

## **Adult Social Care and Health Select Committee**

### **Review of Defibrillators (AEDs)**

#### **Evidence Meeting –20 June 2017**

##### Attendance:

Cllr Grainge, Cllr Povey, Cllr Mitchell, Cllr Stephenson

Peter Mennear, Annette Sotheby (ADE), Tanja Braun (Public Health)

Andy Simpson, Consultant (North Tees and Hartlepool NHS Foundation Trust)

Gareth Campbell, Michael Elvidge (North East Ambulance Service)

##### Notes:

A meeting was held to consider the views of NHS emergency responders.

A presentation was given by the Ambulance Service (NEAS). Data on the number of life threatening calls made in the Stockton Borough area was tabled, along with information on the various types of defibrillator on the market, and a copy of a report that was provided to local communities considering installing a defibrillator, outlining the issues to consider.

NEAS currently has 94 volunteer Community First Responders (CFR) across the region to respond to life-threatening emergency calls. These were trained to provide basic life saving care and were provided with equipment including defibrillators, oxygen, suction etc. Regular training was provided.

There were currently 3 CFRs in the Stockton Borough area. They had recently advertised for further CFR's in Stockton, Darlington, Hartlepool and South Durham and interviews were to be held in the near future. This would hopefully increase the number of volunteers in the local area.

Volunteers came from a range of backgrounds and some had a medical, police or fire brigade background, some were retired, and also university students who wanted voluntary experience or may be interested in a paramedic career.

In addition NEAS worked with local communities to locate Community Publicly Accessible Defibrillators (CPAD) across the region. CPADs are contained in secure (accessible only by key-pad), brightly coloured, publicly accessible cabinets.

There were currently 270 CPADs; these were historically mostly located in rural areas where it may take longer for an ambulance to arrive than in urban areas. However there had been a significant increase in CPAD provision across the region since November.

These were mostly provided through initiatives such as fund-raising by local parish councils so are not owned by NHS, but are overseen by them. NEAS request that two guardians are

appointed to carry out a monthly equipment check on each cabinet to ensure they are in working order. A log is kept to ensure batteries charged, pads are within the kit, no damage/vandalism etc.

This governance process is in place so that NEAS can be confident that when they direct a person to a CPAD, it will be stocked and ready to use. If a CPAD was used in an emergency, NEAS would then take it 'offline' until it had been confirmed as being restocked by the guardians.

Within each cabinet there is a defibrillator – these are logged on the ambulance service software programme which gives their exact GPS location. If cardiac arrest 999 call is received, within a radius of 500m of the CPAD, this will flag up to the operator in the control room the location of the nearest defibrillator. If only one person is in attendance at the scene they will be given instruction by telephone to carry out CPR until ambulance arrival. If a second person is in attendance, they will be directed to the nearest defibrillator, given a 4-digit access code to the equipment cabinet, then could assist the first person, providing further support if necessary. It was noted that quality CPR and use of an AED doubles the chance of patient survival in cardiac arrest, and that the intervention of a defibrillator was one part of a series of interventions that needed to be carried out to restart the heart/enable resuscitation (the 'chain of survival').

NEAS also arranged for CPADs to be deployed (if available) for life threatening calls which could potentially turn into a cardiac arrest, so that one was available if needed.

All calls are triaged according to clinical priority using the following nationally agreed categories:

Red 1 (Respiratory / cardiac arrest)	Red 2	Green 1	Green 2	Green 3	Green 4
Response in 8 minutes  Two resources should be despatched to these incidents where possible. Patient suffered cardiac arrest or stopped breathing.	Response in 8 minutes  All other life threatening emergencies.	Response in 20 minutes  Blue lights and sirens	Response in 30 minutes  Blue lights and sirens	Telephone assessment within 20 minutes  Response within one hour (no blue lights required)	Telephone assessment within 60 minutes.  Telephone assessment within 60-minutes.

The Red targets are national requirements, and the Green targets are recommended response times. The Service is commissioned to reach 75% of Red 1 incidents within 8 minutes. (Nb. These were targets that were currently not able to be met due to performance pressures.)

Additional community responses on the ground such as CPADs were in addition to NEAS resources, not as a replacement; in any case of cardiac arrest, performing CPR and using a defibrillator where possible, was beneficial and increased patient outcomes. Survival to

hospital and discharge was clearly a key measure, but patients who survive could have varying outcomes and long term effects, depending on how much care had been provided to them, and how quickly. The longer someone was in cardiac arrest, the higher the risk of damage to the body, and a greater chance they will need long term care needs. If a CPAD could be deployed earlier for example within 2 or 3 minutes, the chance of more positive patient outcome was much better.

When a CPAD was first installed in a local community, 2-hour awareness sessions are carried out for members of the public, covering basic life support, use of the pads, what the cabinet looks like etc. People are often wary about preparing a patient (i.e. shaving the chest) and the perceived power of the defibrillator if they have no previous knowledge or experience. Attendance was usually good but depended on how much interest and awareness there had been prior to the CPAD being installed.

