

NETWORK 2 SEMI-AUTOMATIC EXTERNAL DEFIBRILLATION (AED) PROGRAM

1. PURPOSE: To provide state of the art emergency early access cardiac defibrillation to all patients, residents, visitors and staff in VISN 2 facilities.

2. POLICY:

a. Medical VA Care Line, Management Systems Care-Line and the Facility Fire Departments (where applicable) will coordinate this program to assure that semi-automatic defibrillation services are available for patients, residents, visitors and staff in the event of cardiac arrest.

b. This program shall apply to all areas of the facility outside the confines of the main Medical Center, i.e. Community Based Outpatient Clinics (CBOC's), Community Day Care Centers, Community Treatment Centers, and in some circumstances areas within the confines of the respective Medical Centers.

c. Those sites, within the confines of the Medical Center, where AED's will be made available will be identified by their geographic distance from first response teams (Code Teams) and the ability to provide a timely first response to a cardiac arrest.

4. PROCEDURES:

a. Semi-automatic external defibrillators, (AEDs) shall be placed at designated sites in each facility as determined by the appropriate staff and/or committees at each location.

b. The qualified/certified user will perform a daily operational check/inspection of the unit at the beginning of day to assure it is operational. Qualified members of the Bio-Medical Department will conduct operational checks of the equipment every six months.

c. In the event of a medical emergency, staff should follow the guidelines indicated in the Chain of Survival Protocol. (See attachment A).

d. Upon arrival of the Emergency Medical Services (EMS), qualified EMS providers will determine if the emergency involves a confirmed full arrest, and assume control according to their standards. If the facility has a First Response Team (Code A, Code 4, etc.) and the ability to care for the patient in house, then the appropriate medical teams shall assume responsibility and provide ongoing care and transfer to the emergency department.

e. The AED Program will have a quality control review. This will include a review of the completed AED Quality Assurance Report, Appendix A (see attachment). This report will be filled out by the staff that operated the AED and sent to the appropriate Medical Center Committee for review (VISN 2 Medical Centers maintain their

uniqueness and Committee structure may vary at the individual Medical Centers), e.g. ICU Committee, ACLS Committee, and Code Committee.

f. The local Chief of Staff or his/her designee will be assigned as the Medical Control Physician for the program.

g. All identified clinical staff will maintain Cardiopulmonary Resuscitation (CPR) certification and shall participate in AED review training annually, except for those disciplines where training is mandated more often, e.g. Fire Department every 90 days. This training will be documented in the Employee Training records. Training on the use of the AED only (not in conjunction with CPR) for non-clinical staff will be provided and reviewed annually.

h. Management Systems will provide preventative maintenance and certification of the AED as needed.

4. RESPONSIBILITIES:

a. Care Line Managers and/or their designee will assure that quality of care is maintained during the use of the AED by having quality assurance reviews conducted and corrective actions implemented if necessary.

b. Management Systems Managers will assure that an effective program for preventative maintenance and repair of the AED is in place.

c. The Chief of Staff and/or their designee, will review all AED Quality Assurance Reports, Fire Department SOP's relating to the AED Response and Operation, and make any necessary recommendations for change or improvement.

d. Care Line Managers and/or their designee will assure that the AEDs are inspected daily according to VISN 2 policy and procedure regarding AED usage.

e. The Management Systems Managers and the Fire Chief/Safety Officer will assure that the firefighters (where applicable-Bath and Canandaigua) complete initial and refresher AED operation and maintenance training.

f. Care Line Managers and/or their designee will assure that staff/users complete initial and annual AED training.

5. REFERENCES:

American Heart Association: External Defibrillation Treatment Algorithm, December 2000

New York State Department of Health: Public Law: Article 3: Bureau of Emergency Medical Services Protocols: March 16, 1999

Fire Department Standard Operating Procedure #E0018, SEMI-AUTOMATIC EXTERNAL DEFIBRILLATION PROTOCOL, June 23, 1999.

Fire Department Standard Operating Procedure #E002, AMBULANCE OPERATION, June 23, 1999.

6. RESCISSIONS: None.

7. FOLLOW-UP RESPONSIBILITY: Author – Richard G. Kazel, Co-Manager, Medical VA Care Line, 315-425-2405.

8. AUTOMATIC RESCISSION DATE: November 1, 2005.

LAWRENCE H. FLESH, MD
Interim Network Director

Attachments: A, B, C, D, E.

