

Automated External Defibrillator – Procedure



Cherry Burton Sportsfield

1. Purpose and Scope

This procedure outlines the use of the Cherry Burton Sportsfield Automated External Defibrillator (AED) should anyone in the vicinity suffer a sudden cardiac arrest.

Sudden Cardiac Arrest (SCA) is a condition that occurs when the electrical impulses of the human heart malfunction, causing a disturbance in the heart's electrical rhythm called ventricular fibrillation (VF). This is an erratic and ineffective electrical heart rhythm which 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 space of time of the onset of VF.

An AED is used to treat victims who experience sudden cardiac arrest. It is only to be applied to victims who are unconscious, without pulse and no signs of circulation or normal breathing. The AED will analyse the heart rhythm and advise the operator if a shockable rhythm is detected. If a shockable rhythm is detected, the AED will charge to the appropriate energy level and advise the operator when to deliver a shock

2. Aim

The aims of this procedure is to provide guidance on the AED, its deployment and use including;

- Description of AED
- Supervision
- Training and authorisation
- Routine maintenance and safety checks
- Technical Support & Spares

The Resuscitation Council's (UK) advice regarding SCA is that electrical defibrillation is well established as the only effective therapy for cardiac arrest caused by ventricular fibrillation (VF) or pulseless ventricular tachycardia (VT). The scientific evidence to support early defibrillation is overwhelming; the delay from collapse to delivery of the first shock is the single most important determinant of survival. If defibrillation is delivered promptly, survival rates as high as 75% have been reported. ***The chances of successful defibrillation decline at a rate of about 10% with each minute of delay.*** Basic life support e.g. cardiopulmonary resuscitation (CPR) will help to maintain a shockable rhythm but it is not a definitive treatment.

The Resuscitation Council (UK) also recommends strongly a policy of attempting defibrillation with the minimum of delay in victims of VF/VT cardiac arrest. They have also stated that to avoid delay in using an AED,

- a) An AED can be used safely and effectively without previous training. Therefore, the use of an AED should not be restricted to trained rescuers. However, training should be encouraged to help improve the time to shock delivery and correct pad placement.
- b) Short video/computer self-instruction courses, with minimal or no instructor coaching, combined with hands-on practice can be considered as an effective alternative to instructor-led AED courses e.g. <https://life-saver.org.uk/>. Such courses should be validated to ensure that they achieve equivalent outcomes to instructor led courses.
- c) When using an AED, minimise interruptions in chest compression to the shock times. Do not stop to check the victim or discontinue CPR unless the victim starts to show signs of regaining consciousness, such as coughing, opening their eyes, speaking, or moving purposefully AND starts to breathe normally.

3. Description of AED

The AED is a ZOLL AED Plus model with alarm and integral heating is sited on the west wall of the Sportsfield Pavilion in Cherry Burton housed in a secure outdoor plastic cabinet with its own power supply.

To gain access to the AED the user must first dial 999 to obtain the door code. The local ambulance service has been informed that an ZOLL AED is in place and has registered it. **Under no circumstances should individuals divulge the door code number to other members of the public as some medical emergencies do not require an AED, and the user should be guided by the 999 call operator.**

4. Supervision

The Clerk to the Cherry Burton Parish Council shall ensure that,

- Training on the use of the supplied defibrillator is given to nominated individuals.
- Maintenance and safety checks have been allocated to individuals and these are carried out regularly.
- Training, testing and maintenance records are kept, these actions are to be carried out as per the manufacturer's recommendations.

5. Training and Authorisation

There is awareness training available as a means by which an explanation of how the system works can be demonstrated to the sports clubs and public. Contact is Zoll UK.

Those expected to oversee the equipment will be given this training and a list of authorised users will be posted beside the equipment. It is the Cherry Burton Parish Council's preference that only those trained in the use of the equipment should inspect and maintain it.

However, when it comes to use, where no trained personnel are available and as the equipment is fully automated then it may be used by any member of the public following the instructions given by the equipment.