Restart a Heart Day was a Europe-wide initiative that saw thousands of school children trained in resuscitation techniques each year. One school in Stockton took part in 2016. Further awareness sessions would again take place this October.

A list of defibrillator locations in the region was discussed. At the CCG-level (ie. including the Hartlepool area too), NEAS was aware of 13 CPADs. The majority of these were in Hartlepool.

It was important to note that NEAS was not aware of all defibrillators in the region. It was noted that some leisure centres, shops and care homes hosted defibrillators, but these were held by staff. All dentists were required to hold them. Static locations in companies were also known.

It would be useful for NEAS to be aware of these, even if they were not always publicly accessible. However for them to be used as CPADs, they would need to be in a publicly accessible place at all times, and housed in an appropriate casing. If companies and public services could be encouraged to locate them on the outside of buildings, this would be helpful. Schools could be a potential common location for CPADs throughout the area, as these were spread across the Borough, and were well known locations.

A suggestion was made in relation to care homes as they were staffed around-the-clock, would there be a possibility if agreement could be reached with all parties that this equipment could be logged, maintained and used if necessary? This could be problematic as care homes would need to keep equipment down-time to a minimum, although the guardian could be in contact to help ensure this.

Ingleby Barwick Town Council recently installed a NEAS linked CPAD defibrillator at the Community Centre – Cllr Mitchell is a guardian for this location.

An overview of Red 1 and Red 2 incidents in the Stockton area over a 12-month period was given - it was pointed out that some areas had a higher footfall and some were more populated than others, and these had the higher incidence of calls.

Councillors asked if one could be available in the centre of the High Street, at the Town Hall for example, which could be accessed by the guardians or street angels during the evening, as Stockton had a large night-time economy. Street Angels were able to carry out CPR, but it was felt that defibrillator training would also be of benefit. Quick and easy access was of paramount importance.

Discussion took place around the number of cardiac arrests. It was reported that approximately 40 occurred each day across the region in both public and private locations,

and this equated to 200 per year in Stockton Borough. Further information could be provided by NHS but this would only be postcode specific, and could not say whether they took place in public or private spaces.

Some statistics from the Resuscitation Council suggested that CPADs were rarely used. In response, it was noted that although large amounts of activity were not usually seen at CPAD sites, if used only once to save a life it was felt of benefit.

Patient outcome data in terms of outcomes where CPADs/defibrillators had been used was not possible to track from a hospital level. However it should be possible to state where and when a CPAD had been used.

Discussion took place around whether defibrillator cabinets should be locked or unlocked. If locked, it queried whether valuable time could be lost whilst the 4-digit code was awaited.

In terms of response times, it was noted that a CPAD would only be accessed when NEAS was aware of at least two people being on the scene and being able to help. It was paramount that an initial call should be made to NEAS first, this would alert the nearest ambulance (which may be close by) during the call itself. Then if two people were present, one could perform CPR whilst the other would collect the CPAD if there was one nearby. NEAS' system would pinpoint the callers location and identify any nearby CPAD on the system. The 4-digit code would be provided over the phone – this was the only way to get the code. Therefore the patient would be receiving treatment (via CPR) before the CPAD was brought to the scene, so there was no delay. If there was only one person on the scene, the priority was for CPR to be given, until an ambulance was on scene.

It was noted that locked cabinets would prove valuable to prevent tampering with contents. It would be inefficient to have to replace vandalised CPADs. However incidence of CPAD vandalism was relatively low (there were 4 recorded in 6 years in the region), and the main reason for having controlled access to the CPADs was to ensure that NEAS could monitor when a CPAD was used, when it had been restocked afterwards, and when it was therefore safe to go back online. Good control of equipment was essential in order that it was ready for use in an emergency.

Dr Simpson agreed that lockable cabinets were necessary, and stressed the importance of all aspects of the chain of survival that AEDs were a part of.

The committee were keen to see defibrillators in more accessible places in our area, but had to consider the machine cost, maintenance etc. There was a need for CPADs to have an electricity supply in order to regulate the temperature inside the cabinets.

The question was raised whether if there was a choice to be made, funding should be spent on more CPR training or more defibrillators? It was reported that the two went 'hand-in-hand' but that quality CPR was vital. The position of NEAS was that any increase in defibrillators would be beneficial.

The units varied in price (approx. £1,500 per machine) and although there were minimal maintenance costs, pads had either a 3 or 5-year shelf life and batteries varied between 5 and 6 years. These had to be changed immediately once the equipment was used.

Investment in Middlesbrough was seeing an increase of 9 CPADs in the area following investment from Public Health funding.

It was suggested that the Fire Brigade could suggest defibrillators/highlight their use as part of their regular inspection of some properties.

A demonstration of two defibrillators took place to give awareness of ease of operation. Some AEDs provided audible prompts to ensure that CPR was being given at the correct speed. Some small, one-use only, defibrillators were also available for use by running groups for example.

It was noted that the Resuscitation Council had changed its guidelines in 2015 so that if a first responder was able and trained, then they should also give breaths as part of CPR, but if not then they should provide chest compressions only.

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