**Paper 8**

**Maximising our Village’s Response to Cardiac-related Incidents**

*A paper for Ide Parish Council, 18 March 2020, presented by Carolyn Tysoe*

**Introduction and Purpose**

This paper, and the associated presentation, seek to bring issues to the attention of the Parish Council and gain its endorsement of proposals for specific actions to improve our village’s ability to respond to cardiac-related incidents. It follows a verbal update to the Parish Council at its meeting on 15 January, when the Council endorsed a proposal for a working group to bring back recommendations to the March meeting advising on how the village can address three issues, all of which could impair our ability to respond effectively to instances of cardiac arrest in the immediate area. These issues are:

* Ensuring vulnerable or isolated people can be properly supported
* Maximising the knowledge and confidence of individual villagers in assisting with the vital stages of addressing cardiac arrest
* Ensuring the ability to swiftly access defibrillation equipment across the whole village

The working group comprises Carolyn Tysoe (member of IPC), Brenda Mosedale (retired GP who also maintains the village defibrillator) and Richard Reynolds (a villager whose son suffered cardiac arrest in 2019 and survived because all the key actions in the vital chain happened quickly).

This paper contains several recommendations designed to address these issues. The IPC is asked to endorse each of them and, where appropriate, consider provision of funding. Though vital, the overall scale of the funding, work and governance needed to put the recommendations into action is relatively modest and, subject to IPC agreement, going forward could be adequately managed by an independent group rather than a formally constituted Parish Council Working Group.

**Background and Issues**

Although cardiac-related incidents (principally cardiac arrest or heart attacks) are quite rare, the potential impact of their occurrence can be devastating. Evidence from the Resuscitation Council indicates that up to 30,000 people suffer a cardiac arrest out of hospital per year and the likelihood of survival is only 8-9%. Each minute that passes without support for the person reduces their chances of survival by 7-10%. Swift response from the emergency services is obviously key, but action prior to that can also be vital. This includes:

* **recognising** the signs of a cardiac incident
* **contacting** the emergency services as a priority
* accessing and using any available **defibrillator** apparatus
* understanding and being confident in the immediate use of **CPR** in the right circumstances

It should be noted that all the actions above can rarely be successfully carried out by one person (for example you cannot be performing CPR whilst fetching the defibrillator) so swift involvement of others is important.

The annex to this paper contains compelling ‘expert’ background information on the need for local action. It contains verbatim extracts from a 2015 paper ‘Consensus Paper on Out-of-Hospital Cardiac Arrest in England’, jointly produced by British Heart Foundation, NHS England and the Resuscitation Council (UK).

Ide has already responded well by investing in a public access defibrillator in 2015, situating it prominently at the local shop where the most footfall in the village occurs. The equipment is well maintained by a very capable local volunteer, a fact confirmed by the Community Heartbeat Trust who supported the introduction of the defibrillator and keep records of equipment maintenance histories. The installation was complemented by a training and awareness session held in the village hall, attended by around 40 people. There has also been recent publicity of a South West Ambulance Service demonstration on defibrillation and CPR that Ide residents were encouraged to attend in Longdown in late 2019, though response from the village was low.

The Parish Council meeting of 21 November 2018 supported a proposal for a second defibrillator machine at the top of the village and agreed that funding (estimated at £1700) would be sought, with IPC contributing an initial £500. This proposal has not yet been taken forward but is addressed later in this paper.

However, as the working group reviewed our readiness for a cardiac incident, it became clear that we could not confidently answer the following questions:

* **Do enough people in this village feel confident they could conduct CPR and/or use a defibrillator if they were involved in an incident?** It is 5 years since the last training, with a turnover of residents in that period. Some villagers, when asked, were clearly not feeling they had the knowledge of what to do or be confident to do it. This includes administering CPR and access/use of the defibrillator equipment. How can we counteract *‘it won’t happen near me’, ‘I’d be scared to use a defibrillator, even if I knew how to access it’, ‘I might cause even more damage attempting CPR’, ‘leave it to the professionals’* and any other reasons for not engaging?
* **How sure are we that older or more vulnerable people know how to contact others for early support in an emergency?** As an example one working group member was (coincidentally) approached by an elderly resident who lives in the upper part of the village and asked what she would do if her husband had a cardiac arrest as she ‘had no chance of getting the machine herself and what if the neighbours were out’?
* **Are we confident that, in a village as widespread as Ide, our local defibrillator can be accessed easily and moved quickly to an incident anywhere in the locality?** IPC have already acknowledged the issues of distance from the current location to top part of the village, through its ambition to site another public access defibrillator. Clearly the elapsed time from an incident, to finding someone to chase down the village, access the defibrillator and return with it, could be critical as we know each minute counts.

In addition, although the first action should be to dial 999 and the ambulance service would provide location and access code to the defibrillator, it has emerged via Community Heartbeat Trust data, that each region operates its own ‘activation area’, outside of which it would not offer details of defibrillator location or how to access it. In the South West this is 200 metres, which means that a call to them from further than 200m from the village shop would not elicit location or access details. In simple terms that is all parts of the village from the school upwards.

