The Parish Council's Automated External Defibrillator

In 2015 the Council purchased an automated external defibrillator (AED) and had it installed by the door to the Village Hall. A training session took place on its use.

Since then, the sign has been moved to the front of the building and the Council has purchased a child defibrillator pad – two adult pads came with the original machine both of which are now past their use by date and one new adult pad has recently been purchased.

According to our records, the AED has not yet been used.

The Community HeartBeat Trust, from whom the Council purchased its AED, has a page in each issue of The Clerk, the magazine of the Society of Local Council Clerks, and I have attached two articles that particularly struck me:

- One, from the January 2017 issue, pointed out "the chance of using a defibrillator on a child under the age of 8 years old in an **average** [emphasis added, GF] community in the UK is about 1 in 3000 years".
- Another, from the March 2017 issue, explains that in lone rescuer situations and due to the Ambulance Service's "Activation Radius" limit, the Ambulance Service may decide the AED should not be fetched even when it might be useful.

I suggest the Council considers whether it should:

1. Decide not to purchase a new child defibrillator pad when the existing one reaches the end of its life.
2. Revive the idea – previously discussed – of trying to create a Volunteer Emergency Telephone System, which might mean that someone can be alerted to collect the AED and to take it immediately to where it is needed.

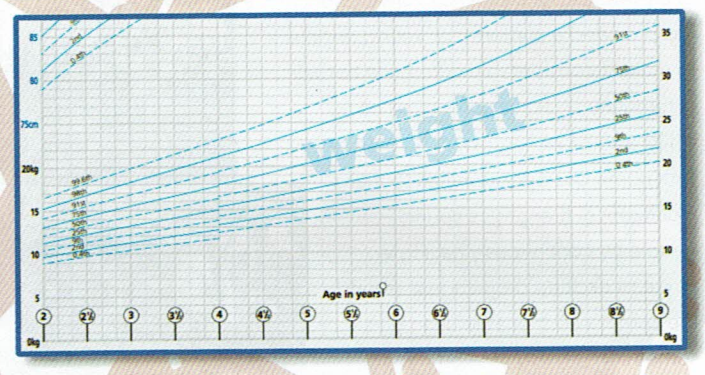
Geoffrey Ferres
Parish Clerk

CPAD Community Public Access Defibrillator

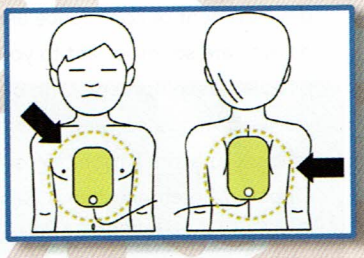
Community Defibrillation
When is a child not a child?

Part 10 of a series

Communities are investing in Automatic External Defibrillators (AED). However the role of using defibrillators on 'children' is confusing. Typically 'children' in respect to defibrillators refers to *any person* under 25Kg in weight, which typically means 7 years and under in the UK. Cardiac arrest in this age group is very rare, typically 3-4 per annum (in non 'at risk' children) in over 3.4 million children, and so should not drive any decision on the choice of equipment. Confusion arises as some adverts for defibrillators say 'child friendly' or suggest higher incidences that occur in reality, as they include teenagers. A 'child' of 29 Kg and aged 6½ is actually an adult, in defibrillator terms. Inappropriate use of energy reducing devices such as switches or keys, may potentially lead to ineffective rescues.



Looking at the Department of Health height/weight charts, the 50th percentile (ie average) for 25Kg is around age 7½ in the UK. Girls is slightly lower. Thus over half of children are over 25Kg by the age of 8 years old. Thus the important aspect to consider is weight, not age. For simplicity, it is easier to gauge an age rather then weight. However the RC(UK) guidance on the level of shock to give a juvenile is 4 Joules per Kg in weight, which would suggest that the correct shock for a 25Kg is more than the reduced shock of 50 J for a 'child' and should be 100 J. Most defibrillators can be used on children to the age of 1 year old. However the guideline from the UK Resuscitation council is that if possible and under the 25Kg threshold, paediatric electrodes should be used to reduce the shock level. However if there are no attenuation devices available, then adult electrodes can be used, but placed front and back of the patient.



When the patient is older than 1 year and younger than 8 years, defibrillation can be done using the paediatric pads. When the device is in paediatric mode (paediatric pads are connected to the device or the Adult/Paediatric Selection Switch is set to Paediatric), it automatically sets the defibrillation energy to 50 J and provides paediatric CPR guide. Place pads on the middle of the chest and back as illustrated above. Pads are not specific to either chest or back. If there are no paediatric pads for the paediatric patient, use adult pads but set the Adult/Paediatric Selection Switch to Paediatric Mode, and then perform defibrillation according to the voice instructions.

