



AUTOMATED EXTERNAL DEFIBRILLATOR POLICY



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Purpose of the policy

The purpose of this policy is to provide information regarding the use of the Automated External Defibrillator (AED).

Introduction

An AED is a machine used to give an electric shock when a person is in cardiac arrest, i.e. when the heart stops beating normally. Cardiac arrest can affect people of any age and without warning. If this happens, swift action in the form of early cardiopulmonary resuscitation (CPR) and prompt defibrillation can help save a person's life.

In 2013, emergency medical services attempted to resuscitate approximately 28,000 cases of out-of-hospital cardiac arrest in England. Overall survival rates varied across the country but ranged between 2% and 12%. However, survival rates as high as 75% have been reported where CPR and defibrillation are delivered promptly.

Cardiac arrest and heart attacks

It is important to understand the distinction between a heart attack and cardiac arrest as they are not the same and require different interventions. CPR and/or the use of an AED is not appropriate for an individual experiencing a heart attack who is conscious, as the heart will still be beating, and the device will not administer a shock in these circumstances. However, a heart attack is still a life-threatening situation, and the emergency services should be called immediately. A heart attack can also very quickly lead to a cardiac arrest, in which case administration of CPR and the use of an AED may help to save the person's life.

Cardiac arrest

Cardiac arrest is when the heart stops pumping blood around the body. It can be triggered by a failure of the normal electrical pathway in the heart, causing it to go into an abnormal rhythm or to stop beating entirely. Oxygen will not be able to reach the brain and other internal organs.

When a cardiac arrest occurs, the individual will lose consciousness and his/her/their breathing will become abnormal or stop. If basic life support is not provided immediately, the chances of survival are greatly reduced. Cardiac arrest can happen at any age and at any time.

Possible causes include:

- Heart and circulatory disease (such as a heart attack or cardiomyopathy)
- Loss of blood
- Trauma (such as a blow to the area directly over the heart)
- Electrocutation
- Sudden arrhythmic death syndrome (SADS; caused by a genetic defect)

When a cardiac arrest occurs, CPR can help to circulate oxygen to the body's vital organs. This will help prevent further deterioration so that defibrillation can be administered.

Heart attack

A heart attack (myocardial infarction) is caused by a clot forming in one of the arteries that supply blood to the heart muscle. This prevents oxygen from getting to a particular region of the heart. As a result, cells in this region start to die. The longer this continues; the more damage is caused to the muscle. This damage is permanent. However, as the heart is still beating, CPR and defibrillation are not appropriate.

Not all people experiencing a heart attack will experience pain or discomfort. They will often remain conscious throughout. However, a heart attack is a serious, life-threatening emergency that requires immediate treatment and can trigger a cardiac arrest. If a person experiences a heart attack, the correct course of action is to call 999 immediately. The person should be made comfortable, ideally seated on the floor (in a “W” position) supported by a wall or a person knelt behind them and reassured until the ambulance arrives. Heart attacks are exceedingly rare among children, but the incidence in the adult population means that coronary heart disease (the most common cause of heart attacks) is the leading cause of death in the UK.

Common symptoms of a heart attack include:

- Chest pain or tightness, like a belt or band around the chest, which is not relieved by rest
- Pain which may spread to the neck, jaw, back and arms
- Feeling sick, sweaty, short of breath, lightheaded, dizzy, or generally unwell along with discomfort in the chest

The chain of survival

In the event of a cardiac arrest, defibrillation can help save lives, but to be effective, it should be delivered as part of the chain of survival.



There are four stages to the chain of survival, and these should happen in order. When carried out quickly, they can drastically increase the likelihood of a person surviving a cardiac arrest.

They are:

1. Early recognition and call for help. Dial 999 to alert the emergency services. The emergency services operator can stay on the line and advice on giving CPR and using an AED.

