

Advice and Best Practice Guidance for the use of Automated External Defibrillators (AED)

The purpose of this document is to provide practical advice and information on all aspects of managing an AED. This document is not a standard or a policy but it aims to promote best practice in the care and use of AEDs.

An AED is a sophisticated, reliable, safe, computerised device that delivers a controlled electric shock and is used to treat victims who experience a cardiac arrest (when the heart stops pumping). An AED should *only* be applied to victims who are unconscious and *not* breathing normally. The AED will analyse the heart rhythm and advise the operator if a shock is required, CPR will help to maintain the victim's heart in a shockable rhythm.

Coronary Heart Disease is Northern Ireland's single biggest killer. More than 1 in 7 men and 1 in 10 women die from coronary heart disease. Many of these deaths occur suddenly and outside of hospital following a sudden cardiac arrest. The chances of survival are very time dependent; the longer the attempted resuscitation is delayed, the worse the outcome. Survival is reduced by 10% for every minute of delay without cardiopulmonary resuscitation (CPR). Two of the most important factors influencing survival are the early use of effective CPR and early defibrillation. Defibrillation is achieved by the use of an AED.



It is important to remember that defibrillation is the **third** link in the chain of survival. **All** of the links are vital and of equal importance

If you wish to proceed with the purchase of an AED there are organisational issues, which must be addressed.

Where will the AED be placed?

It should be somewhere central where it can be easily accessed and preferably mounted on a wall in a secure position. Ideally, the device should be accessible within **2 minutes** brisk walk from anywhere in the building/site. Appropriate signage should be displayed throughout your site indicating AED location/s. The owner/co-ordinator of the AED should ensure that it is 'emergency ready' ie not locked away in an office or cupboard, removed from packaging and out of the box. The AED should be fully assembled with electrode pads and battery in place to ensure there is no delay if required in an emergency situation.

Who can operate an AED?

AED's are intended to be operated by any member of the public and are designed for ease of use by untrained individuals. CPR and defibrillator instruction will be given if required by an ambulance service 999 operator. This is vital in ensuring that CPR is commenced as quickly as possible. Organisations should have trained first aiders who can respond immediately to an incident and provide CPR and defibrillation, however commencing CPR should not be delayed until their arrival. Please inform your insurance company that you have an AED located on site.

Who will provide the initial training?

This training should be provided by an accredited first aid organisation/person. The average length of a training session is approximately 3 hours. The contents of the course should be in accordance with the training recommendations and learning outcomes set out by the Resuscitation Council UK for Cardiopulmonary Resuscitation and Automated External Defibrillation. (This training manual is available from (www.resus.org.uk)

Ongoing training commitment.

It is highly desirable that those who may be called upon to provide CPR or use an AED should be appropriately trained to do so and keep their skills up to date. However those who have not been trained or whose training has expired should not be inhibited if willing to use the AED.

(See Appendix 1 for sample training record)

Who will be responsible for checking the AED?

There should be a Co-ordinator or designated person/s (***See Appendix 2***) with responsibility for checking the AED on a weekly basis and following use of the device. This should be carried out in accordance with the manufacturer's recommendations.

On a weekly basis the following should be checked:

- The AED – that it is in its correct location and has not been tampered with
- Battery status indicator - to ensure the battery is working correctly & not alarming
- Electrode Pads – ensure that these are unopened and still within the manufacturer's expiry date
- Additional equipment – this should include disposable face mask, scissors, disposable razor, disposable gloves and towel/dry cloth

NB: If the AED alarms outside of these checks then please contact the manufacturer for further guidance.

(See Appendix 3 for a sample checklist)

How will AED operators be alerted if a collapse occurs?

It is the individual organisation's responsibility to ensure an appropriate protocol is in place for an immediate, co-ordinated response by the trained AED operators.

Is there aftercare/debriefing available for the person/s who have used the AED in a cardiac arrest situation?

It is the responsibility of your organisation to offer aftercare/debriefing in the event of the AED being used. NIAS if requested can provide this through their Community Resuscitation Team – community.resus@nias.hscni.net

It is important to:

- Complete your standard accident/incident report form
- Ensure all relevant information is given to Northern Ireland Ambulance Service (NIAS)
- Ensure aftercare/debriefing is available for the individual/s involved in the resuscitation attempt if required.

Buying tips for a public access AED:

- buy the AED that is best for your circumstances (including purchase price).
- buy the AED that your community/organisation is most likely to be comfortable with using in an emergency.
- think beyond the initial purchase to the long term cost of battery and electrode (pad) replacement.
- consider the warranty offered.
- consider the cost of regular maintenance checks (as recommended by the manufacturer).
- try and purchase your AED from a local provider who can provide a local after-service as required.

Consider:

- will the device be affixed to a location or will it be moved around a lot (ie team bus/transport)
- the durability of the device
- storage conditions as extremes of heat or cold, dust and moisture could potentially damage the device.
- AED's placed in areas where noise is a factor, or might be used by people with hearing impairments, should provide both visual and verbal prompts to the user.
- regardless of the location, the AED should deliver simple, clear and loud voice prompts to help the user in an emergency.

Each AED has an International Protection (IP) code. This is the level of protection that electrical appliances provide against the intrusion of solid objects or dust, accidental contact, and water. The higher the value of the number, the higher the resistance to the contaminants listed. AED's with a lower numerical IP rating are more likely intended for use in the indoor settings.

It is in the interest of the public and public organisations to know the location of Public Access Defibrillators as awareness of the locations is beneficial in an emergency. Therefore if you have or are purchasing an AED then please register it with the NI Ambulance Service – www.nias.hscni.net

Details of Site AED Co-ordinator**Site Name:****Site Address:****Your Site AED Co-ordinator is:****Name:****Department:****Contact No:****Email:**

Please contact the above person if there are any issues in relation to the AED or if the device is used.

Weekly AED Checking Form

Site Name:

Site AED Co-ordinator:

AED Location:

AED Serial No.:

AED Co-ordinator Contact No:

Date	AED Intact (Y/N)	Battery Status OK (Y/N)	Battery Expiry Date	Pads Expiry Date	Facemask (Y/N)	Gloves (Y/N)	Scissors (Y/N)	Razors (Y/N)	Paper Towel (Y/N)	Signature

Please note: Missing or expired items should be replaced as soon as possible. In the event of a fault, please refer to device manual or your Site AED Co-ordinator/AED distributor

