specify how internal responders and community EMS will be notified when a response is necessary.

The Risk Management AED is located in a cabinet at the west end of the 14th floor elevator hallway near the main entrance to Risk Management office suite and the hall phone.

The tenants on the 13th, 14th and 15th floors will be notified that the AED is available and instructed on how to activate the AED Response Plan in an emergency. Tenants will be reminded periodically of the AED Response Plan.

The Facility AED Program Coordinator will recruit volunteers from staff that have a current CPR, AED certification to be AED Staff Responders. The Facility AED Program Coordinator will train the receptionist(s) on their role in the AED Response Plan. The Facility AED Program Coordinator will provide the receptionist(s) with the current list AED Staff Responders and their phone numbers. The AED Staff Responder names and phone numbers will be posted near the reception desk so that the information is accessible to the receptionists and staff. The AED Staff Responder List will be updated annually or as needed by the Facility AED Program Coordinator.

Instructions on activating the AED Response Plan will be posted at the AED.

The list of Risk Management AED Staff Responders will be kept with the AED.

The AED Response Plan will be incorporated into the Office of the Director of Finance AED SOP.

B. RISK MANAGEMENT AED RESPONSE PLAN

1. EMS should be contacted immediately by any individual
   a. cell phone dial 911 or
   b. land line phone dial 9-911 to report the emergency.
   
   NOTE: The caller must stay on the line with the 911 dispatcher until told by them that they can hang up.

2. PROCEDURE FOR NORMAL WORKING HOURS; Monday through Friday 8:30am to 5:00pm
   a. Notify the Office of the Director of Finance, Risk Management Receptionist by
      i. knock on door or
      ii. cell phone dial 215-683-1713 or
      iii. land line phone dial 3-1713 and
   b. notify the Receptionist of the emergency.
c. The Receptionist will ask for the location and nature of the emergency (floor room number).
d. The individual retrieving the AED should immediately proceed with the AED to where it is needed. The Risk Management AED Staff Responders will meet the person at the emergency site.

**NOTE:** The AED is stored in a locally alarmed cabinet. The Receptionist and Risk Management staff will be trained to respond to the local alarm to offer assistance in initiating the Risk Management Response Plan.

e. Using the phone list of Risk Management AED Responders, the Receptionist will notify AED Staff Responders of the emergency and its location.
f. The Receptionist will also call Building Security (215-683-0036) and notify them of the emergency and the location of the emergency.
g. AED Staff Responders will respond to the emergency and offer assistance consistent with their CPR/AED training.
h. Once EMS arrives AED Staff Responders will follow the instructions of EMS personnel.

3. **PROCEDURE FOR OFF HOURS**
   a. Contact Building Security for all medical emergencies
      i. Cell phone dial 215-683-0036
      ii. Hall phone dial 3-0036

C. **INSTRUCTIONS POSTED ON AED**

**Notify EMS:**
   a. Cell phone dial 911 or
   b. Hall phone dial 9-911

**Notify Risk Management Receptionist:**
   a. Knock on interior door
   b. Cell phone dial 215-683-1713 or
   c. Hall phone dial 3-1713

Immediately proceed with the AED to where it is needed. The staff responders will meet you at the emergency site.

**OFF HOURS: CALL BUILDING SECURITY:**
   a. Cell phone dial 215.683-0036 or
   b. Hall phone dial 3-0036
APPENDIX B
LOCATION OF AEDs

[ENTER DEPARTMENT NAME]     [ENTER DATE]

<table>
<thead>
<tr>
<th>AED MAKE/MODEL</th>
<th>AED SERIAL NUMBER</th>
<th>FACILITY STREET ADDRESS</th>
<th>LOCATION IN FACILITY</th>
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