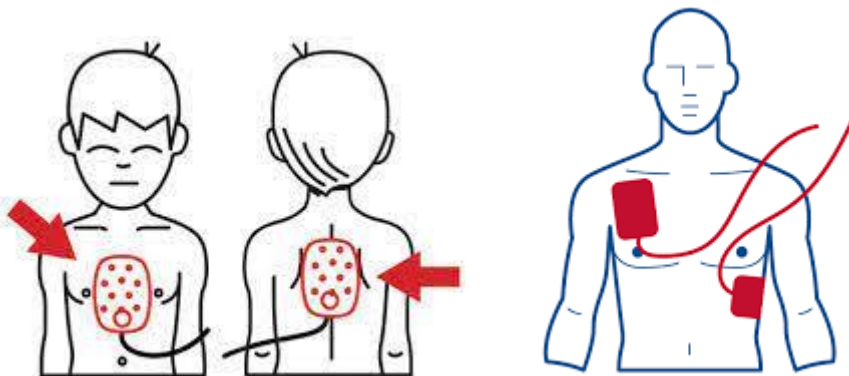
2. Early CPR - to create an artificial circulation. Chest compressions push blood around the heart and to vital organs like the brain.
3. Early defibrillation – to attempt to restore a normal heart rhythm and hence blood and oxygen circulation around the body. Some people experiencing a cardiac arrest will have a “non-shockable rhythm”. In this case, continuing CPR until the emergency services arrive is paramount.
4. Early post - resuscitation care – to stabilise the patient.

Anyone is capable of delivering stages 1 to 3 at the scene of the incident. However, it is important to emphasise that life-saving interventions such as CPR and defibrillation (stages 2 and 3) are only intended to help buy time until the emergency services arrive, which is why dialling 999 is the first step in the chain of survival. Unless the emergency services have been called promptly, the person will not receive the post-resuscitation care they need to stabilise their condition and restore their quality of life (stage 4).

The chain as a whole is only as strong as its weakest link. Defibrillation is a vital link in the chain and, the sooner it can be administered, the greater the chance of survival.

Defibrillation and cardiopulmonary resuscitation (CPR)

When a person suffers a cardiac arrest, it is essential for effective CPR to be initiated as soon as possible; only dialling 999 should take precedence. The person performing CPR should not stop except where this is necessary in order to attach the pads or when ordered to do so by the AED, usually before it delivers a shock. If possible, somebody else should attach the pads to the patient while CPR continues.



AED pad placement on a child 1-8 years of age Under 55lbs or 25 kg

AED pad placement on an adult male/female.

An AED will only administer a shock if the patient’s heart is in a shockable rhythm. The application of CPR can maximise the opportunities for defibrillation to be administered effectively. The AED will continue to analyse the patient’s heart rhythm after each shock and will provide ongoing instructions about continuing CPR.

Some cardiac arrest patients will not present with a shockable rhythm, and the AED will not administer a shock. In such cases, it is essential that CPR is maintained until the emergency services arrive.

Location and access

In view of the importance of responding swiftly to a cardiac arrest, AEDs should be located where they can be accessed quickly in an emergency.

Brackenfield School's defibrillator is positioned on the external wall of the school facing Duchy Road. It is clearly identified with the standard "defibrillator" sign. The defibrillator was purchased via DefibSafe. It has also been registered with the Ambulance Service. They have also been made aware of its make, model and location. This is to assist 999 operators and ambulance crews.

Community Use

Funds were raised for the purchase of the defibrillator for Community Use. If the unit is needed for use outside of the school environment, the user will call 999 and give the location number to the call handler, who in turn will give the user a code to access the unit. The unit will then be taken to the scene of the incident and used as per the guidelines given by the machine.

Replenishing the unit

After use, Brackenfield School has the responsibility to replenish the pads of the unit. The school holds details on where they can be purchased from. We will ensure that we always have a spare set held within the accessible storage box held in the Headmaster's office.

Training

AEDs, as work equipment, are covered by the Provision and Use of Work Equipment Regulations 1998 (PUWER), and as such this places duty on employers in respect of employee training and the provision of information and instructions in the use of such equipment.

However, AEDs are designed to be used by someone without any specific training and by following step-by-step instructions given by the AED at the time of use.

Brackenfield School has 10 members of staff who received the initial CPR and AED training on 25th April 2022.

Name of policy AED Policy	Policy reviewed/amended date November 2023 V1
Original policy date October 2022	Current version V2
Date of new review Autumn Term 2024	