**Proposals**

The working group has considered various solutions to the issues identified and believe that a small number of actions will go a long way to mitigating current risks. These are outlined below with specific questions for IPC consideration.

1. **Mount a further training and awareness session in the village** covering access to and use of the defibrillator and how to perform CPR. This will also serve to remind attendees that, in the event of an incident, there is not time to wait for someone else to act and confirm that any action taken will be better than none as, without no action or untimely delay, the person is unlikely to recover.

The recent session held at Longdown was run by the South West Ambulance Service and cost £200 plus vat. The Longdown event was also open to other villages in the area. In discussions with Andy Swain, our District Councillor, he has suggested any Ide training this year become part of an annually run event, hosted by parishes in rotation. Andy has offered to approach the other parish councils, proposing they share the cost of an Ide session this year. To stay in annual cycle, this event would ideally be held in late summer/autumn. However, given the recommendation below to mount a volunteer emergency telephone system as soon as we can, it would make sense to tie the training with that system and so an earlier date might have advantages.

On funding, it is noted that IPC pledged £500 towards a second defibrillator. Later in this paper the working group are recommending pausing the procurement of a second machine. If that proposal is accepted would IPC be willing to divert some of the pledged funding towards training costs?

**Decisions requested – IPC is asked to:**

* **agree to the training, including inviting other villages, and endorse a free-standing group that should now plan and take necessary actions to make it happen.**
* **consider the optimum timing of training, taking account of the full context of this paper**
* **re-allocate to a training fund part of the funding earmarked for a second defibrillator, for use by the group.**

1. **Create a Voluntary Emergency Telephone System.** There is no doubt that we need to find a greater degree of certainty to ensure that more vulnerable people can be supported by others in the event of a suspected cardiac issue. Encouraging neighbours to provide contact numbers and confirm their ongoing willingness to help can go a long way, and we should encourage that, but it will not cover all eventualities. Likewise, we could seek an informal group of willing volunteers to make their number readily available but a) that could mean a lone rescuer ringing multiple numbers until someone picks up and b) not everyone would be keen to have their number so widely publicised.

During our research we discovered that, to support community resilience, the Community Heartbeat Trust (CHT) provides a service to help villages install and run a scheme known as Volunteer Emergency Telephone System (VETS). It is designed for situations when there are few people immediately available to ‘rescue’, in spread out community situations. Essentially it is a community run system that enables up to 10 ‘good neighbours’ to assist pending the arrival of the emergency services. It provides a single emergency telephone number for the village, made available to all residents and works as follows:

* First person on scene call 999, then calls the VETS number
* Telecoms computer calls all VETS volunteers simultaneously
* Once first volunteer answers, the other phones stop ringing
* That volunteer can reject the call (e.g. they realise they are too far away) and remaining lines re-commence ringing. Once the call is accepted, that volunteer will collect the de-fib and go to assist the patient.

**Is it effective?** – CHT’s national data shows that volunteers arrive significantly sooner (4-6 minutes) than the emergency services. It is possible this may be different for Ide, given some data from 2014 indicates the median ambulance response time for Ide is 4 minutes 21 seconds with 95% of life-threatening calls from Ide postcodes being responded to in under 8 minutes. Nevertheless, we also need to consider the instances that are the wrong side of the average and the 5% of responses over 8 minutes.

**What do volunteers need to do**? – At its simplest they would fetch the defibrillator to the scene (and would already have the access code for its cabinet, so need not get that from the ambulance service). In practice however CHT do recommend that volunteers also have some basic training in life support, which CHT can arrange, but it is not a mandatory part of the system. There is no need for volunteers to be first aid experts. On reaching the scene they should find the ambulance service are already on the line and can talk anyone through essential actions, some of which may be CPR and use of the defibrillator. Volunteers also receive a handbook outlining how things work and their basic responsibilities.

**How can people trust a stranger turning up at their door?** Volunteers will have ‘VETS’ ID with them and will of course have been the only person knowing the call was made in the first place and the incident location. We will receive advice from CHT on selecting the volunteer team from those who offer to help.

**How do we ensure people know the number?** Posters, business cards and other publicity material for use in local communications is provided as part of the start-up arrangements. We can ensure each household receives details directly and advise how to keep the number handy as well as publishing Ide Times periodic reminders.

**Is the system only for cardiac emergencies?** The system can be used for any emergency where additional help is required from the neighbourhood. It can provide a level of re-assurance to the elderly, those living alone and to the infirm that there is always help at hand. This is already in place in some villages. Although the working group is recommending that we focus initially on cardiac arrest, to get the system up and running, we then have a real opportunity, at no extra cost, to provide assurance to the whole neighbourhood that we have a real support network for any emergency. That feels like a step to be discussed as volunteers come on board, so that we can be confident we have the right, willing, people to be able to expand the function seamlessly as soon as possible.

