

First Aid Guidance

June 2025

Automated External Defibrillators (AEDs)

Use and Maintenance

Occupational Health and Safety Service
HSD079E (rev 1)

Approval History:

Revision	Reviewed by	Amendment history	Approved by	Date
2	Andrea Eccles	Links reviewed and updated. Inclusion of AssessNet link. No significant changes to the text.	Working Group for First Aid	June 2025
1	Safety Office	None	Working Group for First Aid	Dec 2017

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1. Introduction

Sudden cardiac arrest (SCA) is a leading cause of premature death but it is known that with immediate treatment many lives can be saved. SCA means the electrical rhythm that controls the heart normally has been disrupted and become chaotic. This chaotic rhythm is called ventricular fibrillation (VF). The quicker the VF can be treated with defibrillation the greater the chance of a successful resuscitation. Literally every second counts, and the ambulance service is unlikely to arrive quickly enough to resuscitate most patients. Conditions for defibrillation are optimal for only a few minutes after the onset of VF, although this can be extended if CPR is performed, nevertheless, the patients chance of survival falls by around 7-10% with every minute that the use of an AED is delayed. (Information from the Resuscitation Council (UK))

Many SCA victims can be saved if someone nearby recognises what has happened and calls for an ambulance immediately, begins to perform basic cardiopulmonary resuscitation (CPR) and uses an AED to try to restore the hearts normal rhythm. Each of these is a link in a chain of events that provide the best chance for a successful outcome for the patient, but the most critical factor is the speed with which the shock is given.

The University has acknowledged this information and over the past few years installed AEDs throughout many Institutions and Departments across the whole Estate, this will hopefully allow for an AED to be easily accessible to all should it be required.

As you may be aware AEDs have been installed in many public locations throughout the country such as shopping centers, train stations and sports grounds with the intention being to provide an accessible restart to the heart as soon as possible. This was a government-led initiative which started back in 1999. Providing many more around the University is an extension of this program and they can be used to help University staff, students, visitors and members of the public.

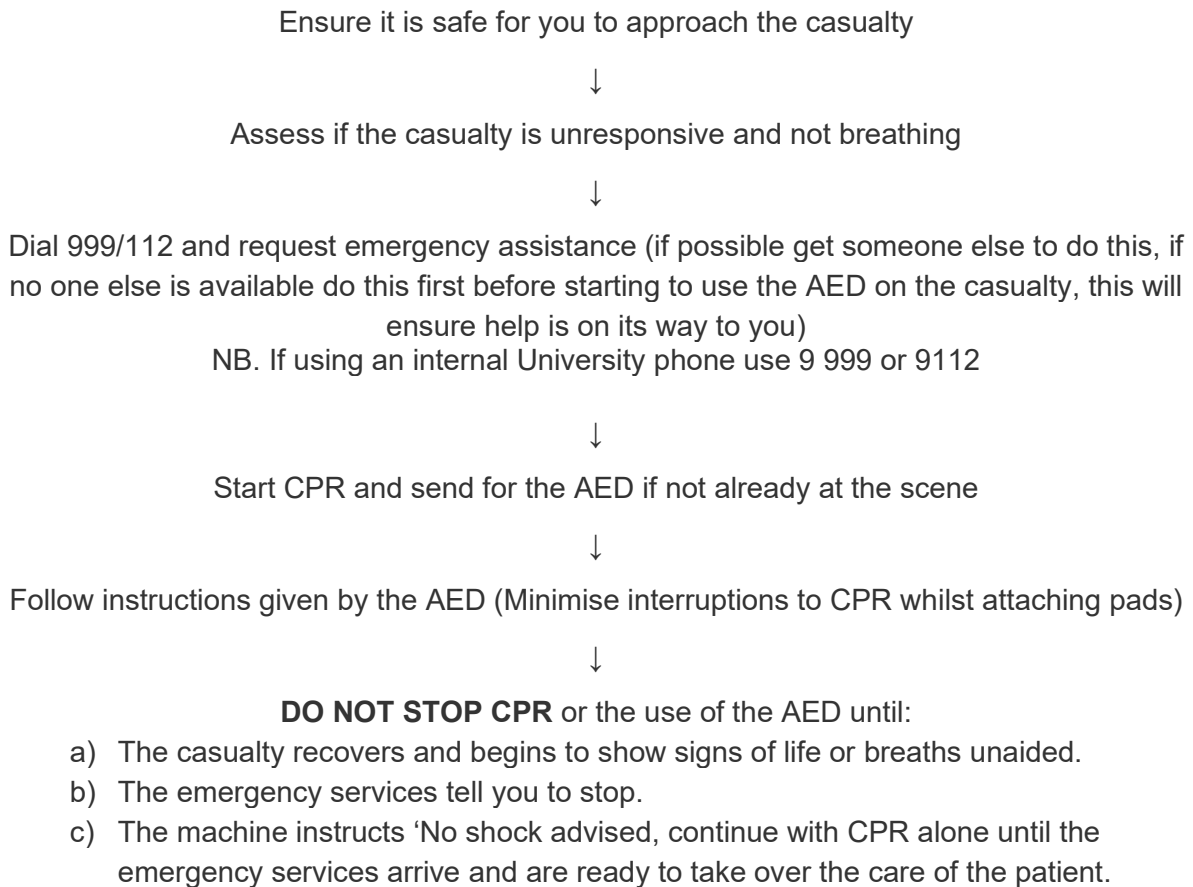
2. Using the Automated External Defibrillator (AED)

