

Chapter:	Health and Safety
Title:	Automated External Defibrillator (AED) Policy and Procedure
Current Effective Date:	11/14/11
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PURPOSE

The purpose of an Automated External Defibrillator (AED) Program is to increase the rate of survival for people who have sudden cardiac arrest. The AED Program provides specific guidelines for training, maintenance, and the use of AEDs to make it possible for a Voluntary AED Team to administer defibrillation prior to the arrival of Emergency Medical Services (EMS). In addition, staff who have not received training are encouraged to provide “Bystander CPR” until trained personnel arrive at the scene or until the AED arrives and the Emergency Medical Dispatch Operator provides instruction on AED use.

POLICY

The Division of Public Health AED Program shall:

1. Implement a Voluntary Employee AED Response Program.
2. Designate individuals to perform the following essential roles:
 - Medical Advisor
 - AED Site Coordinator
 - Voluntary AED Team

Note: Staff will find the names of the Medical Advisor, AED Site Coordinator and the Voluntary AED Team on bulletin boards in the facility.

3. Install an AED in buildings with a large number of staff when funding becomes available and team members are selected and trained.

Note: Not all DPH office locations have AED units. Currently, AEDs are found in the State Laboratory of Public Health, Cooper Building, Cotton Building, Buildings 1, 2, and 3 on the Six Forks Road Campus.

DEFINITIONS

Automated external defibrillator (AED): An AED administers an electric shock through the chest wall to the heart. Built-in computers assess the patient’s heart rhythm and determine if defibrillation is needed; the AED then advises if administering of shock is necessary.

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Bystander CPR: The bystander should provide Hands-Only™ (compression-only) CPR for the adult victim who suddenly collapses, with an emphasis to push hard (at least two inches deep) and fast (at least 100 compressions per minute) on the center of the chest, and follow the directions of the EMS dispatcher to use the AED.

Staff: Any individual working in the building i.e. contractors, temporary staff, interns, etc.

Sudden cardiac arrest (SCA): SCA occurs when the electrical impulses of the human heart malfunction causing a disturbance in the heart's electrical rhythm called ventricular fibrillation (VF). This erratic and ineffective electrical heart rhythm causes complete cessation of the heart's normal function of pumping blood resulting in sudden death. The most effective treatment for this condition is the administration of an electrical current to the heart by a defibrillator, delivered within a short time of the onset of VF.

LIABILITY AND GOOD SAMARITAN LAWS

North Carolina law provides immunity from civil liability for those who provide CPR and act in good faith when using an AED to attempt to save a life. This immunity includes untrained staff who provide "Bystander CPR" and staff who choose to use the AED under the instruction from the Emergency Medical Dispatcher.

ROLES AND RESPONSIBILITIES

Staff shall:

- Know the street address of the work location and how to call Emergency Services, by dialing 9-911.
- Know the exact physical location of each AED in the building.
- Know the name and location of everyone on his/her floor who is on the AED Team.
- Know how to respond as outlined in this procedure when they find an unconscious person or a person having a medical emergency. Take action during a real emergency and must participate in AED drills when they hear a cry for "HELP".
- Be encouraged to do "Bystander CPR" (hands-only chest compressions) until the AED team member arrives and to use the AED under the direction of the Emergency Medical Dispatcher.
- Be aware of the symptoms of a heart attack, i.e. uncomfortable pressure, squeezing, fullness or pain in the center of the chest that lasts more than a few minutes, or that goes away and comes back. Symptoms can include pain or discomfort in one or both arms, the back, neck, jaw or stomach, breaking out in a cold sweat, nausea or lightheadedness. Shortness of breath may occur with or without chest discomfort.

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Medical Advisor shall:

- Provide medical direction for use of the AED.
- Write a prescription for the AED.
- Review and approve guidelines related to the use of the AED and CPR.
- Evaluate post-event review forms and digital files downloaded from the AED.
- Inform the Safety Officer of new health information that needs to be communicated to the team and staff.
- Maintain compliance with the Health Insurance Portability and Accountability Act of 1996 as follows:
 - Protected Health Information (PHI) obtained as a result of emergency use of the AED unit will be treated as confidential information in compliance with the Health Insurance Portability and Accountability Act of 1996 (HIPAA).
 - An individual's PHI is to be shared only with persons directly involved in that individual's care.

Supervisor/Manager shall:

- Support the AED team members who participate in the AED Program with approved time away from his/her job to attend:
 - Annual CPR/AED/FIRST AID training
 - Refresher training (practice drills)
 - Crisis events
 - Post-event reviews
 - AED Team meetings
- Ensure all staff are trained on the AED Procedure and know the location of AEDs in the building.
- Encourage all staff to participate during a medical emergency and during an AED Drill.
- Encourage staff to learn "Hands Only" CPR which is a quick 30 minute class.

DPH Safety Officer shall:

- Review the AED policy annually and update as needed.
- Act as a liaison to communicate information to AED Site Coordinators.
- Review monthly inspection reports.
- Notify Site Coordinators when software updates are required.
- Provide annual AED/CPR/First Aid and Blood Borne Pathogen Training.
- Provide refresher training through hands-on classroom practice or by simulating a real emergency involving local staff in the drill at least once a year.