Distribution: Network 2 Medical Centers
Network Care Line Managers
VISN 2 Network Web Site

CHAIN OF SURVIVAL PROTOCOL

ACTIVATE 9-1-1:

- Assess scene safety
- Assess responsiveness. Tap shoulder and shout, "are you OK?"
- Activate emergency response plan
- Call 9-1-1
- Provide dispatcher with location, emergency details and notify them that an AED is being deployed within the company
- Broadcast over the PA system an announcement to activate targeted responders and indicate the location of the patient (e.g., Attention, Attention, Attention, Emergency Response Team report to.....).
- Assign a designated team member to wait at the front entry and help lead the EMS personnel to the victim
- Check ABC's:

Assess **Airway**, perform head tilt, chin left to open airway

Assess **Breathing**. Look, listen, feel, if breathing is absent, use barrier mask to deliver two (2) rescue breaths

Assess **Circulation**. Check carotid pulse. If pulse is absent, begin CPR.

EARLY CPR:

- Perform CPR until the AED arrives
- Compress and release chest 15 times (rate: 80-100 compressions/minute)
- Ventilate. Give two (2) rescue breaths
- Continue CPR. 15 compressions/2 rescue breaths. Check pulse after four (4) cycles and every few minutes thereafter

EARLY DEFIBRILLATION:

Instructions for one-rescuer approach: When defibrillator arrives:

- Place AED near head of patient (at left ear) on same side as rescuer
- Turn on AED
- Bare and prepare chest (cut or tear away clothing. If excessive chest hair, shave, dry the chest, if wet).
- Follow AED's verbal and visual prompts
- Apply electrodes (follow drawings on pads)
- Allow AED to analyze
- If indicated, deliver shock by pressing the orange button
- Continue care per AED Treatment Algorithm

EARLY ADVANCED CARE LIFE SUPPORT:

- Have a designated team member wait for MES providers at front entry of building and help guide them through building and security door to the patient
- Responders working on the victim should communicate any important information to the EMS providers, such as: victim's name, any known medical problems, allergies or medical history, time the victim was found, initial and current condition of the victim
- Information from AED screen
- Number of shocks delivered
- Length of time defibrillator has been used
- Provide EMS providers with the PINK copy of the Patient Information Sheet
- Help EMS personnel as requested

LOCATION OF AED STATION:

AED STATION INVENTORY:

One AED:

- One dry razor
- Two sets of electrodes
- One installed PC data card and one spare
- One carrying case
- One pair of trauma scissors
- One towel

POST USE PROCEDURE:

The AED Coordinator will do the following after any AED use:

- Notify the Medical Director
- Remove used PC data card with patient information and deliver to appropriate personnel according to medical protocol
- Conduct employee incident debriefing, as needed
- Complete incident follow up report as deemed necessary by the Medical Director
- Restock any used electrode pads, batteries, razors or towels. Inspect unused supplies for any damage or old expiration dates
- Clean the AED if needed. Review User's Guide for list of appropriate cleaning agents (User's Guide kept in Plant Safety Office).

DAILY AND AFTER EACH USE:

- Inspect the interior and connector for dirt or contamination
- Check status indicator. Perform a Battery Insertion Test (BIT) to confirm AED is ready to be put back in service

Department of Veterans Affairs
VA Healthcare Network
Upstate New York

Network Memorandum 10N2-163-02
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ATTACHMENT A

- Remove PC data card (if used in your system) and replace it with a spare. Apply a patient ID label to the used PC data card and deliver to the appropriate personnel.

AED QUALITY ASSURANCE REPORT

This report is to be completed by the users of the Semi-automatic external defibrillator and turned into the Fire Chief/Safety Officer within two (2) shifts. The Fire Chief/Safety Officer shall provide a copy to the Medical VA Care Line for "Code Blue" review.