AEDs are designed to be used by anybody and don't need any specific training to be effective as all the models installed around the University are either semi or fully automatic and as soon as they are opened the machine will guide the operator through the process required with both verbal and visual instructions. They are perfectly safe and will not discharge a shock unless the patient requires it.

All that is required to use an AED is to recognise someone has collapsed with an SCA, attach the two adhesive pads to the patient's bare chest as indicated on the packet, the pads will monitor the patient's electrical rhythm of the heart and deliver a shock if required, either automatically or by instructing the operator to press a button. All of this will be explained by the audible instructions given by the machine. The machine will then instruct you to continue with CPR and after 2 minutes instruct you not to touch the patient. This is to allow it to check the heart's rhythm again and deliver a further shock if required. This cycle must continue until emergency services arrive and take over.

The important factor is time and therefore getting an AED to the person who has collapsed as quickly as possible and used it on the patient before the arrival of professional help from the ambulance service will give the patient the best chance of survival.

The following are the steps required to ensure safe use of an AED:



3. Training for AED users

AEDs have been used successfully by untrained people, and lack of training should not be a deterrent for using them.

Since 2017 First Aid at Work courses are required to teach the use of an AED within the course and therefore all University trained first aiders will have had some experience with a training AED.

To enhance this training the University Safety Office offers training in AEDs to all first aiders and other interested parties within the Institutions and Departments where AEDs have been installed. If you would like to book yourself on a course or book a refresher training course for your department please contact the Safety Office.

4. Legal Issues

Modern AEDs are very reliable and will not allow a shock to be given unless it is needed. Therefore, they will not harm the person who has collapsed with a suspected SCA.

In some countries 'Good Samaritan' legislation protects those who go to the help of others in an emergency. Here in the UK we do not have such legislation, which leads people to be concerned if they attempt to resuscitate could they be sued by that person or their family. The short answer is that this would be very unlikely.

In English law, for someone to be held liable it would have to be proved that their intervention left the person in a worse state than if they had done nothing. In these circumstances the casualty is technically dead following a SCA and so doing nothing would not improve this outcome but doing something could potentially save their life. No case brought against anyone in the UK for delivering first aid has ever been successful; in fact, the courts have always looked favorably on those who have tried to help.

If you are a trained University first aider you would be covered by the University insurance for such actions and if you have been trained by St John Ambulance and deliver first aid to a member of the public outside of work, you would also be covered by their insurance policy.

