

SCOTTISH BORDERS COUNCIL

# AUTOMATED EXTERNAL DEFIBRILLATOR

## GUIDANCE DOCUMENT

Produced in line with guidance from the NHS, Scottish Ambulance Service and the Scottish Fire and Rescue Service.



EMERGENCY PLANNING  
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**NHS**  
Borders



**SCOTTISH**  
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Working together for a safer Scotland

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# AUTOMATED EXTERNAL DEFIBRILLATOR EMERGENCY PLAN

## 01. AED



# 1. INTRODUCTION

- 1.1 This Guidance Document is designed to define the process of the purchase / provision of an Automated External Defibrillator (AED) and is to complement any existing first aid cover which may be in place. In the event of an out of hospital cardiac arrest there will be an AED available prior to the arrival of the ambulance service.
- 1.2 Defibrillation is one crucial stage in a sequence of events that need to occur for the resuscitation of a victim of sudden cardiac arrest (SCA). This sequence or “Chain of Survival” starts by summoning the emergency services as soon as possible. The second stage is providing basic Cardiopulmonary resuscitation (chest compressions alternated with rescue breaths) to keep the victim alive until the third stage (defibrillation) can be performed.
- 1.3 The Automated External Defibrillator (AED) has been described as the single most important development in the treatment of SCA. These devices are now widely available and increasingly used by people, often with little or no training, to restart the heart of a victim of SCA. Under ideal circumstances, when used very soon after collapse (within two or three minutes), many can survive.
- 1.4 The crucial determinant of survival is the interval between collapse and the use of AED to deliver a shock. The strategy therefore is to have an AED installed at a place where it might be needed so that someone nearby can access it quickly. Taken to the person who has collapsed and used before the arrival of professional help. This arrangement is known as Public Access Defibrillator (PAD)
- 1.5 In this guidance document, we explain the background of defibrillation and describe some important practical aspects of setting up an AED programme or PAD scheme. The information will help those considering establishing an AED programme in any public place. This will include the workplace, school, transport, and shopping or sports facility. Similarly, the information will be relevant to those wishing to make an AED generally available by placing one in a prominent place in their local community. It is not intended as a guide for the purchase of an AED for use in the home.

# 2. BACKGROUND

- 2.2 Out of Hospital Cardiac Arrest (OHCA) remains a significant Health Care Challenge in Scotland. Approximately 3,500 patients undergo attempted resuscitation each year after OHCA. Nationally survival rates are low compared to the European average, with considerable variation in outcomes between communities. European centres with the best survival rates return almost a quarter of all OHCA victims home alive. In Scotland, around 1 in 20 survives to hospital discharge.
- 2.3 The Scottish Government launched an Out of Hospital Cardiac Arrest “Strategy for Scotland” in March 2015, with a broad coalition of Stakeholders, setting out a commitment to improve outcomes after out of hospital cardiac arrest (OHCA) and an ambition that by 2020 Scotland will be an International Leader in the management of OHCA.

## 2.4 To meet this commitment the Scottish Government has set two clear outcomes,

- The aim to increase survival rates after OHCA by 10% across the Country within five years. Reaching this target would mean an additional 300 more lives being saved every year compared to recent years. Starting this improvement programme now could result in 1,000 additional lives being saved by 2020.
- To equip an additional 500,000 people with CPR Skills by 2020. Increasing the incidence of bystander CPR is the cornerstone of improving outcomes because prompt bystander CPR can increase the likelihood of survival after OHCA by 2 or 3 times.

## 3. CURRENT POSITION IN SCOTTISH BORDERS

3.1 Since the launch of the Government Strategy in 2015, a lot of good work has been done throughout the country in meeting the set outcomes and indeed the National figure for survival from OHCA has now risen from a year ago. Locally within the Scottish Borders, the survival rate (return of spontaneous circulation/pulse ROSC) has risen to 29% an outstanding achievement, due to the commitment of local Public Services, Charity Organisations and Community resilience. Indeed the key to sustaining improved outcomes from OHCA within the respective communities of the Borders is through Community resilience where there is scope to further increase and mainstreams this through a range of Third Sector organisations to support the response of the emergency services.

