

# University of Central Arkansas Athletic Training

## Automated External Defibrillation (AED) Protocols

### I. INDICATIONS FOR USE

- A. Immediate use with any witnessed sudden cardiac arrest (SCA) for an adult (8 and older or weighing more than 55 pounds) or child (1-8 years of age or weighing less than 55 pounds) after determining the absence of breathing and pulse. Do not delay CPR if AED is not immediately available for use.
- B. After 2 minutes of CPR for any unwitnessed emergency in which there is no breathing or pulse present.

### II. AED USE PROCEDURE

- A. Perform a primary assessment to determine if patient is conscious, breathing and has a pulse.
- B. If victim is determined to have a life-threatening emergency (unconsciousness, no breathing, no pulse, or severe bleeding) call 911 to activate the emergency medical system (EMS).
- C. Treat patient according to findings during primary assessment (e.g. if unconscious and not breathing with a pulse - perform rescue breathing, control bleeding, etc.).
- D. If patient is unconscious, is not breathing, and does not have a pulse initiate CPR (30:2 Adult, Child, and Infant – single rescuer OR 15:2 Child and Infant – two rescuer) immediately unless SCA was witnessed and an AED is immediately available.
- E. If AED is immediately available during a witnessed SCA, apply AED and follow prompts. If AED is not immediately available, perform CPR until it arrives and continue CPR until it prompts you to stand clear of the patient.
- F. Regardless of whether an AED is immediately available, two minutes of CPR should be performed for any unwitnessed emergency in which there is no breathing or pulse present.
- G. Once AED is to be applied follow these steps:
  - 1. If patient is adult (older than 8 or more than 55 lbs) then proceed to #2. If patient weighs less than 55 pounds or is 1 – 8 years old, insert the infant/child key into the slot at the top center of front panel of the FRx AED. The pink portion of the key pivots and fits into the slot.
  - 2. Press the green on/off button
  - 3. Remove clothing from person's chest
  - 4. Clean and dry the patient's skin and if necessary clip or shave excessive chest hair to ensure pads have good contact with the bare skin
  - 5. Remove the SMART Pads II from carry case and place them as directed by the pictures on the pad. If an adult, the pads are placed on the upper right chest and lower left chest. If a child, place one pad on anterior chest and the other on the posterior chest (see manufacturers diagram).
  - 6. Once pads are placed follow the FRx AED's prompts. Make sure to stay clear of the patient while the AED is analyzing the patient's heart rhythm.

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7. If the AED detects a shock is needed, the shock button will flash and you will be prompted to press it. Press the shock button once you ensure everyone including you and everybody around you are not touching the patient. Once the shock is administered, the FRx AED will tell you that the shock has been delivered. It will let you know it is safe to touch the patient and prompt you to immediately start CPR. The blue “i-button” will flash and will provide CPR coaching if pressed.
  8. If the AED detects a shock is not needed, the “i-button” will come on solid to show it is safe to touch the patient. The AED will then prompt you to perform CPR if needed. Press the lighted “i-button” for CPR prompts if needed.
  9. Perform CPR immediately after the shock as been administered unless obvious signs of life are noticed. Follow the FRx AED’s prompts throughout.
- H. Notify EMS upon arrival of duration of CPR and the number of shocks given to the patient. Answer all EMS questions. Assist EMS to package and remove the patient from athletic venue for transport to the nearest hospital.
  - I. Document all actions.
  - J. Notify Team Physician as soon as feasible for case review.

### **III. Program Administration**

The University of Central Arkansas (UCA) AED Protocols apply only to the University Athletic Department and approved personnel who are certified in both CPR and AED use by an American Heart Association and/or American Red Cross certified instructor.

UCA will appoint a person to serve as the Automated External Defibrillator (AED) Coordinator. This AED Coordinator and/or his/her designee are responsible for implementation of the AED protocols and maintaining, reviewing, and updating the AED Protocols a minimum of once every twelve (12) months and/or whenever necessary to include new or modified tasks and procedures. This includes ensuring all applicable Arkansas Statutes relating to access by the public to defibrillators are being followed. In addition, the AED Coordinator and/or his/her designee will be responsible for training, certification, continuing education, and documentation of training for all personnel involved.

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### **IV. Priority for Usage** (referenced from The University of West Alabama and Florida Atlantic University AED policies).

The following venue areas have been defined for AED coverage of events and practices:

1. Farris Center and Baseball fields
2. Estes football stadium, Pepsi Center, and football practice fields
3. Prince Center Gym
4. Soccer and Softball fields

Parameters used to determine priority include:

- Sudden cardiac death (SCD) occurs in male athletes more than female athletes.
- SCD occurs in black athletes more than any other race of athletes.
- Men's basketball has the highest reports of SCD followed closely by football.
- Blunt injuries to the chest can cause ventricular fibrillation.

