

CITY OF LONDON SCHOOL FOR GIRLS

AUTOMATED EXTERNAL DEFIBRILLATOR (AED) PROTOCOL

The UK Resuscitation Council recommends that Automated External Defibrillators (AED) are situated in areas of higher population flow. Given that the chances of survival decline at a rate of 7-10% with each minute of delayed treatment after a cardiac arrest, City of London School for Girls has taken the step to acquire an AED machine.

The AED is situated by the A floor staircase near reception and the school entrance.

Any staff member who has been trained to use an AED (through Highgate School or externally) may use the machine provided they feel confident and competent to do so. A minimum of twelve staff members have received certified AED training across the school.

1. What is an AED?

Ventricular fibrillation is the most common cause of cardiac arrest. This is a rapid and chaotic rhythm leaving the heart unable to contract and therefore unable to pump oxygenated blood to the brain and the rest of the body. Defibrillation is a controlled electrical shock to stop the lethal ventricular fibrillation. The sooner the shock is provided, the greater the chance is of survival. Death occurs within minutes of ventricular fibrillation starting so it is vital that the AED arrives to the casualty within a target of 5 minutes.

The AED is a sophisticated, reliable, safe, computerised device that delivers defibrillatory shocks to a person in cardiac arrest. It uses voice prompts to guide the user, and is suitable for use by both lay rescuers and healthcare professionals. City of London School for Girls has a PowerHeart G3 Semi-Automatic AED.

2. PowerHeart G3 Semi-Automatic AED

These analyse the victim's cardiac rhythm, determine the need for a shock, and then deliver a shock where appropriate. The voice prompts will deliver a step by step guide on what action to take including when to perform manual CPR.

3. When should the AED be used?

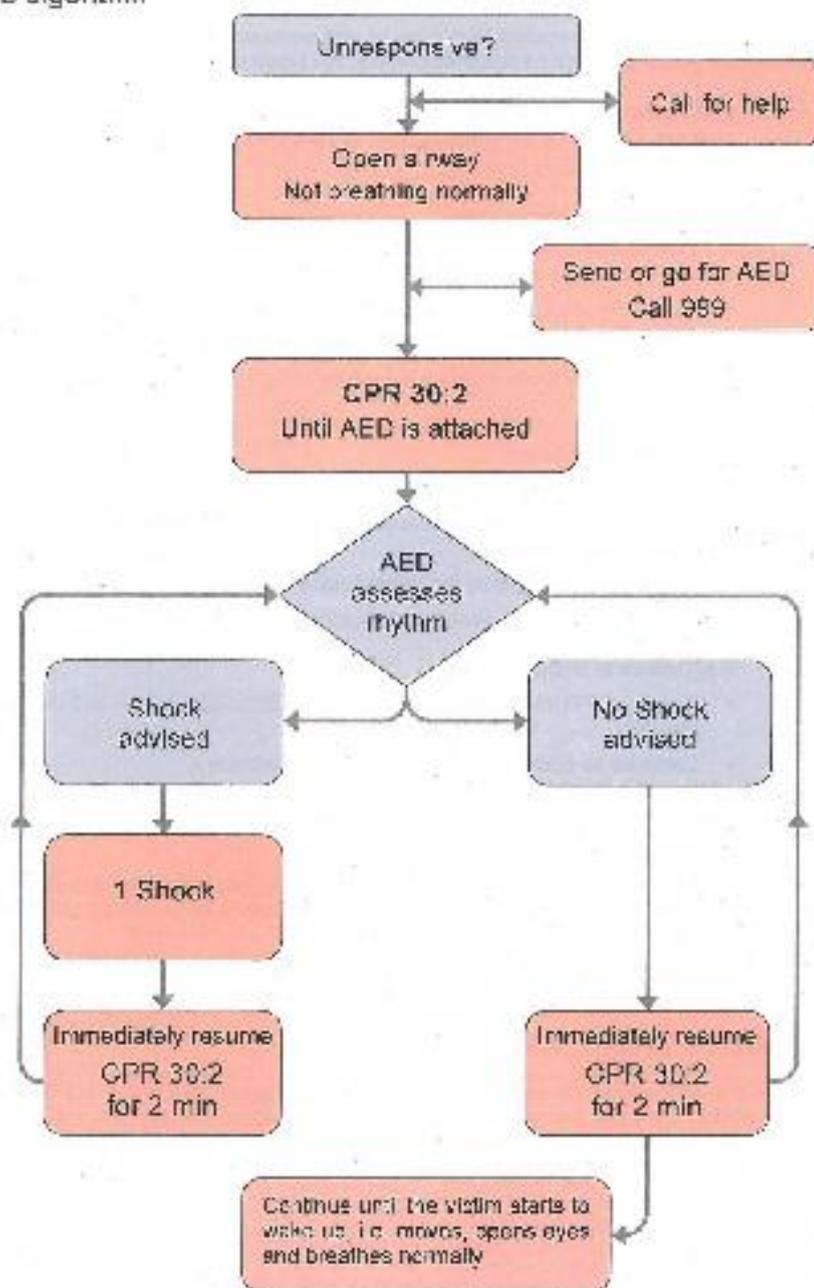
An AED should be applied to any casualty who is unconscious and not breathing properly.

