

Report for public access defibrillators

Review of proposed placement of an automated external defibrillator

Introduction

The North East Ambulance Service NHS Foundation Trust (NEAS) is involved in raising awareness of the importance of early defibrillation for people suffering a sudden cardiac arrest, and helping communities to acquire their own automated external defibrillator (AED).

This document is to clarify the options, as well as associated costs.

Community First Responders (CFRs)

CFRs are individuals who volunteer to respond to life threatening emergencies in addition to an ambulance. They are trained by the Trust and provided with various equipment such as an AED and oxygen. The advantage of having a team of CFRs is that you have access to immediate first aid, prior to the ambulance arrival. The difficulty is usually finding enough people willing to give up their time for the training and being available to respond, as we look to provide cover as near to 24 hours per day as possible.

Established Base Sites

Established base sites (statics) have purchased their own AED which they only use **on their premises**. There will be key staff who are trained in basic life support and the use of the AED. We would always to seek agreement to list the site on our Contact Centre dispatch system.

In the event of a life threatening emergency occurring on the premises, the caller will be advised that there is an AED on site, and its location. Our Contact Centre would also contact the site to ensure that they are aware of the incident, the location, and request that they take the AED to the scene.

The disadvantage of statics is that the AED is only available on that site, and only when the site is in use. This can mean that a vital life-saving piece of equipment is unavailable for over fifty per cent of the time.

Community Public Access Defibrillators (cPAD)

With cPAD sites, the community purchase not only an AED but also a cabinet, which is usually placed on the outside of an easily identifiable building, thus allowing 24 hour access. If the cabinet is fitted with a combination lock, it ensures that it is always secure. In the event of the AED being required, the code for the lock is obtained by dialling 999. This ensures that the Trust is always notified that there is an incident in the location, and therefore, an ambulance is deployed.

In the event of a cardiac arrest, the caller would be advised that there was an AED in the proximity, where it was located, and the code. The caller would be asked if someone could fetch the AED, but would be advised not to leave the patient to do so, as basic life support is crucial to survival.

There is the added cost of the cabinet and, as they are located externally, they also require an electricity supply to keep the unit above 5°C, so that it remains operational. The cabinet can be vandal proof and weather proof.

Ownership

The AED would belong to yourselves, and it would be your responsibility to ensure that it is checked regularly, to establish that it is in good working order, and that the defibrillator pads are in date.

cPAD sites need at least one guardian who is responsible for checking the machine, and making a monthly return to NEAS to confirm the AED is in good working order. You should also make provision for the on-going cost in respect of the purchase of new pads when they go out of date, and new batteries, as they are required. If the AED were located in an external box, then there would be the cost of electric to consider as well, which would depend very much on the weather. This is estimated at approximately £30 per year. This is to ensure the equipment is kept at an ambient temperature as the Lithium battery and water based pads can be affected should the temperature drop below zero degrees C over consecutive days and or nights; it is not to charge the battery.

Warranty

The machine will be covered by a warranty of between five to ten years, depending on model, although some manufacturers offer extension up to ten years. The pads usually have a shelf life of between two years and five years, and the batteries of between four and seven years. (see appendix for a comparison, including estimated costs)

Training

The North East Ambulance Service NHS Foundation Trust can provide training in basic life support (BLS) and the use of the defibrillator to key personnel in respect of static sites. This takes four hours with a two hour recertification done on an annual basis. There is a cost involved for any Static Sites for this training. Please contact CommercialTrainingAdmin@neas.nhs.uk for further details and costs. <http://www.firstaidneas.co.uk/enquiry-form>

For cPAD sites, we offer support and initial awareness sessions, so that everyone feels more confident and comfortable, as AEDs are now present in so many public places. The session covers making the 999 call, the information required, deciding whether someone is conscious or not, whether they are breathing normally or not, the recovery position, basic life support and the use of the AED. It takes around two hours, **is free** and can be delivered to both adults and children. We encourage communities to contact the British Heart Foundation (BHF) to obtain a CPR training kit, which is free, so that you can regularly update your skills.

The CPR BHF Training Kit is [free for secondary schools, sixth forms and colleges](#) as well as [community groups](#) working with adults or young people over the age of 12 (excluding Scotland and Greater Manchester).

Whilst the Resuscitation Council (UK) take the view that the use of an AED should **NOT BE RESTRICTED** to trained personnel, it also states that it is "highly desirable that those who may be called upon to use an AED should be trained in their use, and keep their skills up to date".