3.2 It is acknowledged that there is a wide range of organisations, initiatives and groups operating at different levels within the Scottish Borders who have an interest in supporting Community Resilience, through promoting individual awareness and resilient behaviours, encouraging and co-ordinating volunteering and through community level emergency planning groups. However, there are huge opportunities to improve on this communication and networking amongst these groups in order to explore the potential for CPR skills to become more widely available throughout the Scottish Borders.

**Locations of AEDs throughout the Scottish Borders and the UK can be found via the Crowdsav website. Also by downloading the Crowdsav app which is continually being developed and updated as AEDs are registered.**

**<https://www.crowdsav.com>**

Information can also be obtained via the Scottish Ambulance website –

**<http://www.scottishambulance.com/YourCommunity/pad.aspx>**

## 4. LOOKING FORWARD

- 4.1 The following stakeholders working in partnership, Scottish Borders Council, Scottish Ambulance Service, NHS Borders and the Scottish Fire and Rescue Service, have acknowledged the Strategy for Scotland and the good work already being done within the Scottish Borders and now look to consolidate and support resilience in the respective communities by ensuring that equitable access is provided to all members of the communities for training in CPR and that all communities are informed of locations of Public Access Defibrillators.

## 5. FUNDING

- 5.1 Scottish Borders Council, working with local Third Sector partnerships can advise on a range of funding opportunities to help to support communities to increase the provision of PADs. Funding opportunities may include acquisition of the PAD, installation, training and consumables in some cases.

**Further information on funding sources can be obtained from the following website(s) –**

**[https://www.scotborders.gov.uk/info/20076/community\\_grants\\_and\\_funding](https://www.scotborders.gov.uk/info/20076/community_grants_and_funding)**

**[https://www.scotborders.gov.uk/info/20076/community\\_grants\\_and\\_funding/262/a-z\\_funding\\_guide](https://www.scotborders.gov.uk/info/20076/community_grants_and_funding/262/a-z_funding_guide)**

Avrils Trust - **[info@davrilstrust.org.uk](mailto:info@davrilstrust.org.uk)**

Scottish HART - **[kennethgunn183@btinternet.com](mailto:kennethgunn183@btinternet.com)**

Kelso Heartbeat - **[kelsoheartbeat@hotmail.com](mailto:kelsoheartbeat@hotmail.com)**

- 5.2 External funding opportunities are subject to constant change and successful funding dependant on who is applying, when they apply and the scale of the funding request. For external funding, they should contact SBC or one of the identified providers above for the latest advice on funding availability.

- 5.3 In addition to advising on external sources of funding, SBC also delivers a range of generic funds which may well be able to support the provision of PADs.

Currently these are the Community Grant Scheme, Quality of Life and Common Good funds.

## 6. AED PURCHASE

- 6.1 Several manufacturers supply AEDs directly to the purchaser or through subsidiary medical equipment sales companies. An internet search will reveal many models and options, making choice confusing. Most of the AEDs currently aimed at basic level responders are suitable for Community AED schemes. Some models are designed for use by more highly trained responders (and have additional features like ECG screens), but these are not appropriate for basic level responders. The Ambulance



service may provide recommendations (usually based on compatibility with the models they use). Important differences between models include the cost of buying the AED itself, the cost and shelf life of batteries, the cost and shelf life of electrode pads, the duration of manufacturers guarantee and after sales service provided. All these factors should be considered when making a choice. It can be useful to ask others of their experience with a particular AED before going ahead with a purchase.

6.2 The purchase of more than one machine usually reduces the unit price, and such discounts should be sought when several AEDs are purchased.

