


School Board of Brevard County

1254 S. Florida Avenue • Rockledge, FL 32955
Mark W. Mullins, Ed.D. Superintendent



May 21, 2021

MEMORANDUM

To: Leadership Team
From: Jim Powers 
RE: **Automated External Defibrillators (AED) Update**

The following answers to Frequently Asked Questions (FAQ) are provided to aid you and your staff with keeping the Automated External Defibrillators (AEDs) on your school campus (& ancillary sites) in good/reliable working condition and ready for use when needed for emergency medical situations:

1) Whom may I contact to purchase replacement cardiac pads and replacement batteries for my AED unit?

For replacement supplies, you may directly contact one of the following local/regional distributor business (that are approved BPS vendors) and purchase with either a purchase order or P-card:

When ordering please provide our/ BPS government account #104910 & school/site name.

School Health, Inc.
Rachelle Shipp, Tertiary Manager
cellphone: 630-339-7905
Main Office: 866-323-5465
<https://www.schoolhealth.com/>

ZOLL Medical Corporation
Damian L. Dollard, South/Cent. FL Channel Partner Sales Manager - Public Safety Division
Cellphone: 813-785-7223
DDOLLARD@ZOLL.com

For questions pertaining to such things as warranty and performance of distributor businesses etc., you may directly contact the manufacturer's representative:

Cardiac Science® Sales/service
Customer Service: 800-426-0337 (dial 2 for customer service)
Account Representative: Mr. Jeff Perlow - cellphone # 727-330-0840
Email address: JPerlow@cardiacscience.com
Website: www.cardiacscience.com

Page 1 of 2

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Phone: (321) 633-3580 ext. 13074

BPS, Leadership Team - 05/21/21 Memo: Automated External Defibrillators (AED) Update

2) Might I expect to experience a delay when ordering/receiving replacement cardiac pads and batteries as it relates to international market trade relation and global health-emergency issues?

Yes. One may expect to experience 4-6 week shipping delay (or longer) as it relates to world-health emergencies and ever-changing relations with over-seas markets.

Best practice is to order replacement components (pads & batteries) well in advance of component expiration date (ref. mfg. date on each individual component).

Typically, the *Cardiac Science® PowerHeart G-5* model (and its cardiac pads and batteries) will continue to function far beyond two months (60 days) from the date/time the service indicator light (& audio-buzzed) is automatically activated. AED units with service indicator lights activated for more than 60-days should temporarily be removed from staff availability, and a message to all on-site staff informing them that the particular AED unit is temporarily out of service. Upon expediting a replacement components or additional AED unit(s), a follow-up message should be made to all staff informing them that the AED unit is back into service (available for emergency use).

3) Can older AED units (i.e., *Medtronics®*) continue to be kept for use on my school campus, and/or can I purchase (or receive as a donation) an AED that is manufactured by a company other than *Cardiac Science®*?

No. All obsolete AED units (i.e., *Medtronics®*) were taken out of service in 2018 and replaced with the current district-wide standardized AED unit that is manufactured by *Cardiac Science®*. For reliability purposes, the District standardized AED equipment to one design – the *Cardiac Science® PowerHeart G-5* model.

4) Who pays for replacement AED parts (i.e., cardiac pads & batteries)?

BPS Policy and Procedure 8452 states that ‘site administrators or their designee are responsible for replacing electrodes and batteries before their expiration date.’ The *Cardiac Science®* AED units have batteries that are expected to last (read-for-use) for approximately four (4) years. Their cardiac pads are designed to last (ready-for-use) for two (2) years.

5) How often must our school/site staff perform reliability inspections of our newly acquired AED equipment (*Cardiac Science® - PowerHeart G-5*)?

At a minimum, each AED unit should be inspected monthly for functionality (ensure: full battery charge, cardiac pads are present & not expired, etc.). Each site-based administrator (principal/director) or designee shall maintain a paper inspection record (log-entry form for each AED unit) tracking who inspected the AED unit, when, and functional status, etc.

Administrative Procedure 8452 – Automatic External Defibrillators is attached for reference.

Please do not hesitate to contact the District Office of EH&S at 321-633-3580 ext. 13012 with any related questions.

Susan Hann

Approved:

Susan Hann, P.E., Assistant Superintendent of Facilities Services



Book	Administrative Procedures
Section	8000 Operations
Title	AUTOMATED EXTERNAL DEFIBRILLATOR
Code	ap8452
Status	Active
Adopted	April 12, 2005
Last Revised	February 28, 2006

8452 - AUTOMATED EXTERNAL DEFIBRILLATOR

Mission Statement

The mission of the District is to plan and implement a sustainable Automated External Defibrillator program (AED program) by teaching lifesaving skills and by providing prevention and awareness information to reduce disability and death. The program includes ongoing training of staff in emergency care procedures.