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- Notify the Heart Disease and Stroke Prevention Branch of the North Carolina Division of Public Health of the AED deployment and post-event follow-up.

AED Site Coordinator shall:

Each DPH location with AED equipment will have an AED Site Coordinator.

- Maintain a current AED Team Member list that includes the name of the Medical Advisor, the AED Site Coordinator, all AED Team Members with the office location and phone number of each.
- Send the AED Team list to every employee in the building and post the list beside every AED, on central bulletin boards in the facility and at the receptionist desk.
- Ensure certification credentials are current, and remove individuals from the AED Team list when the team member resigns from the program or when his/her training lapses.
- Track training due dates and ensure training is completed and forward all training documentation to the DPH Safety Officer (if training is not completed by DPH Safety Officer).
- Coordinate annual and refresher training with the DPH Safety Officer.
- Conduct a monthly inspection that includes checking the AED battery status, noting pad expiration dates and verifying that resuscitation supplies are present.
- Send the monthly inspection reports to the DPH Safety Officer.
- Serve as a central point of contact for the DPH facility with regards to AED support and notify the Division Safety Officer at (919) 707-5465 when the AED is used.
- Arrange an immediate debriefing after an incident with all staff that participated in the incident and send the DPH Safety Officer and the AED Team a confidential copy of the information gathered in [Post AED Event Evaluation](#).
- Arrange with the AED sales representative (when possible) to download electronic files captured by the AED after an event and give this data to the hospital emergency room and the Medical Advisor ASAP but no later than 72 hours after the incident.
- Notify all personnel when the AED is removed from service and when it returns.
- Request that the AED manufacturer send product notifications, including safety alerts that affect the operation, safety, and upgrading of the AED equipment.
- Ensure the AED equipment and accessories are maintained to the most current level of software upgrades and functionality by completing the necessary paperwork at the beginning of the budget cycle to ensure funding for anticipated expenditures, i.e. battery and electrode pads with known expiration dates.
- Ensure that all AED(s) are registered with Wake County EMS and 9-911 call center.
- Promote training of “Hands Only” CPR for non-trained personnel by routing the 30 minute training kit to any staff that wants to learn or by coordinating classes.

Voluntary AED Team Member shall:

- Attend annual AED/CPR/First Aid and Blood Borne Pathogen Training.

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- All team members must be able to perform the following:
 - Receive emergency calls from internal sources and respond to the emergency.
 - Call 9-911 to initiate Emergency Medical Services response.
 - Assess the victim's condition to determine if the victim is unconscious and not breathing.
 - Initiate CPR technique on victim until the AED arrives (if not breathing).
 - Turn on the AED and follow directions.
 - Relinquish CPR/AED support to EMS when EMS indicates they are ready to take over.
- Document all events that are directly related to the occurrence and provide copies to the AED Site Coordinator immediately. (See [Post AED Event Evaluation](#))
- Maintain the CPR/AED/First Aid certification through DPH sponsored CPR/AED/First Aid training or other approved training courses. If a team member is no longer able to meet this requirement or carry out the functions, he/she must immediately notify the AED Site Coordinator.
- Bring a breathing barrier to any emergency.

TRAINING REQUIREMENTS

- The AED team members will receive Blood Borne Pathogen Training including glove removal, and American Red Cross or American Heart Association AED/CPR/First Aid training annually.
- Personnel assigned to buildings with an AED must review this procedure and complete on-line training within 30 days of hire and when the procedure changes significantly. Training will be posted on the DPH website.
- The American Heart Association recommends a regular review of CPR and AED skills every 6 months for all potential AED users. Examples of how to review skills include performing mock drills or attending a practice session. The goal is to have trained responders practice activating the emergency response system, and using the AED within 3 minutes of collapse.
- Training documentation includes the following: date, content summary, trainer's name, and name and job title of staff.
- Documentation shall be maintained for three years.

EQUIPMENT

- AEDs must be purchased through Term Contract 465B.
- The location of AEDs in DPH facilities follows:

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- State Laboratory of Public Health - beside the elevator on Levels 1, 2, 3, 4, 5
 - Cooper Building - beside the elevator on Levels 1, 3 and 5
 - Cotton Building - beside the elevator on Level 2
 - Six Forks Buildings 1, 2, and 3 - beside the elevator on Level 1
- Each AED will have one set of defibrillation electrode pads connected to the device and one spare set of electrode pads. Note: The State Laboratory of Public Health has five AEDs and is exempted from having a spare set of electrode pads. The extra set of electrode pads will be obtained from the 4 additional AEDs in the building during an emergency.
 - One resuscitation kit will be connected to the handle of the AED. This kit will contain two pairs of latex-free gloves, one safety razor, one drying pad, scissors, one facemask barrier device, and water base hand wipes or hand sanitizers.
 - All equipment and accessories necessary for support of medical emergency response situations should be maintained in a state of readiness.