6.3 Please note that the partners in this guidance document cannot specify a specific supplier and other suppliers may be available, however we recommend that AED is entered into a web search engine to obtain the best quotations and prices.

## 7. INSURANCE

7.1 Communities and organisations should consider insurance to cover any theft, damage etc of the AED. Further information and guidance on insurance can be obtained by contacting the local office of The Bridge. See website for details.

**[www.the-bridge.uk.net](http://www.the-bridge.uk.net)**

## 8. INSTALLING AND POSITIONING THE AED

8.1 The Community Resilience Department of the Scottish Ambulance Service will provide support, advice and guidance on all aspects of location/risk management of an installation of an AED and will provide a site risk assessment if required. Please contact NHS Borders –

**[bord-uhb.resus-defibinfo@nhs.net](mailto:bord-uhb.resus-defibinfo@nhs.net)**

8.2 The most important consideration is that those who might need to use an AED know where it is kept and how to access it quickly. It is preferable barriers are not put in the way of anyone collecting it when it is needed.

8.3 There is understandable concern that an AED in a Public place may be at risk of theft or vandalism. Where there is a definite high risk that an AED may be stolen or damaged, any arrangements to protect it will almost certainly create delays in getting it to the person who is in immediate need of it. On the other hand, an AED that has been stolen or damaged will be of no use to anyone. Our general advice is that AEDs should not be kept locked, but if they are at risk of theft or Vandalism is considered significant, any protective measures must be accompanied by a reliable arrangement to minimize the delay in obtaining access when it is needed.

8.4 Most AEDs located in public places are kept in protective cabinets; the standard sign for an AED should be used to show where it is stored –

**<http://www.resus.org.uk/pages/AEDsign.htm>.**

Various types of cabinet are available offering different levels of security and whether proofing. With many, the door is alarmed so that when the AED is removed an alarm is activated, but local circumstances will determine the need for this feature.

- 8.5 In the workplace, it is vital that all employees know that there is an AED present, where it is and what it is for. Installing the standard sign for an AED nearby will help. Equally important is that everyone knows exactly what he or she could do to raise the alarm in the event of an accident or sudden illness. Organisations with AEDs should consider having a formal policy to facilitate this.
- 8.6 AEDs should be located as close as possible to their most likely place of use. This will usually be determined by the layout of the building or venue and by the number of people at potential risk in each place. Security considerations may play an additional role. Ideally, AEDs should be located no further than two minutes brisk walk from the places they are likely to be used, and this precedent could act as a practical guide.
- 8.7 It is recommended that the Scottish Ambulance Service is made aware that an AED is available at a particular location and whether it can be accessed at all times or only (for example) during office hours, this information can help ambulance call takers guide those initiating a resuscitation attempt. You can find this information via the link below.

**<http://www.scottishambulance.com/YourCommunity/pad.aspx>**

## 9. TRAINING

- 9.1 The crucial factor in the resuscitation of someone from vascular failure is to provide a shock from an AED with the minimum delay. Time should not be wasted if trained staff are not immediately available. Untrained people have used devices successfully to save a life and lack of training (or recent refresher training) should not be a barrier. Provided someone is prepared to use the AED, they should not be inhibited from doing so.
- 9.2 There are advantages, however, of having a core number of appropriately trained personnel: training people to use an AED can be achieved quickly without major cost. Providers of training include the Scottish Ambulance Service, Scottish Fire and Rescue Service, Heartstart and various registered charity organisations within the Scottish Borders such as Avril's Trust and Kelso Heartbeat and private training companies. Choice of training provider will depend on what is available locally, the numbers being trained and the pre-existing level of expertise of the trainees. Clearly skilled or first aid at work employees will usually need less training than those with no knowledge of first aid or experience.

Increasingly, online or distance learning programmes are being offered and may be used widely in the future, particularly for refresher training. The British Heart Foundation has produced an Interactive CD that allows Community groups to self-teach and all local Fire and Rescue Stations are available throughout the Scottish Borders to facilitate this training.