**How much does it cost?** The initial set-up cost is £45. There are no other first-year costs but thereafter it would be £100 per year.

**Decision requested - The Working Group is recommending to IPC that it endorses use of the VETS system and considers meeting the initial £45 cost and whether the ongoing annual cost is something it can also plan to meet. If not, modest fund-raising can be undertaken via the working group. With IPC’s agreement the group would then work to plan and deliver the system, including the technology, seeking and mobilising volunteers and providing appropriate communications across the community.**

1. **Complementary Ide Times article**  - a well-timed article would serve several purposes:
   * Warm people up to the training and volunteer system (and consider being a volunteer) and watch out for developments
   * Remind everyone where the defibrillator machine is sited, how to access it and to stress that its use will is supported by telephone guidance from the ambulance service as well as sound and visual guidance from the machine itself
   * Ask everyone to consider if they have vulnerable neighbours who would find re-assurance in having neighbours’ numbers to call in emergencies, if not already in place

**Decision requested – IPC is asked to agree to an Ide Times article as above, to be written by the aforementioned group.**

1. **Pause the ambition to procure a 2nd defibrillator for Ide -** The VETS system described above provides a new perspective on our ability to respond quickly and, if successful, would reduce the requirement for a 2nd machine. Additionally, the Resuscitation Council state that local initiatives would be required if a community is more than 5 minutes away from emergency service medical help. The average response times quoted earlier in this paper indicate we are under the advisory threshold for local initiatives, casting some doubt on the justification for a 2nd defibrillator. The working group has concluded that effort would be better spent on alternative initiatives and recommend pausing the previously agreed ambition to acquire another machine. This could be reviewed in, say, one year to ensure enough alternative measures are in place.

**Decision requested – IPC is asked to pause its stated intent to obtain a 2nd defibrillator and to review in one year, to check that enough alternative measures are in place to be confident of permanently shelving the possibility of another machine for Ide.**

**Annex**

**Extracts from Consensus Paper on**

**Out-of-Hospital Cardiac Arrest in England**

**(Dated 16 October 2014 and revised 16 October 2015)**

This annex contains verbatim extracts from a consensus document produced jointly by some of the leading organisations in this field. This includes British Heart Foundation, Resuscitation Council (UK) and NHS (England)

‘In England in 2013 the Emergency Medical Services (EMS) attempted to resuscitate approximately 28,000 cases of Out-Of-Hospital Cardiac Arrest (OHCA). If more bystanders had the confidence and skills to call 999 quickly, deliver effective cardiopulmonary resuscitation (CPR) until the EMS arrive, and when appropriate use a public access defibrillator, the number of cases where EMS could attempt resuscitation would increase.

Approximately 80% of OHCAs occur at home and 20% in public places. Only about 20% are in a ‘shockable rhythm’ (i.e. treatable by defibrillation by the time the EMS arrive). Survival is more likely when shockable rhythm is present. The proportion of people in shockable rhythm could be increased if more cardiac arrest victims received immediate and effective CPR from bystanders.’

‘The average overall survival to hospital discharge from those 28,000 is 8.6%. This is significantly lower than…. North Holland 21%, Seattle 20% and Norway 25%.’

‘Countries with the highest rates of OHCA survival are those which have strengthened all 4 links in the chain of survival:

* Early recognition and call for help – to prevent cardiac arrest
* Early CPR – to buy time
* Early defibrillation – to re-start the heart
* Post resuscitation care – to restore the quality of life’

‘When someone has a cardiac arrest, every minute without CPR and defibrillation reduces their chances of survival by 7-10%.’

‘As the chain of survival illustrates, a person is most likely to survive an OHCA in the following circumstances:

* Their cardiac arrest is either witnessed by a bystander or the victim is discovered immediately after collapsing
* The bystander calls 999 immediately
* The bystander delivers effective CPR without delay
* The cause of the cardiac arrest is a due to a shockable rhythm disturbance
* There is a Public Access Defibrillator (PAD) close by which another bystander can fetch
* The bystanders use the PAD without delay
* The EMS arrive very quickly (within minutes of being called)’

‘CPR increases the chances of survival because it keeps some blood circulating to vital organs such as the brain and the heart itself. It also increases the chances of the heart remaining in a ‘shockable’ rhythm, rather than… a flat line.’

‘It should be noted that 80% of cardiac arrests occur at home where defibrillators are not usually available but calling 999 immediately and delivering effective CPR at home can still save lives.’

‘It is better for a bystander to do something rather than nothing. Some people are untrained or unwilling to deliver ‘rescue breaths’ (mouth to mouth). It is better to deliver hands-only CPR, rather than do nothing or attempting rescue breathing ineffectively.’

‘It is crucial to increase public awareness of:

* Cardiac arrest
* How to recognise it
* The need to call 999 immediately
* The need to start CPR immediately
* The fact that PADs can be used safely by anyone’