CU-Systems iPad user guide version 2011 page26

In reality this means that the chance of using a defibrillator on a child under the age of 8 years old in an average community in the UK is about 1 in 3000 years. The chance of that defibrillator being used on an adult in the community (ie over 8 years old) is 1 in 1000 people per annum. In simple terms, it is more likely to be used on the adult many times more than an under 8. Devices with 'child' switches have the potential to be mis-used on 'adults' or over 7 years, which would be inappropriate and offer a sub-theraputic dosage. If in doubt call 999 first and follow the instructions of the ambulance service operator.

Schools are being recommended to have defibrillators. If these are to be placed outside the school grounds, or to be made available for public (non-school) use, the school should also be aware of their responsibilities and liabilities to ensure the equipment is used right. Part of this is to ensure all staff are appropriately trained, and where there is a possibility of the children using this device on an adult, that the children are similarly trained. A full governance system should be in place, with appropriate policies and procedures. Schools should also be aware that the device should be suitable for community use, be cost effective to run, and a sustainable programme should be in place to ensure that this equipment is always ready for use.

Community Defibrillation
"What if I am on my own?"

Part 11 of a series

The 2015 guidance on basic life support and the use of defibrillators says: *"When implementing an AED programme, the community should consider…identification of a group of volunteer individuals who are committed to using the AED in victims of cardiac arrest."* **RC(UK) 2016**

Whilst it is fine to have a defibrillator in your community, if a rescuer is on their own with the patient, or if they are outside their ambulance service 'AED activation radius' how do they get access to the defibrillator? Many communities now implement localised rescue programmes to help in these situations.

If you are a lone rescuer with a patient, most ambulance services will not ask you to collect the defibrillator, but task you to stay with the patient and undertake *Chest Compressions* to keep the patient alive. However in addition to the numbers of people present, the 'Activation Radius' which is the distance the ambulance service determines is practical and reasonable to send a member of the public to collect the defibrillator and still remain safe, varies from service to service. How then do you address the activation radius and the lone rescuer situation? Do you need more devices, or alternative solutions, such as a community response team, or both? A defibrillator that cannot be accessed is a useless investment.

To support the lone rescuer situation; or the out of activation radius scenario; or when the rescuer is under 12 years old; a community can opt for a 'Volunteer Emergency Telephone System' or VETS™ These use up to 10 volunteers per community who are able to be called upon in a Cardiac Arrest emergency, to collect the defibrillator and assist with CPR. The latter is a community run programme, and also finds favour in other resilience uses within the community, such as care of the elderly, flood defense and neighborhood watch. VETS is not a replacement for first making a 999 call in an emergency.

VETS is easy to use, with a single unique emergency number for the community to contact one of your volunteers. In the case of Cardiac Arrest time is critical, and getting to the patient with the defibrillator quickly has a dramatic impact on successful resuscitation. It may be that in some circumstances DBS checks are required, particularly as some ambulance services are seriously looking at VETS as a route to increase survivability. However, although not as time critical, having a VETS system in the community for other uses is also a good way to meet a community resilience agenda. For this reason the VETS system has now been extended to cover a single approach for a multi-village parish (VETS X3), and also a multi-discipline approach to community resilience (VETS R3)

An 'Activation Radius' of 200m is not uncommon, but may not cover the village, or address outlying areas such as farms.

VETS systems	Description	
VETS	The original VETS system for Sudden Cardiac Arrest (SCA) emergencies, where a lone rescuer is with the patient, the emergency is out of the activation radius, or there are children present. A single telephone number links to volunteers in the community willing to lend assistance	
VETS R3	VETS covering the three services for help in a community – ❖Medical ❖Neighbourhood watch ❖Community Resilience with three groups of volunteers each servicing their own area. Community Resilience could include care of the elderly, flood watch, or other community resilience issues.	
VETS X3	VETS, covering up to three communities through a single telephone number, but with three different sets of volunteers, one per community.	

In communities with no public telephone, or areas of no mobile telephone signal, the community may wish to also consider a 999 community emergency telephone service. These can be cellular - working of all networks, or land line, and are devices with a single button press, just like an intercom, to connect to the 999 emergency operator.

If you have not yet considered a community defibrillator, or wish to extend your service, come and talk to the Community Heartbeat Trust, the UK's leading charity in the provision of holistic and resilient community defibrillation programmes.

COMMUNITY HEARTBEAT
The Community HeartBeat Trust
(Reg Charity No. 1132824)

The Community Heartbeat Trust
the UK's leading community
defibrillator charity

For more information, or to obtain your 'Guide to Community Defibrillation' please contact the CHT at our website or call
0845 86 27739
www.communityheartbeat.org.uk