

# Why We Need An AED

Automated External Defibrillator  
To Treat Cardiac Arrest Outside of Hospital

# Cardiac Arrest – the science bit

- Is the loss of mechanical heart function and the absence of circulation
- Heart stops beating, blood flow stops, organs stop working, person dies
- Time is Crucial with lack of blood flow leading to continual cell death

## **Survival is Dismal**

- Less than 10% of patients who arrest in the community will survive
- Usual cause is due to a heart attack or myocardial infarction
- 1/3 of hearts will stop if untreated following a heart attack.
- Heart attack symptoms can be subtle and range from “crushing central chest pain” to just “feeling a bit off” or “a spot of indigestion”



## SWEATING

Similar to stress sweat, rather than sweating from exercise.



## FATIGUE

Extreme tiredness.



## CHEST PAIN OR DISCOMFORT

The pain can be anywhere in the chest, not just the left side.



## SHORTNESS OF BREATH

Typically trouble breathing for no clear reason.



## PAIN IN THE ARMS, BACK, NECK, OR JAW

Pain can be gradual or sudden.



## NAUSEA

Flu-like symptoms, including nausea, may occur a few days before a heart attack.



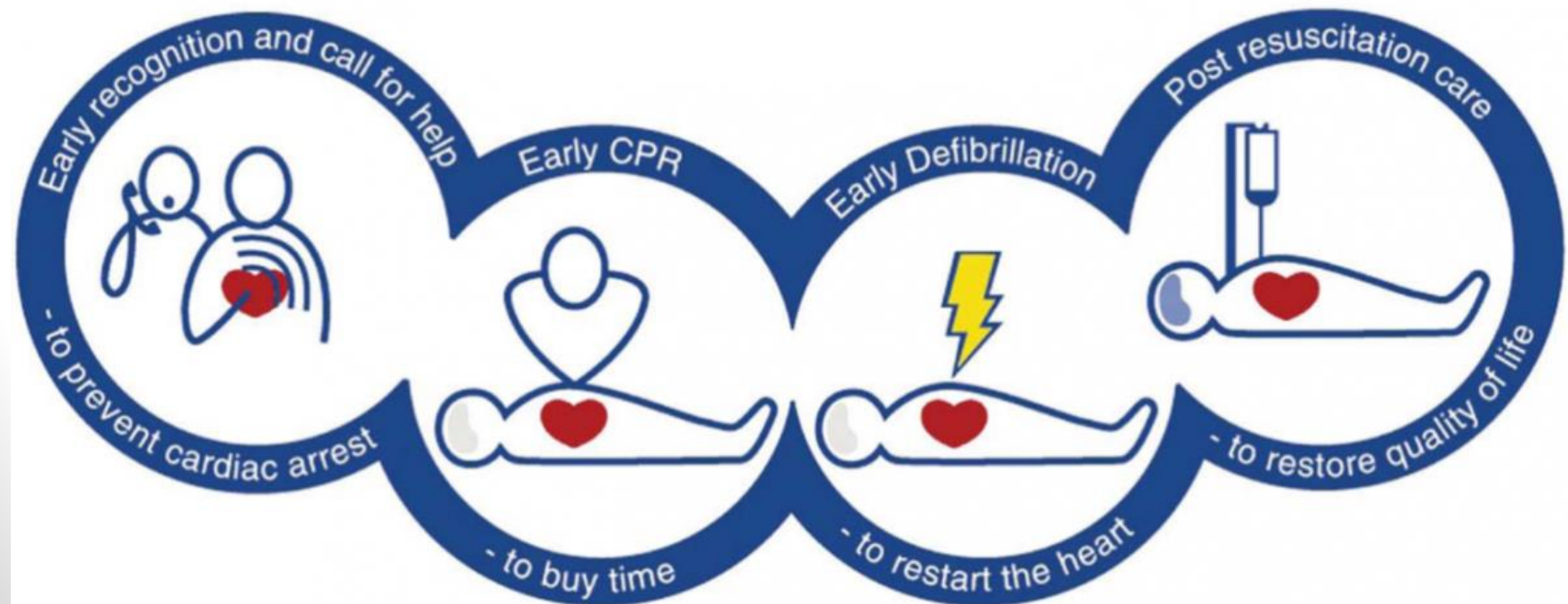
## STOMACH PAIN

Can range in intensity from heartburn-like pain to severe abdominal pressure.



# How do I tell it's a cardiac arrest?

- Are they responsive, are they breathing normally
- If no to both of these, assume it's a cardiac arrest
- Ensure safe to approach
- Call for help and dial 999
- Start CPR and hope we stumped up for the defibrillator



# Lamyatt – Why Us?

- Out of Hospital Cardiac Arrest occurs at a rate of one person per 1900 per year
- In Lamyatt we have an older population so rates are likely to be higher
- Lamyatt's population could expect one to occur every 10 years
- Quick use of an AED (combined with CPR) gives an unresponsive person who isn't breathing the best possible chance of survival. Defibrillation within 3-5 min of collapse can produce survival rates as high as 50-70%
- Each minute of delay to defibrillation reduces the probability of survival by 10%
- Or closest ambulance station is in Shepton Mallet – 16 minutes away.
- 2 ambulance crews operate out of Shepton Mallet – do not rely on and ambulance to get to Lamyatt in time – services are stretched

# Chest compressions saves lives

## Defibrillation is important too!

- The most important aspect of CPR (cardiopulmonary resuscitation) is good chest compressions,
  - push hard (1/3 chest depth in centre of the rib cage) and quick 100 times a minute, sing along to staying alive by the Bee Gees
  - Count to 30, Give two breaths if your feeling confident
  - Then repeat until the defibrillator arrives
- Time to defibrillator is the second most important survival indicator after good chest compressions
- Machines are easy to use, reliable, and completely automatic
- Turn it on, apply pads as per diagram, it will then detect the heart rhythm or absence there off, and deliver a shock to restart the heart.

# How Much is this going to Cost Me?

- A budget of £2000 would cover:
- £1270.80 for a Zoll AED plus defibrillator with LCD display
  - cheaper options exist but Zoll are respected brand, ease of use and an automatic coaching function means its very much suited to lay person being able to use it – it will even given feedback on quality of chest compressions etc
- £595 for a cabinet with keypad lock, heater, and light
  - Code can be available to Lamyatt residents and be held by 999 ambulance controll
- £134.20 to connect to electrical supply
  - I propose cabinet to be mounted on the outside wall of the village hall – although not central in village it's a lot closer than Bruton. Small electricity supply would need to be drawn from the village hall to charge batteries and prevent device from freezing in winter

# In summary

- Cardiac arrest is bad news
- Only 40% of victims receive bystander CPR in the UK
- Immediate initiation of CPR can double or quadruple survival from out of hospital Arrest
- Early defibrillation can only occur if we have access to the equipment.
- Access to defibrillation equipment relies on you to say yes to paying a precept
- I am happy to give a demonstration on CPR and defibrillator use