### 9.3 Further information and advice on training can be found from the following contacts

Scottish Ambulance Service – [colinbaxter@nhs.net](mailto:colinbaxter@nhs.net)

Scottish Fire and Rescue Service – [E.melbcat@firescotland.gov.uk](mailto:E.melbcat@firescotland.gov.uk)

NHS Borders, Resuscitation Department – [Rod.mcintosh@borders.scot.nhs.uk](mailto:Rod.mcintosh@borders.scot.nhs.uk)  
[bord-unb.resus-defibinfo@nhs.net](mailto:bord-unb.resus-defibinfo@nhs.net)

**And also the following local charities –**

Avrils Trust – [wendy.brown0609@googlemail.com](mailto:wendy.brown0609@googlemail.com)

Scottish HART – [kennethgunn183@btinternet.com](mailto:kennethgunn183@btinternet.com)

Kelso Heartbeat – [kelsoheartbeat@hotmail.com](mailto:kelsoheartbeat@hotmail.com)

## 10. TESTING AND MAINTAINANCE

10.1 Users of an AED are not expected to carry out any maintenance tasks other than replacing expired batteries, electrode pads and other consumable items (razor, airway adjuncts, and plastic gloves). Even then, the shelf life of unused units is usually 3-5 years so any maintenance tasks are infrequent. In all cases, the manufacturer's instructions should be followed. All currently available AEDs perform regular self-checks and if a problem is detected it will be indicated. In most cases, they show this by a warning sign or light visible on front of the machine.

10.2 Those owning an AED should have a process for it to be checked regularly and frequently (ideally weekly) for such a warning, and for appropriate action to be taken when necessary. If this task is delegated to individuals, allowance must be made to ensure that the checks are not neglected during absence on holidays, sick leave etc. Some manufacturers may provide a replacement AED while one is removed for servicing, and the arrangement for this should be clarified and agreed during the process of buying an AED.

10.3 It has been noted that there have been problems arising with the servicing/checking and regular maintenance of the defibrillators, where error codes have been displayed firstly please refer to the manufacturer's instructions or contact- Scottish Ambulance Service /NHS Borders via the email address below:

**[bord-uhb.resus-defibinfo@nhs.net](mailto:bord-uhb.resus-defibinfo@nhs.net)**

10.4 The weekly check is a visual check and the outcomes of the monthly test should be recorded in **Appendix One**.

## 11. SITE/AED RESPONSIBILITY

11.1 Consent to the location/site of the AED being logged on the Command Control System in the Ambulance Control Centre (ACC). The details of the AED location/site will also become publicly available on the relevant partners websites.

Registering your AED the site specific information should be completed via then link below 'Registering your PAD' **see Appendix Two.**