Date of Incident: _____ Time of Incident: _____

Patient Age: _____ Patient Sex Male Female

CPR prior to defibrillation: Yes No

Cardiac Arrest: (Circle one)
Witnessed: Yes No

Estimated time from arrest to CPR: _____

Circle One: AED Indicated Shock AED Indicated No Shock

Estimated time from arrest to 1st shock: _____ Number of Shocks Delivered:

Additional Comments:

Patient outcome at incident site: (Circle One)

- a. Return of spontaneous circulation
- b. Return of spontaneous circulation, then cessation of spontaneous circulation
- c. Never achieved return of spontaneous circulation

Name of AED Operator(s), Include CPR and AED certification dates:

Reviewed by	Date	Reviewed by	Date
Fire Chief/Safety Officer			

Comments:

VISN 2 AUTOMATIC EXTERNAL DEFIBRILLATOR (AED)
PROTOCOL

1. PURPOSE:

The VA Healthcare System is committed to reducing death and disability from cardiovascular disease and stroke by improving the chain of survival in every community. Therefore, the VISN 2 has marked its facilities in emergency response and equipped them with Automatic External Defibrillators (AEDs). This protocol will serve as a guideline for the AED program.

2. TRAINING:

- a. Staff who have successfully completed the cognitive and skills evaluations in accordance with the American Heart Association's Basic Life Support (BLS) Program and VA guidelines will be designated users of the AED.
- b. All staff that has completed training shall maintain their credentials by participating in refresher training annually.
- c. No staff member will use the AED unless they have successfully completed the training program.
- d. All training will be coordinated through the BLS coordinator/designee at each site.

3. MEDICAL OVERSIGHT:

Medical Control oversight for the VA AED Program has been secured by the local Chief of Staff or his/her designee. The Medical Control Physician will be made aware of any AED events, all training activity and oversee AED training exercises annually.

4. EVENT RESPONSE AND PROTOCOL:

- a. In the event of a Cardiac Arrest:
 1. Assess patient's level of consciousness (tap and shout, "Are you OK!") Call Code (Medical Emergency) or 911.
 2. Assess airway by head tilt, chin lift method
 3. Assess breathing 3-5 seconds
 4. Assess pulse for 5-10 seconds (For non CPR personnel, check for signs of responsiveness – breathing, movement, coughing)
 5. If no pulse, open AED case and activate the AED by depressing the Power or ON/OFF button.

b. Apply electrode pads to chest. Look for:

ASSESSMENT	ACTION
Wet skin	Dry with towel
Transdermal Medication Patch	Remove with gloved hand and wipe off medication
Implantable Pacemakers/Defibrillators	DO NOT place electrode pads directly over implanted device
If patient is lying in water	Remove to a dry area

c. Plug in electrode connector to AED, if not already done.

d. Once the AED begins to *ANALYZE*, stand clear of patient, making sure that you and no one else is in contact with the patient.

NOTE: If you are performing CPR, STOP at the time you shock the patient with the AED.

e. If Shock is indicated, press the *SHOCK* button.

f. Continue to follow instructions verbalized by the AED unit.

g. If no shock is indicated, immediately assess for a pulse, check responsiveness, then breathing:

- If no pulse, start CPR (if you are trained).
- Allow AED to *ANALYZE*, follow verbal commands.
- If pulse is present and no breathing, provide rescue breathing (1 breath every 5 seconds) if trained.
- If pulse and breathing are present, position patient in left lateral recumbent position or maintain head-tilt, chin-lift.

5. RESPONSE PRIOR TO DEFIBRILLATION:

a. If the Code Team arrives BEFORE the defibrillation protocol is complete, the AED Rescuer will continue the protocol as directed by the AED until the Code Team acknowledges they are assuming responsibility for further treatment of the patient.

b. Upon arrival of the Code Team/EMS Personnel the AED Rescuer should begin a dialogue briefing them on the patient's condition and provide any information upon request.

6. POST EVENT PROCESS:

a. POST EVENT REVIEW

After use of the AED replace the following:

- Electrode Pads
- Gloves
- Pocket Mask or one-way valve mask
- Razor (if necessary)
- Verify battery placement (Does the indicator light reveal that the device is operational?)

NOTE: The AED Coordinator/designee is responsible for re-equipping the unit with these accessories prior to returning it to service. Your local facility will designate where supplies are stored.