Evidence shows that the times to the first shock being delivered, a crucial factor in survival, are much shorter where there are people who are trained and able to use the AED. The awareness sessions we offer should give people the knowledge to identify someone in cardiac arrest, and the confidence to start CPR and use the AED.

Charity Funding

There are various charities who may be able to help with the funding of the defibrillator and cabinet.

BHF

The British Heart Foundation accept applications through their website for partial funding to obtain either an iPAD or Zoll AED Plus for a reduced price of £400. However, there are restrictions on who may apply, and it is not guaranteed that an application would be successful. They also do not support AEDs being kept in locked cabinets.

<http://www.bhf.org.uk/heart-health/life-saving-skills/defibrillators.aspx>

North East Hearts with Goals

Based in the Cramlington area, have helped partially fund AEDs for various schools, colleges, sports venues and businesses.

neheartswithgoals@gmail.com

<https://www.facebook.com/NEHEARTSANDGOALS>

Suppliers – additional information

Cardiac Science

<http://www.cardiacscience.co.uk/products/powerheart-g5-aed/>

- Local Rep – Kevin Garvey
- 07747634216
- KGarvey@cardiacscience.com

Wel Medical

<http://www.welmedical.com/i-PAD-SP1-with-FREE-Carry-Case>

- Local Rep – Rhona MacKinnon
- 07872 058 041
- Rhona.Mackinnon@welmedical.com

Zoll

<http://zollaed.co.uk/ZOLL-AED-3/Features-and-Benefits/>

<http://zollaed.co.uk/aed-plus/features-benefits/>

- Local Rep – Lyndsey Westcott
- 07753967706
- 01928 595160
- LWestcott@zoll.com

PhysioControl

[http://www.physio-](http://www.physio-control.com/WCProductDetails.aspx?id=2147498014&langtype=2057)

[control.com/WCProductDetails.aspx?id=2147498014&langtype=2057](http://www.physio-control.com/WCProductDetails.aspx?id=2147498014&langtype=2057)

- Local Rep – Bianca Daly
- 07826 925 493
- Bianca.Daly@physio-control.com
- Order through Defib Central <https://defibcentral.co.uk/>

DefibSafe - cabinet

www.defibsafe.co.uk

CE-TEK – cabinet

<http://www.ce-tek.co.uk/>

Appendix – Comparison (prices to be confirmed before purchase)

	Zoll		Cardiac Science	Physiocontrol	Wel Medical
	AED Plus	AED 3	G5	CR2	iPAD
Pads	£23 + VAT	£20 + VAT	£30 + VAT	N/A	£27.45 + VAT
Pads with CPR feedback	£81 CPR-D padz® £55 pedi-padz II	TBC	£60 + VAT	£65.45 + VAT	N/A
Batteries	£65 + VAT	£165+VAT	£156 + VAT	£147.05 + VAT	£130 + VAT
CPR feedback	Yes with CPR pads	Yes with CPR pads	Yes with CPR pads	Yes	No
Metronome	Yes	Yes	Yes	Yes	Yes
Adult/child mode	No	Yes	No	Yes	Yes
Time to shock	10 seconds	8 seconds	<10 seconds	<7 seconds *	6 seconds
Pads shelf life	5 years	5 years	2 years	4 years	2 ½ years
Battery life	5 years	4 years	4 years	4 years	5 years
Machine warranty	5 years extended to 7 on registering	6 years extended to 8 on registering	8 years	8 years	7 years extended to 10 on registering
Cost	£975+VAT	TBC	£850 + VAT	£999 + VAT	£861.75 + VAT
	With BHF partial funding - £400				With BHF partial funding - £400

* this is the only machine capable of analysis of the heart rhythm whilst CPR is on-going, increasing the amount of time spent doing compressions

Cardiac Science Community Access Package

£1,495 + VAT “worry free” package – AED & carry sleeve, mild steel external cabinet, replacement battery/pads for the eight years of the warranty, and theft insurance

£1,650 + VAT – as above but with CPR feedback pads

WEL Medical Community Access Package

£1,301.75 + VAT for iPAD AED & DefibSafe2 cabinet (polycarbonate)

Cost of the DS2 cabinet(polycarbonate) 10 year warranty is £495+VAT.

Or £440+VAT when bought as a package with the SP1.