Registering your PAD can be carried by using the flowing email address –

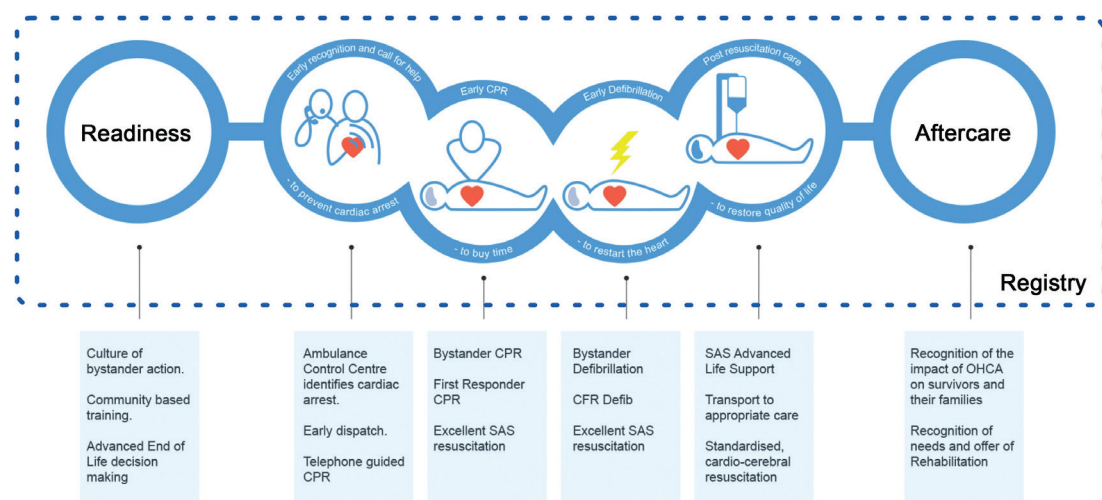
**bord-unb.resus-defibinfo@nhs.net**

- 11.2 Consent to being informed by the ACC, on an agreed telephone number, of any life threatening incidents on their premises (or within a 150 metre perimeter) and will be prompted to take the AED to the incident in case it is required.
- 11.3 Agree to display the nationally recognised AED signage and to house the machine in an easily accessible location, agrees to inform the Community Resilience Department of the SAS should the AED be taken out of service for any reason.

Scottish Ambulance Service contact:

**<http://www.scottishambulance.com/YourCommunity/pad.aspx>**

## 12. CHAIN OF SURVIVAL



## 13. POST AED ACTIVATION TASK

- 13.1 Following activation of the AED the responsible person (**see Appendix 2**) will complete and forward the Post Activation Form, **see Appendix 3**. In the event that the AED is activated, the consumable parts should be replaced by the Responsible Person for that specific community.

## 14. FAQs

**<http://www.scottishambulance.com/YourCommunity/Defibfaq.aspx>**

## APPENDIX 1

## 15. AED WEEKLY CHECK SHEET

## EXAMPLE OF STATIC AED SITE MONTHLY CHECK SHEET

AED Model:

Serial No:

Location:

Year:

TASK	Is AED serviceable i.e. clean, and no signs of contamination, or damage.	Check the AED Status Indicator (as per manufacturer's instructions)	AED Pads in date (best practice, two sets of pads)	Carryout Battery check including the expiry date	Accessory Pack i.e. Scissors/ Razor + Towel (or similar)
January					
February					
March					
April					
May					
June					
July					
August					
September					
October					
November					
December					
<b>Inspected by: Signature</b>					
<b>Remarks/ Problems:</b>					
<b>Corrective actions:</b>					

Please complete this form monthly and maintain copies on-site

## APPENDIX 2

### 16. REGISTERING YOUR AED

The site specific information should be completed via the form below and emailed to the following address –

Please register your AED at:

**<http://www.scottishambulance.com/YourCommunity/pad.aspx>**

The following completed form should also be forwarded to –

**[bord-uhb.resus-defibinfo@nhs.net](mailto:bord-uhb.resus-defibinfo@nhs.net)**

Name of Organisation/Group responsible for the AED:	
Name of the designated Person(s) responsible for the AED maintenance and completion of the post activation form:	
Contact phone number for the Location/site:	
Full Address including post code of AED Location/site:	
Model No. and Serial No. of AED:	
Exactly where the AED is situated within the location/site:	
If applicable: Availability/Opening times of the location/site:	
Do you consent to responding to incidents within 150m from your premises?	Yes/No    Delete as appropriate

## APPENDIX 3

## 17. POST ACTIVATION FORM

Name of person submitting form	
Organisation (if any)	
(Contact number/email address)	
Signature	
Date/time of AED use	
Date/time form completed	
Full address of AED site	
Date/time form completed	
Full address of AED site (including postcode if possible)	
Location of AED use	
Opening hours of site/times AED accessible	
Was AED from a cabinet	Yes/No    Delete as appropriate
Any additional comments	
Completed form should be sent to  Generic email address to be added for information to be posted	





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