Why a Policy and Procedure for the Use of an AED?

A heart attack is a life-threatening event that can result in cardiac arrest and death. This procedure manual will attempt to describe what should be done at the onset of a heart attack that leads to cardiac arrest. The manual also describes how to use an AED housed at the school or other facility site in the event of a cardiac arrest.

Many people suffer permanent damage to their hearts or die because they do not get medical attention upon experiencing the onset of heart attack symptoms. Each year, more than a million people in the United States have a heart attack and about half (515,000) of them die. About one-half of those who die do so within one (1) hour of the start of symptoms and before they reach the hospital. Emergency personnel (paramedic's, physician's, etc.) can often stop arrhythmias with emergency CPR (cardiopulmonary resuscitation), defibrillation (electrical shock), and prompt advanced cardiac life support procedures. If care and treatment is sought as soon as the symptoms of a heart attack start, blood flow in the blocked artery may be restored in time to prevent permanent damage to the heart. Everyone should know the warning signs of a heart attack and how to get emergency help.

The warning signs and symptoms of a heart attach can include:

- A. Central chest discomfort. Most heart attacks involve discomfort in the center of the chest that lasts for more than a few minutes, or goes away and comes back. The discomfort can feel like uncomfortable pressure, squeezing, fullness, or pain. Heart attack pain can sometimes feel like indigestion or heartburn.
- B. Discomfort in other areas of the upper body. Can include pain, discomfort, or numbness in one (1) or both arms, the back, neck, jaw, or stomach.
- C. Shortness of breath. Often coincide with chest discomfort, but it also can occur before chest discomfort.
- D. Other symptoms may include breaking out in a cold sweat, nausea, and vomiting, or feeling light-headed or dizzy.

Signs and symptoms vary from person to person. In fact, if an individual has had a second heart attack, the symptoms may not be the same as for the first heart attack. Some people have no symptoms at all.

In all cases, a heart attack is an emergency. Call 9-1-1 if you think you (or someone else) may be having a heart attack or experiencing the symptoms of a heart attack. Prompt medical treatment of a heart attack at a hospital can help prevent or limit lasting damage to the heart and can prevent sudden death. As soon as 9-1-1 has been alerted, immediately notify the schools first responder (see item A under Training below). The first responder should immediately report, with the AED, to the location where the potential heart attack victim is located. The first responder is to remain with the potential victim, prepared to use CPR and the AED should the victim suffer cardiac arrest. The first responder should remain with the potential victim until paramedics arrive.

Although there is a wealth of information available to describe the symptoms of a heart attack, most people do not seek medical care for two (2) hours or more after symptoms begin. Many people wait twelve (12) hours or longer. When an individual avoids the symptoms of a heart attack they run the risk of suffering cardiac arrest. On occasion an individual may also suffer an immediate onset cardiac arrest.

Signs of cardiac arrest include:

- A. Sudden loss of responsiveness (no response to gentle shaking).
- B. No normal breathing. The victim has not taken a normal breath after you've checked for several seconds.
- C. No signs of blood circulation (pulse). No movement or coughing.

During cardiac arrest the heart most often goes into uncoordinated electric activity called ventricular fibrillation. The heart twitches ineffectively and can't pump blood. If CPR cannot get the heart to pump normally an AED may help. The AED delivers electric current to the heart muscle, momentarily stunning the heart and stopping all activity. This momentary stopping of heart function gives the heart an opportunity to resume beating effectively. An AED only treats a fibrillating heart. In cardiac arrest without ventricular fibrillation, the heart doesn't respond to electric currents, but needs medications and breathing to bring it back to normal function. Also, AED's are less successful when the victim has been in cardiac arrest for longer than a few minutes, especially if no CPR was provided.

The remaining portion of this procedure manual addresses what should be done in the event of a cardiac arrest and how to use both CPR and an AED as life saving techniques immediately after a cardiac arrest.

Placement of the AED

- A. In order for a school or other District facility to be approved for the placement of an AED the site administrator or school principal must designate a minimum of two (2), preferably three (3) or more, staff or other persons as "first responders".
- B. The first responder(s) should obtain and keep current first aid/CPR/AED training certification.
- C. A suggested location for the AED is the school clinic or any designated location where the unit can be easily obtained by any staff member or citizen. This location should be made by consensus of the site administrator and their designated first responders. The AED is most effective when it is used within three (3) to five (5) minutes after a cardiac arrest. Therefore, large ancillary sites should consider purchasing an additional AED.
- D. The location of the AED should be clearly marked and visible.
- E. All staff members shall be made aware, on an annual basis that the school or other District facility has an AED on site and its current location.
- F. A list of current first responders shall be located next to the AED.

