DEFIBRILLATORS FOR DYRHAM & HINTON?

Item 12 of the January meeting included the subject of defibrillators for D&H:

> ***Deffribillators*** *(sic)*
> *The subcommittee gave a report; there were 2 options for this.*
> - *Rental £1,800 for first unit and £1,000 for second unit this will include servicing, updating, theft and damage and will be for 4 years. Plus £500 fitting*
> - *Purchase £1,995 per unit but no damage or maintenance cover plus we have to install and when updating required we have to buy new.*
>
> *PM proposed the rental option, seconded by PB – carried unanimously.*

Our PC intends to spend £3300 of public money on AEDs (automatic external defibrillators), aka PADs (public access defibrillators). That's half of SGC's precept. It is not clear what the on-going costs will be both within and after 4 years and whether the fitting cost is £500 for one or both, so the final bill could be £3800, plus the cost of electricity and liability insurance in years 1 to 4. I hope they took professional advice before reaching their decision.

In 2013, the PC asked my advice about buying AEDs as I had been a doctor involved in resuscitation for the previous 35 years. The PC accepted my advice then that AEDs would not be cost effective in D&H. Some of the reasons I gave are given below*.

I can assure you I would have given the same advice this time, had I been asked. According to the November 2016 minutes, CTT and KS were to speak to their contacts in the village to find out if this was a good idea.

But has something changed in out-of-hospital resuscitation since 2013 to convince the PC to go ahead with this project? No, it hasn't:

In 2014, and revised in 2015, the Resuscitation Council with the British Heart Foundation and NHS published a consensus paper on out-of-hospital cardiac arrest: https://www.resus.org.uk/publications/consensus-paper-on-out-of-hospital-cardiac-arrest-in-england/
Anyone advising the PC should have acquainted them with this paper.
It stated:
(i) Four out of 5 cases attended by the ambulance service did not have the type of heart attack that responds to defibrillation.

(ii) There is limited data on the success of "bystander" (ie non-medical persons such as most D&H residents) use of AEDs, but one study showed a 1.7% success rate, which included cases where an AED was available with a trained operator.
So, in the very best conditions, which are very unlikely to occur in D&H, there would only be a 1 in 40 chance of saving a resident.

(iii) What's more, the report states that for every minute of ineffective CPR (external heart massage and mouth-to-mouth ventilation), survival rate decreases 7 to10%. I know I could only provide 5 minutes maximum of effective CPR in my prime despite training and practice. So who is going to keep the patient alive for the more than the ten minutes needed to get the AED from wherever? On average, our households have

only 2.4 persons in them including children (2011 Census for D&H), so we shall need our neighbours to keep us alive while someone runs or drives to get the AED.

It's reasonably easy to predict one's potential for cardiac arrest. Your GP will do it, but you can do it yourself:
http://www.health-calc.com/body-composition/waist-to-height-ratio
http://www.qrisk.org/lifetime/

Once you know your have a more than a 20% chance of a heart attack in the next 5 years, **just do something about it!** You can't rely on an AED to save you. To get the best from an AED you'll need a trained resuscitator standing by your side with the AED when you arrest with several young trained helpers available until the ambulance arrives, and even then your chances are only about 1 in 40.

So is the PC wasting tax-payers/community money? Definitely yes. AEDs are great in crowded places with trained operators but useless in dispersed communities such as ours with residents who aren't trained and *regularly practiced* in AED *and basic CPR*.

If you agree, please let the PC know – it's your money they are spending.

Read about AEDs:
http://en.wikipedia.org/wiki/Automated_external_defibrillator

***My Reasons in 2013:**

1. Cardiac arrest is rare in D&H
2. The expense involved with having AEDs would therefore not be justified.
3. Only about 20% of arrests are suitable for defibrillation.
4. The AED even in each village would be too far away from most residents to use in time. The helper would have to:

(a) realise their relative/friend has had a heart attack (and it is a usual response to deny an unexpected bad event for a while)
(b) call the ambulance
(c) engage the help of neighbours
(d) either run to get the AED or get someone to fetch it
(e) phone the ambulance service to get the release code for the AED
(f) run or drives back to the scene.
(g) be brave enough and trained enough to use it.

5. Each minute of inadequate resuscitation causes a 7 – 10% reduction in a good result. The above scenario would take about 15 minutes minimum.
6. Residents would need to learn and maintain their CPR skills regularly to keep the patient alive until the AED arrives.