5. Locations of University AEDs

AEDs have been installed where large numbers of people are gathered such as lecture theatres, museums, large departments.

Within these departments they must be stored in an accessible place. They should not be locked away or stored in offices that are locked when the occupant is not in the building. No barrier should be put in the way of anyone collecting it when needed. The most sensible place would be in the reception area, clearly visible and signed correctly. The location should be clearly signed, these can be printed for free from the following link:

[AED Signage Sign](#)

If your building/department is particularly big then you may consider putting signs up informing people where their nearest AED unit is located throughout the building.

Please note that the AED pads are temperature sensitive so units should not be stored in out-buildings or areas where there is no heating unless they are kept in a specially design cabinet with a power supply to provide the required heat. Such cabinets are available from specialist suppliers.

All people within the building or location must be aware of its location and purpose.

All University AED locations can be found on the University map, see link below:

It is important that all University first aiders know the location of their nearest AED especially if they do not have one in their building. Ideally all University personnel should be aware of this information.

The Safety Office hold a spare AED that can be borrowed by any University department for special events and times when they are significantly increasing the number of people in and around their buildings. i.e open days, public functions etc. To access this resource please contact the Safety Office directly.

6. Maintenance of the AED

AEDs require hardly any maintenance or servicing. Most models perform their own daily self checks and will display a warning light or bleep if they need attention.

Heartstart G5 models that have been installed across the University during 2017 have an intuitive system which will start to beep and the 'ready rescue' will turn to red from green if the pads are out of date. Check the expiry date of the pads first if you have this model and it starts to beep.

Please contact the Safety Office if your unit requires attention. Do not attempt to service the machine yourself.

7. Responsibilities of the Nominated Person

All Institutions and departments where an AED has been installed should nominate one person to be responsible for the AED. The Safety Office should be informed of this person and any subsequent changes. This person MUST check the AED on a daily basis to look for warning lights/bleeps. Each month they must do a complete inspection of the unit which will include ensuring the pads are in date, have not been opened or tampered with and the first aid kit kept with the unit is still fully stocked up. Records of this inspection should be kept in the department. Appendix 1 can be used to record these monthly checks.

Adequate arrangements must be put in place to perform these daily checks and monthly inspections when the nominated person is on annual leave or off due to illness.

The nominated person should also be aware of the expiry date of the PADS and the date the BATTERY was inserted into the AED unit and they are responsible for reordering replacements. Pads usually have a shelf life of 2 years and batteries are guaranteed for 4 years. It must be noted that if a unit starts to bleep to indicate a low battery it is still fully operational and will deliver shocks if required but a replacement battery must be ordered immediately and replaced upon delivery.

Replacement pads and batteries can be obtained from the Safety Office, however they do not keep a stock of such items so please order replacements in plenty of time before the current ones expire. If you have any questions regarding ordering replacement parts or any other aspect of your AED unit please contact the Safety Office.

8. Reporting the use of an AED

When an AED has been used on a patient it is helpful that the ambulance crew knows the number of shocks it has delivered prior to their arrival, please pass this information on to them if known.

Each unit has an internal memory which will record all the details of any shocks given and the heart rhythm of the casualty during the process. This information may be required after the event and can be downloaded from the unit if required.

All incidents involving the use of an AED must be reported using the University AssessNet portal.

[Report an Accident/Incident | Safety Office](#)

AED's are designed to deliver many shocks from the life of one battery, so the unit can just be placed back into service but please ensure the pads used are disposed of and replaced. Replacement pads are sourced through the Safety Office.

9. References

- i) Resuscitation Council (UK) www.resus.org.uk
- ii) British Heart Foundation www.bhf.org.uk

AED Monthly Inspection Record

AED Serial Number				
AED Location				
Date Installed				
Nominated Person				
Expiry date of PADS				
Expiry date of BATTERY				

[illegible]



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