4. Sequence of actions when using an AED

- 1) Make sure the victim, any bystanders, and yourself are safe. If two rescuers are present, assign tasks

- 2) If the victim is unresponsive and not breathing normally:
 - Send someone for the AED and to call for an ambulance
 - If you are on your own do this yourself; you may need to leave the victim
- 3) Start CPR according to the guidelines for Basic Life Support
- 4) As soon as the AED arrives:
 - Place the AED near the casualty's head and switch on the AED
 - Attach the electrode pads. If more than one rescuer is present, continue CPR whilst this is done
 - Follow the voice/visual prompts
 - Ensure that nobody touches the victim whilst the AED is analysing the rhythm
- 5) If a shock is indicated:
 - Ensure that nobody touches the victim
 - Push the shock button as directed
 - Continue as directed by the voice / visual prompts
- 6) If no shock is indicated:
 - Immediately resume CPR using a ratio of 30 compressions to 2 rescue breaths
 - Continue as directed by the voice / visual prompts
- 7) Continue to follow the AED prompts until:
 - Qualified help arrives and takes over
 - The casualty starts to breathe normally, or you become exhausted

AED algorithm



5. Attaching the electrode pads

The casualty's chest must be sufficiently exposed to enable correct electrode pad placement so clothing will need to be opened (buttons) or cut with the shears. Chest hair may prevent the pads adhering to the skin and interfere with electrical contact. Shave the chest only if the hair is excessive, and even then spend as little time as possible on this. Do not delay defibrillation if a razor is not immediately available. In the AED case you will find shears and in the accessory bag you will find a razor and a towel to wipe the chest dry enabling good attachment of the pads.

The AED pads are labelled and show a picture for correct placement. If an 'error' is made, the pads should not be removed and replaced as this wastes time and they may well not adhere adequately when re-attached. With female casualties try to avoid breast tissue by moving the breast aside when placing the electrode pad.

6. Special Circumstances

- If the casualty is in water, move to a dry surface and dry chest.
- If there is a lump/bump (implanted pacemaker), do not place pad over the area.
- In the case of a medication patch in the area, remove it and wipe the skin.

7. Training

Training will be given to staff by the London Ambulance Service. Trained staff will be given refresher training annually.

8. Maintenance of AED

The expiry date of the AED cartridge (electro pads) and the battery must be clearly noted so that replacements are available in good time. Weekly and monthly checks should be done and recorded in the online maintenance log via the London Ambulance Service online record service. The visual weekly check is to ensure the green ok symbol is on. The monthly check also does this and also to check that all the accessories are present and in date in the accompanying accessory bag. On each monthly occasion the following checks must be noted:

- AED has green light flashing and a pair of cutting shears in the case
- Expiry date of battery and cartridge in the AED
- That the machine turns on
- That the accessory bag contains the following:
 - Spare adult cartridge
 - Resuscitation face mask for manual CPR
 - Razor
 - Towel
 - Disposable gloves

- Accident form and pen

The School Nurse is responsible for the weekly and monthly checks of the AED.

New batteries and pads can be ordered via Cardiac Science on 07787 563 612. Our current representative for AED is jphillips@cardiacscience.com.

9. After using the AED

After each use a full check should be done including removal and re-insertion of the battery and replacement of used accessories. An accident report must be completed and returned to the school nurse in the medical room.

Revised: July 2014, June 2016

Approved by Board of Governors: October 2014

To be reviewed by: June 2017 (or earlier if necessary, in response to accidents)