
Defibrillator presentation to Kirby Misperton Council 24 July 2018

History

The Clerk received a request from a local resident in 2017 for Council to consider providing a defibrillator for use in the community. The matter was deferred to the early part of 2018 until a full complement of Councillors could consider the proposal. It is also necessary to note that as the Council do not own "walls" or lamp posts it is necessary to note it will need to be a community project

Considerations

Planning

Consultation with the Ryedale District advises that they take the view that defibrillators do not comprise development that require planning permission but when an appropriate location is identified a call to planning should be made to verify existing legislative requirements

Hardware;

Cabinet

The cabinet is to be located on an exterior wall where all weather protection is required. The cabinet protects the defibrillator from temperature variances, dust and moisture and alerts everyone to the location of the unit held.

Community Heart beat advises that "All cabinets in a public place should be easily identified and visible, even in low light and dark conditions. Therefore, the cabinet should be a light Hi-Vis colour - i.e. yellow or white. There are no official on colour currently".

It is protected with a pin code, which is provided by the emergency services when you dial 999.

Whilst in an area of low crime it may be felt that an alarmed box is not a necessity an additional benefit of this alerts others in the area that an emergency is taking place. It is also an insurance requirement by many insurers that the cabinet is locked to ensure 3rd party liability is protected and asset liability is also considered

Cabinets in exposed locations should be heated, or have some other form of protection to stop the defibrillator temperature from dropping too low, generally manufacturer guidelines advise that the operating range is between 0-50°. The chemical reaction within the battery changes in extreme cold and can limit its output and longevity. More importantly the pads attached to the defibrillator use a water based gel which may freeze or become less adhesive, which in turn may make it difficult them to the chest of someone for defibrillation. If heated, and using mains electricity, the appropriate electrical warning symbol needs to be visible on the outside of the cabinet, and the cabinet should be earthed and connected via a Residual Current Device –(RCD).

Defibrillator

Two types of defibrillators are available – semi automatic and fully automatic with the difference being the ease of use. A semi-automatic defibrillator allows the user to control the "shock" by the use of a button.

An AED (automated external defibrillator) is an emergency life-saving device that can be used by anyone to help restart the heart when sudden cardiac arrest (SCA) strikes.

The device is fully portable and gives the heart an electrical charge to establish a regular heartbeat.

Always remember that you cannot hurt someone with a defibrillator as the unit will only shock a patient with a detectable problem in their heart rhythm.

Fully automatic defibrillators will deliver the shock automatically leaving the respondent to administer the chest compressions which are also monitored by the unit.

Consider if the make of defibrillator that can be supported by the local ambulance service, or their agents? The reason for this is to be able to download clinical data after the rescue in order to complete the duty of care.

Warranty;

Between 5 – 10 years dependent on machine

Reliability

Defibrillators perform self checks of circuitry and battery levels but an additional “manual check and update” should be performed every “x” days/weeks dependant on the model selected.

A “Guardian” should be appointed to take on the responsibility for inspecting the cabinet along with the defibrillator. It only takes a few minutes and Arrhythmia Alliance advises this is completed once a fortnight.

IP Rating

The IP rating advises the suitability rating for the environment in terms of the elements in which it is to be used – the first number indicates its protection level against dust and the second water – as with UV protection on sun screen, the higher the number the greater the protection

Voice prompts

Each unit provides different degrees of prompt from general overview to step by step preparation to prepare the casualty for shock and advising on CPR whilst doing this checking the rhythm and density of maintenance of CPR is correct for the responses received from the patient

Pads

Depending on the defibrillator the single use pads can be separated to Adult and Child (where a child is generally identified + 8years old) or dual use pads with a defibrillator switch selection for use whatever the age. Pads have a limited life and also require replacement after each use.

Light/Signage

To comply with disability requirements, signage must be such that visually handicapped people, dyslexic, English as a second language, and educationally people can fully understand instructions. All instructions should be in an easy to understand and clearly visual ICON format not text. The cabinet must also present the international ICLOR defibrillator symbol on the front, in green and standing out from the background colour of the cabinet.

Whilst this is not mandatory light alerts those in the area where the unit is from a greater distance.

Location

The Cabinet must be placed at a location for access by all including by disabled people and placed so the cabinet is approximately 1.10m from the ground and no more than 1.30m. It should be clearly identified by correct signage. Mounting bolts should be appropriate for the location, be strong enough to comply with public liability to prevent the cabinet coming off the wall, even if climbed on, and be of stainless steel not brass. Always use an RCD device with an isolator switch.

The Law and liability

The area of protection for a lay rescuer in an emergency is covered by The Social Action Responsibility And Heroism Act is a new law receiving Royal ascent in April 2015 aiding the reassurance to members of the public wishing to act to help in an emergency and developing the network of community defibrillation.

The owner of the equipment has a duty of care to bystanders to ensure the equipment is properly maintained and rescue ready.

Cabinets must adhere to BS7671 wiring regulations for safety, and carry warning symbols. An electrician must supply a certificate of conformity on installation.

Price Comparisons;

“Community Packs” are provided by some suppliers and provide a group of products to assemble a full service. The data below indicates both packs and separate items to aid full comparison and possibly interchange where this is thought to be needed.

Installation is not included in the price of the items unless stated. An allowance of approximately £200 be allowed for registration, installation and certification

For the purpose of this document the Clerk has provided information for fully automated defibrillators based on information above. Prices have been checked to be @best for July 2017 – paperwork from the @best site accompanies this document but does not necessarily give the best product description

Supplier	Description	IP Rating	Pads	Warranty	Initial Cost	Ongoing Cost if available
Defib Shop	iPad SP1 Fully automatic	55	2 pairs dual use 24 – 36 months pad life	7 years	£1,104.00	£199.95 over 5 years
St Johns Ambulance	Cardiac Science Powerheart G5 Fully Automatic with CPR Device	55	Pair of defib pads (adult)	7 years	£1,440.00	
Defib shop	defibshop Outdoor Heated Cabinet with Lock	66			£534.00	
Defib shop	Aivia 210 AED Cabinet Digicode Protected with Audible Alarm & Heating	54			£543.60	
Defib Shop	Powerheart G5 Fully Automatic AED with CPR Device with defibshop Outdoor Heated Cabinet with Lock	55	Not specified but uses Adult /child specific with a pad life of 2 years	8 years	£1,618.80	£234.95 over 5 years

Additional activity once installed;

Register the unit with local ambulance service
Ensure Governance in place

Ensure DDA compliance

Check training in place

Ensure correct checking procedures are in place to monitor the equipment and if used recommissioning procedures and notification requirements

Ensure Data Protection requirements are met (defib will hold clinical data that can be identified to the patient).

Maintenance and Replacement

Pads will need to be replaced every 2 – 4 years (depending on make and model) and after every event

Batteries (subject to correct storage) dependant on make and model need to be replaced every 3 – 5 years and require checking after use for deterioration

Information source

Arrhythmia Alliance

Community Heartbeat

North York Moors National Park Authority

Legal Bulletins

SLCC Magazine

British Heart Foundation

St Johns Ambulance