G. All AEDs shall be registered with the local Emergency Medical System (EMS).

H. Under no circumstances can the Board, their employees, or agents guarantee that a first responder or the AED will be available for emergency situations on District property.

Brand and Model Approved for Use

A. The only AED brand and model approved for use District wide is the Medtronic Physio-Control LIFEPAK CR Plus.

B. Schools may purchase the above AED by contacting the Office of District and School Security. This department should make contact with the District's equipment distributor for AED's and will assist the school in obtaining the necessary equipment. The current cost for the District's distributor (effective August 2004) for AED devices is as follows:

1. AED - \$1,770.00
2. Cabinet - \$240.00
3. Pediatric Electrodes - \$135.00 (used for children under eight (8) years of age)

C. No other AED's or models are approved for use at this time. The designated AED is the only approved device because it is easy to operate and is compatible with most of the AED's used by local EMS, fire, sheriff departments, and hospitals.

D. The school or other facility administrator is responsible for the cost to replace the battery Charge-Pak and Quick-Pak electrode(s) every two (2) years at a cost of \$99.00 (as of August 2004). These parts can be requested through the Office of District and School Security.

E. It is also the responsibility of each school or facility site administrator to pay for the replacement battery Charge-Pak and Quick-Pak electrode(s) and other device requirements for re-calibration after each use in a cardiac emergency. The current cost for this replacement is \$290.00 (as of August 2004). These parts can also be requested through the Office of District and School Security.

Training

A. Each AED site should have a minimum of two (2) first responders that are certified in first aid/CPR/AED at each location where an AED is placed (see item A under Placement of AED above). This certification should be kept current on an annual basis.

B. All training must be in accordance with the American Health and Safety Council, American Red Cross, American Heart Association, or the National Safety Council Standards.

C. School and other facility sites that have an AED should submit evidence that training has occurred to the Office of District and School Security no later than September 1st of each school year (see Form 8452 F1).

How to Use an AED Device

A. Each site must develop an emergency plan for the use of the AED. It is important to note that an AED is not a substitute for cardiopulmonary resuscitation (CPR). An AED is only a tool used in combination with CPR as a life saving technique. Without CPR and the use of an AED brain death and permanent death start to occur in just four (4) to six (6) minutes after someone experiences cardiac arrest. Cardiac arrest may be reversed if it's treated within a few minutes with a combination of CPR techniques and an AED. A victim's chances of survival are reduced by seven percent (7%) to ten percent (10%) with every minute that passes without defibrillation. Few attempts at resuscitation succeed after ten (10) minutes. The AED plan should include the following:

1. In the event of an emergency, staff should attempt to locate and notify the school or site first responders of the emergency situation.
2. Staff or the first responders should go to the emergency situation and assess the scene for safety.
3. Staff or the first responders should assess the victim's responsiveness. This can be done by tapping the person on the shoulders and shouting "Are you okay?"
4. Staff or the first responders should confirm the victim is not breathing.
5. Staff or the first responder should confirm the absence of a pulse.
6. When staff or the first responder confirms that the victim is not breathing and has no pulse, the emergency response plan should be put in place and includes:
 - a. A call is placed to the Emergency Medical System (EMS) reporting system by dialing 9-1-1. Staff or the first responder should provide the dispatcher with the location, emergency details, and notify them that an AED is being deployed within the school/facility. Do not hang up until the dispatcher hangs up.
 - b. Designate a person to wait at the appropriate entry point to the school or facility site. This designated individual should help lead Emergency Medical System personnel to the victim.
 - c. The first responder should bring or immediately request staff to retrieve the AED from its designated location.
7. The first responder should begin CPR until the AED arrives.
8. The first responder should use the AED according to the manufacturer's instructions.
 - a. The first responder should first turn on the AED.
 - b. The first responder should apply the electrodes in the proper positions.
 - c. The first responder should listen to the instructions from the AED and act accordingly.
 - d. The first responder should resume CPR when the AED instructs them to do so.
9. The first responder should not leave the victim until they are relieved by EMS.
10. After the AED has been deployed, the first responder or the site administrator should contact the Office of District and School Security to report the incident.
11. The AED can only be used for one (1) emergency situation within the need for further maintenance. After each use the AED requires a new battery, new electrodes, and re-calibration from the manufacturer. The Office of District and School Security should assist the site administrator with arranging for the Medtronic Service Technician to recalibrate the AED and in obtaining the new battery and electrodes.