7. EVENT DATA COLLECTION:

- a. Once attached to a patient, the AED records and saves in memory, important information about the condition of the patient's heart and the results of any shocks delivered.
- b. The AED saves event data on a removable PC Data Card.
- c. After an AED has been disconnected from a patient, regardless of whether a shock was delivered, it should be secured in a locked area until the Coordinator/designee can retrieve it.
- d. The Medical Control Physician should be notified of an AED event immediately after the event.

8. REPORTING:

- a. If an AED is attached to a patient, even if no shock is delivered, an AED Quality Assurance Report must be completed and submitted to the Safety Officer or local Patient Safety Officer within two shifts.
- b. The AED Quality Assurance Report is located with the Patient Safety Officer.
- c. The AED Quality Assurance Report and Event card will be reviewed by the Critical Care Committee/or designated committee on a quarterly basis.

9. AED USE AND MAINTENANCE:

- a. When the AED is turned on it will perform a diagnostic check.
- b. Each device has an indicator light that tells the user if the machine is in operating order. The light will flash indicating that the machine passed its periodic self check and is ready for use.
- c. Any variation of this indicator indicates there is a malfunction.

- d. The AED will perform a self-diagnosis test periodically that includes a check of battery status.
- e. The AED contains a lithium battery that requires no charging and has a battery life of approximately 5 years.
- f. If the AED is signaling a malfunction, it will be taken out of service immediately and returned to Biomedical Department.
- g. A visual inspection of the unit and its equipment will be performed weekly by the Patient Safety Officer/designee and will be documented on the checklist clipboard.
- h. A visual inspection of the indicator light will be performed daily and marked on the checklist clipboard by the Patient Safety Officer/designee.
- i. A list of the AED units in each institution and their location will be available and posted per each facility's recommendation.
- j. The AED will not be moved from its designated area unless it is for rescue or maintenance.
- k. The AED will always be stocked with a spare set of electrodes, pocket mask, and gloves or according to each institution's policy.
- l. If the AED unit is placed out of service for maintenance purposes, it will be replaced with a spare AED.

STANDARD OPERATING PROCEDURE E-0018

1. The following procedure is based upon American Heart Association's External Defibrillation Treatment Algorithm and New York State Department of Health, Bureau of Emergency Medical Services Protocols.
2. The following procedures shall be conducted by currently certified and qualified Fire Department personnel only.
3. AED should only be placed on an unconscious patient in confirmed full arrest. Do not use the AED in pediatric arrest!
4. Notify Life Support of confirmed "Code Blue".
5. Initiate/continue CPR until defibrillator is attached.
6. Bare chest of patient and attach AED pads.
7. Make sure all emergency responders are clear of the patient then Press "Analyze" button.
8. If AED indicates "Shock", make sure all emergency responders are clear of the patient and then push the "Shock" button.
9. Following delivery of the shock, press the analyze button again. Repeat #5 above if indicated.
10. After maximum of 3 shocks, check pulse and respirations, transport immediately to the hospital, continuing CPR if needed. If pulse is present, support airway and breathing and transport immediately to the hospital.
11. Transfer care to Life Support staff, advising staff of actions already taken. Assist where necessary.
12. Ready ambulance and AED for next call.
13. Complete AED Quality Assurance Report and turn-in to Fire Chief/Safety Officer.

STANDARD OPERATING PROCEDURE E-0020

AUTOMATIC EXTERNAL DEFIBRILLATION (AED) 90-Day Rectification

1. PURPOSE:

To assure that the quality of care is maintained to all patients, residents, visitors and staff. To meet VA and Local Policies on Defibrillation, Quality Assurance and the manufactures recommendations.

2. PROCEDURES:

1. All firefighters shall review the Physio-Control, In-service Video for the LifePak 500.
2. Review the policies on Automatic External Defibrillator (E0018), Medical Center Memorandum Semi-automatic External Defibrillation Program (SA-04), Medical Emergencies Outside the Hospital (SA-05), Appendix-A AED Quality Assurance Report (PM-15) and VAFD Prehospital Care Report.
3. Each firefighter shall follow the American Heart Association skill evaluation sheet, assemble and operate the defibrillator trainer per VA and AHA protocols.
4. 90-day rectifications shall be conducted by each firefighter. The rectification shall be documented on the VAFD training report and the AHA skills check list. Copies of the training sheets shall be sent to the Medical VA Care Line and to Performance Management.