6. Routine Maintenance and Safety Checks

Cherry Burton Parish Council will own the AED but the Sportsfield Management Committee will appoint persons to carry out regular (weekly/monthly) visual checks/tests on the equipment to ensure that it can be used when called upon.

a) Control Circuit Check;

The cabinet is designed to maintain an internal temperature of 10 degrees C and is thermostatically heated requiring an external power source to function.

- The only check that the power is on is a white light which fades in and out over several seconds and cannot easily be seen in daylight. However, by pressing the access buttons on the front of the cabinet and hearing audible tones indicates that power is being supplied to the cabinet. Red Light indicates that the door is open.

b) Self-Diagnostic Checks

- The device performs a self-test as soon as the battery is inserted, turns itself off when the test is done, then periodically wakes up to perform daily, weekly and monthly self-tests.

- Run-time Test – self monitoring in real time.
 - Periodic Self-Diagnostic Test – self checks daily, weekly and monthly on battery status, pad status and internal circuits.
- c) Other checks;
- Status Indicator – Green Tick symbol indicates batteries are healthy.
 - Two sets of spare pads present incl. accessory pack of;
Towel, Razor, Scissors, Gloves, Face Shield all present.

7. Technical Support & Spares

AED Plus defibrillators are manufactured by ZOLL Medical Corp. in the USA. There is a UK office at Zoll Medical UK Ltd, 16 Seymour Court, Manor Park, Runcorn, Cheshire. WA7 1SY. Customer Service 01928 595160. The AED standard warranty is 5 years but it has been extended by 2 years to 9/12/2023 by registering the device at www.zoll.com/aedpluswarranty. All problems/faults with the DefibSafe supplied AIVIA 210 weatherproof cabinet need to be passed to DefibSafe as the main supplier who will if necessary contact the manufacturer direct if telephone resolution is not possible.

Spares and accessories can be supplied by Zoll Uk, St John Ambulance or Selles Medical Ltd. at 3-5 Popple Street, Hull HU9 1LP. Tel 01482 317960. To re-order accessories please call DefibSafe and quote;

8900-0800-01	CPR-D padz electrode incl. accessory kit
8000-0807-01	Set of 10 Batteries (Type 123L Lithium Batteries) Duracell preferred.

Further information on the AIVIA 210 cabinet can be obtained from St Johns Ambulance supplies at <http://www.stjohnsupplies.co.uk/products/Defibrillators/Accessories/AIVIA-210-AED-wall-cabinet>.

The power supply and the cabinet were installed by Drewery Electrical Ltd., Electrical Contractor on 8th Dec 2016.
Tel: 07710 345945.

NOTE: The equipment must be maintained in accordance with the manufacturers' instructions to avoid invalidating the warranties.

AED CHECKLIST – MONTHLY/6 x Monthly CHECKS

Cherry Burton Sportsfield

(Weekly check – see overleaf)

To be completed every month and when taken out for an event.

For each item, please tick or cross the box and sign at the bottom.

Any problems or missing items must be reported to The Clerk to Cherry Burton Parish Council Tel: 01964 550107 or e-mail cbpc@pjm.karoo.co.uk. All spares are kept by the Clerk.

Date (Month & Year) Monthly													
Check AED is on standby mode – green tick is displayed on the front of the AED.													
Check Door opens correctly (code available from the Clerk - not to be divulged to public)													
Check adult electrode pads are sealed and in date (green date tab on handle of AED)													
Check 2 spare Adult CPR-D Padz with accessories (Ref 8900-0800-01) in bag.													
Is the unit clean, undamaged – no loose parts?													
6 x Monthly													
Verify electrodes are connected to the AED Plus (entails opening front cover)													
Turn the AED Plus on and off and verify the green check indicates ready for use.													
Check Batteries are within expiration date.													
Signed													

If the AED shows a fault, report it to The Clerk to Cherry Burton Parish Council Tel: 01964 550107 or e-mail cbpc@pjm.karoo.co.uk.