B. Only in the event that a first responder is not available to perform the functions above should staff or other CPR/AED certified staff attempt to perform the above functions.

Post-Use Procedures

A. The Office of District and School Security, the school/facility site administrator, and designated medical director for AED's should be notified of the AED's use in a cardiac emergency.

B. Arrangements for counseling of rescuers, bystanders, etc., if needed, should be made by the school or site administrator.

C. A written report of critical incident debriefing session should occur within forty-eight (48) to seventy-two (72) hours between the first responders, school/site administrators, and the Office of District and School Security.

D. The Medtronic Service Technician will be called to download the AED device and a written report will be submitted to the designated medical director for AED's.

E. A replacement battery Charge-Pak and Quick-Pak electrode(s) will be ordered for the AED in order to put the AED back into readiness state by the Medtronic Service Technician and responsible site administrator.

F. The Office of Risk Management should be notified by the school or facility site administrator in the event that school or site staff utilizes CPR or the AED due to a cardiac arrest.

Testing of the AED

A. The school or facility site administrator and first responders must review the LIFEPAK CR Plus video for proper maintenance instructions. Maintenance of the AED requires a daily inspection verifying the AED is in its storage location and that the status indicator readiness display is indicating "OK". There are four (4) status indicators:

1. OK - symbol indicates the AED is fully functional.
2. Battery - symbol indicates that Charge-Pak is disconnected.
3. Triangle - symbol indicates that the internal battery is low; however, it can be used in an emergency.
4. Wrench - symbol indicates there is an internal problem which requires manufacturer's attention.

B. The AED can be used when and if it indicates OK, battery, or triangle. If the wrench appears, the AED must be taken out of service immediately. The school or facility administrator or the Office of District and School Security must contact the manufacturer Medtronic at (800) 442-1142 for further instructions. When the AED is used or taken out of service, the Office of District and School Security should provide the site with a temporary replacement unit. This unit must be returned to the same individual when the school or facility sites assigned unit is placed back into service.

C. The AED has a manufacturer's warranty for five (5) years. However, the battery Charge-Pak and Quick-Pak electrode(s) has a life expectancy of two (2) years or after each use. The Office of District and School Security is responsible for:

1. maintaining a master list of AED serial numbers and distributing AED's to each site;
2. maintaining a record of the expiration date(s) of each Quick-Pak electrode(s) and battery Charge-Pak;
3. notifying the manufacturer when there is a problem with an AED that requires manufacturer's attention;
4. retaining information for contacting the service technician for Medtronic;
5. retaining information for ordering replacement equipment for the AED's;
6. alerting the medical director of AED's when a cardiac emergency that included the use of the AED has occurred;
7. making sure the medical director receives a copy of the written backup report in the event that an AED was used.

D. Site administrators or their designee are responsible for checking the daily readiness of the AED by viewing the display window in the upper right corner of the AED. Site administrators or their designee are also responsible for replacing the Quick-Pak electrodes and battery Charge-Pak before their expiration date and after each use. When the Quick-Pak electrodes and battery Charge-Pak are replaced, the site administrator or their designee needs to verify:

1. the new expiration date of the replacement Pak has a life expectancy of two (2) years from the purchase date;
2. notify the Office of District and School Security of the new battery and electrode expiration date;
3. the OK symbol is indicated in the readiness display window.

If the triangle symbol appears, this indicates that the internal battery needs a trickle charge from the Charge-Pak.

The readiness display window will indicate OK when the internal battery is fully charged.

If the triangle symbol does not go away within twenty-four (24) hours after charging the battery Charge-Pak, notify the Office of District and School Security for further instructions.

If the wrench symbol appears, this indicates an internal problem which requires the manufacturer's attention and the AED should remain out of service. Notify the Office of District and School Security for a temporary replacement.

Medical Oversight

A. Medical oversight will be provided by the Director of Emergency Medical Care for Brevard County.

B. The Director of Emergency Medical Care shall:

1. write the prescription for the AED's (required before an AED can be placed at a school or other facility location);
2. approve the protocol to be followed for the use of the AED's in schools and other facility locations;
3. receive a written report from the AED device used in a cardiac emergency provided by the service technician from Medtronic-Physio Control;
4. receive a written report of the cardiac emergency from the first responders.

Revised 8/05
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