Priority for AED usage in these areas will be based on the following conditions:

1. Competitions/Scrimmages have priority over practices
2. Home games have priority over away games
3. Team priority:
  1. Football
  2. Men's Basketball
  3. Women's Basketball
  4. Baseball
  5. Softball
  6. Men's Soccer
  7. Women's Soccer
  8. Men's T&F/CC
  9. Women's T&F/CC
  10. Women's Volleyball
  11. Women's Tennis
  12. Cheerleading/Dance
  13. Men's Golf
  14. Women's Golf

The University of Central Arkansas Athletic Team Physician will have the final decision over AED priority.

### **V. Equipment**

Phillips HeartStart FRx Automated External Defibrillators

### **VI. Location of AEDs / Emergency Phone Numbers**

The AEDs will be stored in the Farris Center and Estes Stadium Athletic Training Rooms. The certified athletic trainer in charge of the priority coverage sport will be responsible for transporting the AED to the venue coverage area. This person will also have the additional responsibility to insure the AED can be rapidly deployed to any location within the venue area when it is needed.

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### VII. Safety

The following are general warning and caution statements concerning the AED units:

- DO NOT attempt to operate the AED units unless thoroughly familiar with their operating instructions, and the function of all controls, indicators, connections, and accessories.
- DO NOT disassemble the defibrillator.
- DO NOT use an AED in a moving vehicle.
- DO NOT touch the victim while the AED is analyzing or defibrillating.
- DO NOT use alcohol to wipe the victim's chest dry.
- DO NOT use the AED on a victim lying on a conductive surface (i.e. – metal bleachers) or in/around water or a wet surface.
- DO NOT use an AED on a victim wearing a nitroglycerin patch or any other patch on the chest. With a gloved hand, remove any patches from the chest before attaching the device.
- DO NOT place the pads directly over an implanted pacemaker or defibrillator. A noticeable lump with a surgical scar should indicate the position of an implanted device.
- If the pads do not stick well, check to ensure the pad adhesive has not dried out. If it has, replace with spare set of pads located in AED case.
- DO NOT use a cellular phone or radio transmitter within 6 feet of the AED.
- DO NOT use this device in the presence of flammable gases or anesthetics.
- DO NOT let the pads contact other electrodes or metal items that are in contact with the patient.
- Avoid operating the AED units near cauterizers or diathermy equipment.
- Always have access to a spare, fully charged, properly maintained battery.
- Once prompted to push the flashing orange Shock button, you have only 30 seconds to do so. After 30 seconds the FRx will disarm itself and prompt to continue CPR.

### VIII. Special Situations

#### (1) Water –

- Avoid using AED with victim lying in water / rescuer kneeling in water (i.e. – pool deck/locker room)
- May cause burns or shocks to the victim or rescuer(s)
- Carefully remove the victim from contact with the water
- Dry the victim's chest quickly before attaching the AED

#### (2) Metal –

- Avoid using the AED when the victim / rescuer is on a metal surface
- No metal should be on the victim (i.e. – nipple rings, bra, jewelry, etc.)
- All metal conducts electric current
- Run chance of the electric charge shocking a rescuer or bystander
- Run chance of burns on the victim where the metal is located
- Remove ALL metal located above the victim's waist

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#### (3) Transdermal Medications –

- Placing an AED electrode pad on top of a medication patch (i.e. – nicotine patch, nitroglycerin patch, birth control patch, etc.) may block delivery of shocks or cause small burns to the skin
- remove the transdermal medication patches and wipe the area clean

#### (4) Implanted Pacemakers or Cardioverter-Defibrillators

- Hard lump (usually about ½ the size of a deck of cards and usually accompanied by a small overlying scar) beneath the skin of the upper chest or abdomen (usually on the victim's left side)
- Placing an AED electrode directly over an implanted medical device may reduce the effectiveness of defibrillation
- DO NOT place an AED electrode pad directly over an implanted device
- Place an AED electrode pad at least 1 inch to the side of any implanted device

### IX. Post-Event Procedures

Immediately following the conclusion of an incident, the following events should take place:

- The AED should be turned OFF unless it is immediately needed for an additional incident.
- The AED should be immediately delivered to the AED Coordinator. The AED Coordinator will download the event information with the software as per the manufacturer's directions. **(currently not purchased)**.
- The following persons / offices should be notified following each AED use:
  - AED Coordinator
  - Head Athletic Trainer
  - Athletic Director
  - Appropriate University Administration (as per University policy)
- All persons involved in the use of the AED will complete an *Incident Report Form*. The AED Coordinator will perform a complete inspection of the AED unit as soon as possible, and replace any single-use supplies.
- The UCA Coordinator will complete an *AED Use Report / Post-Event Checklist* as soon as possible after the incident. This report will include a case by case analysis of the AED application, including:
  1. A review of the AED Rescue Data Card
  2. A review of the circumstances leading up to the use of the AED unit
  3. An evaluation of the treatment of the victim with shocks using the AED unit
  4. An evaluation of the command of the scene, safety, efficiency, speed, professionalism, ability to troubleshoot, completeness of patient care, and the interactions with other professionals and bystanders
  5. A brief review of all participants in the emergency, as well as any witnesses
  6. Recommendations for the improvement of future emergency situations/AED use

This report will be maintained on file in AEDs Coordinators office along with copies being distributed to the appropriate administrative staff.

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The AED Coordinator will arrange for a stress debriefing / post-incident counseling session with the appropriate personnel as needed and/or requested.

The AED unit will not be returned to service until it has been thoroughly inspected by the AED Coordinator for proper functioning and battery level, all single-use supplies have been replaced, and the proper paperwork has been filed out with the appropriate persons.

**All statements to the press / media concerning the emergency situation and surrounding events will be made through the Public Information Officer (PIO) of the University.**

### **X. Compliance**

All policies and procedures contained within this document will be in compliance with current state and local laws regarding AED use.

### **XI. EMS Notification**

Local EMS agencies will be notified of the AED implementation policies, as well as the make, model, and number of AEDs assigned to each location.

### **XII. AED Training**

All athletic training personnel will maintain current CPR/AED certification, which will require a recertification course yearly. The level of training will be consistent with that found in the American Heart Association Healthcare Provider course or the American Red Cross CPR/AED for the Professional Rescuer course. A review of emergency procedures including AED use will also be performed at least one other time outside of the CPR certification course during the academic school year, and documented.

### **XIII. Documentation**

All training sessions will be documented by the lead CPR/AED instructor and maintained for a period of at least three years.

### **XIV. Equipment Maintenance**

#### **AED Maintenance-**

- The AED unit will perform a self-diagnostic test every 24 hours that includes a check of battery strength, electrode self-test, and an evaluation of the internal components.
- The AED Coordinator and/or his/her designee will inspect all AED units on a weekly basis. Inspections will include, but will not be limited to, the following-
  - Check to make sure the green Ready light is blinking
  - AED supplies-pads/electrodes, razor, towel, scissors, Infant/Child Key, and FRx/LifePak Electrode Adaptor
  - AED case integrity
  - Expiration Dates (defibrillator pads, batteries, supplies, etc.)

It is important to ensure the defibrillator always has a set of pads connected otherwise the defibrillator will start chirping and the “i-button” will start flashing. In addition, **never store the FRx with the Infant/Child Key installed.** It should be stored in the appropriate pouch in the AED case.

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It is NOT necessary to perform a battery-insertion test as long as the green Ready light is blinking. This uses battery power and risks draining the battery prematurely.

Completed inspections will be recorded on the AED Weekly Inspection Log. The date, time, inspector's name and initials, and comments will be recorded for each inspection. Completed documents pertaining to the maintenance of the AED units will be stored in the UCA Coordinator's office.

If the AED or any part of the AED is found to be defective and/or not in proper working condition, the following procedure will be followed:

- The AED and/or defective part will immediately be removed from service.
- The AED Coordinator and/or his/her designee will immediately be notified.
- A replacement part (if applicable) will be immediately ordered
- The AED unit will not be returned to service until it has been inspected by the AED Coordinator.

### AED Cleaning –

This will be conducted in accordance with the manufacturer's recommendations/guidelines, and on a monthly basis.

### **XV. Program Review**

The UCA Athletic Training personnel, in conjunction with the University Police, and MEMS and/or other appropriate personnel, will review the AED program on an annual basis during the month of May and/or whenever necessary.

The periodic review procedures will ensure that the AED Implementation Guidelines reflect new or modified tasks and procedures with regards to the use of AEDs.

Program revisions will be dated and provided to any necessary personnel.

### **XVI. Supplies**

Upon finding supplies that will expire within a two (2) month time frame, replacement supplies will be ordered in time to replace the necessary parts prior to the expiration date(s).

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Dr. Brad Teague, Director of Athletics

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Date

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Dr. John Smith, Team Physician

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Date

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David Strickland, M.S., ATC, LAT, CSCS  
Head Athletic Trainer

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Date