Note: The only AED that is equipped with child adapter key and pediatric electrodes is in the Cooper Building on Level 1. The 2010 American Heart Association guidelines now allow for adult pads to be used on children and infants if a pediatric electrode is not available.

Note: **Two full minutes of CPR must be attempted to revive the child before using an AED.**

AED CARDIAC ARREST RESPONSE PROCEDURE

For conscious victims having the symptoms of a heart attack, call 911 and if there is no serious bleeding, no signs of stroke and it is determined the victim does not have allergies to aspirin, give two low dose aspirins 81mg or 1 regular strength aspirin 325 mg (if available).

Team members will not enter a potentially dangerous environment to attempt to save a life, i.e., a manhole, the middle of the roadway, a burning building, or a lab with a hazardous airborne release. The scene must be secured and trained personnel with the proper personal protective equipment must move the victim out of the hazardous environment to a secure location before care can be provided.

1. When a medical emergency occurs, the **first** employee on the scene or the receptionist (if present) shall:
 - Shout loudly for help, note the time and call emergency services 9-911 (if alone) or direct a co-worker to call.
 - Assign someone to notify the AED Team members on that floor and then to contact other team members at the site to provide support. Utilize the AED email distribution list (if available).
 - Assign someone to meet EMS outside to escort them into the building and to the scene.

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- Assign someone to get the AED/Resuscitation kit, notepad/pen and bring it to the scene.
 - Document who is doing each role and note the time and go back to the victim to inform the team that all calls have been made. An AED team member might take over the role of timekeeper. (See [Post AED Event Evaluation](#))
 - Any employee may be asked to provide crowd control.
 - **Receptionist:** confirm that all actions listed above have occurred. If any of these tasks have not been completed, the receptionist should take on these responsibilities.
2. When speaking with Emergency Medical Services do the following:
- Request an ambulance.
 - Provide your name, phone number, street address, nature of the emergency.
 - Stay on the line answering questions until directed to hang-up.
 - Request confirmation of the building location from the EMS dispatcher.
 - Inform the emergency operator that someone will meet the EMS team outside of the front to direct them to the location of the medical emergency.
3. The first AED Team member who arrives at the location of the medical emergency should:
- Make sure the scene is safe.
 - Check if the person responds. Tap him or her and shout, “Are you OK?” If he or she doesn’t move, speak, blink or otherwise react, then he/she is not responding.
 - Check for breathing for 5 to 10 seconds.
 - If not breathing or if only gasping raise all clothing, including shirt and bra, and start compressions.
 - Give 30 compressions at a rate of at least 100 per minute and a depth of two inches. After each compression let the chest come back up to its normal position.
 - If this is a witnessed collapse, compressions will be given without breaths until the AED arrives.
 - Rescue breathing along with compressions will be provided when a breathing barrier is available and no one witnessed or heard the victim collapse and in any situation when two team members are responding to the incident.
 - The second team member arriving at the scene will begin two person CPR under the direction of the first member. Team members must reverse roles every two minutes. The members will coach each other to establish an effective rhythm, effective compressions and minimal breaths.
 - When the AED arrives one of the team members will turn on the AED, remove clothing that is in the way of applying the AED pads, and shave excess hair off of the skin, apply the AED pads while the other team member provides uninterrupted chest compressions.
 - Then the victim will be cleared from contact with any person prior to analyzing and ensure at least 4 feet of separation from cell phones or other mobile radio frequency equipment. The victim is cleared for a second time during charging just prior to shock instructions. If the AED team has not arrived, bystanders can follow EMS directions to use the AED.

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- Follow prompts of the AED unit.
- Upon arrival of EMS, the AED team member will continue the process of administering CPR/AED until EMS personnel indicate they are ready to take over.
- The team member will remain at the scene to provide EMS with assistance as needed.
- The team member should provide EMS with a brief summary of the emergency details, including any pertinent information about the victim and/or the emergency situation.

Note: The victim's chest will be exposed so respect must be maintained by insisting that personnel not assisting in the response be asked to leave the immediate area.

4. The employee's supervisor and HR will be contacted to ensure that the emergency contact for the person is notified. The Supervisor must have the emergency contact information for all employees, interns and temporary staff.
5. The team member should take the AED to the Site Coordinator for the post event assessment. The Site Coordinator will immediately attempt to arrange for download of information onto a pdf file and send the information to the hospital emergency room where the victim was transported and provide a copy to the DPH Medical Advisor.
6. Staff providing direct support during an emergency or any employee who is negatively impacted as a result of the emergency are encouraged to debrief with a health professional after an event to protect his/her emotional health.

DOCUMENTATION OF THE EMERGENCY SITUATION

After the emergency event, the AED Site Coordinator will work with the AED team members involved to complete the [Post AED Event Evaluation](#) and deliver the form to the DPH Medical Advisor, Safety Officer and DPH Human Resources for placement in the workers confidential medical file.

DOCUMENT HISTORY

08/28/07: Initial approval of procedure
04/21/08: Revision 1
03/07/11: Revision 2
11/14/11: Revision 3