

Cardiac Arrest and Automated External Defibrillators



What is cardiac arrest?

Cardiac arrest is the term given to the sudden loss of heart function. The person will collapse and stop breathing normally. The heart is no longer pumping blood around to the vital organs of the body.

Cardiac arrest is recognised if the person is:

1. Unconscious
2. Unresponsive
3. Has absent or abnormal breathing

How common is cardiac arrest?

Over 33,000 people experience an out of hospital cardiac arrest in Australia every year. Less than 9% will survive. The first 5 minutes after a person has a cardiac arrest are the most critical. For every

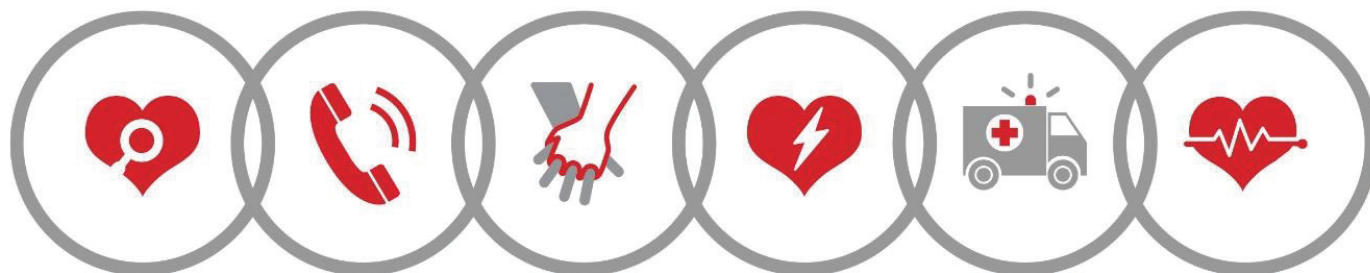
minute that passes, the chance of survival decreases. Defibrillators can be used for certain cardiac arrhythmias which occur in around 20-30 per cent of all cardiac arrests. Early cardiopulmonary resuscitation (CPR) and defibrillation within the first 8-10 minutes can increase the chance of survival by up to 75 per cent.

What actions are required to survive an out of hospital cardiac arrest?

If a person is **unconscious, unresponsive** and **not breathing normally**, you need to call 000 for an ambulance, commence CPR and use an automated external defibrillator (AED) if one is available **as soon as possible**.

Chain of Survival

The Chain of Survival is recognised internationally as a set of actions that will increase a person's chance of surviving an out of hospital cardiac arrest. Defibrillation can play an important role in the chain of survival for people who experience an out of hospital cardiac arrest.



RECOGNITION

CALL 000

EARLY CPR

EARLY AED

AMBULANCE

HOSPITAL

The chain of survival relies on the community and bystanders to recognise a cardiac arrest, call Triple 000 (Ambulance), commence CPR and use an AED (if available).

Cardiopulmonary resuscitation (CPR)

Cardiopulmonary resuscitation (CPR) is the technique of chest compressions combined with rescue breathing. Early CPR saves lives. The Australian and New Zealand Committee on Resuscitation recommends that bystander CPR be actively encouraged. Resuscitation using the steps DRSABCD should be followed for cardiac arrest and is taught in all first aid courses in Australia. It is important that first aid skills are up to date.

Further information is available on the NSW Ambulance website at: <http://www.ambulance.nsw.gov.au/Community-Info/First-Aid/CPR.html>

What is an automated external defibrillator (AED)?

An AED is a small, portable device designed to deliver a controlled electrical shock to a person experiencing certain cardiac arrhythmias. An AED can be purchased by individuals and organisations of all types to enhance their first aid capabilities and response. AEDs must be used in conjunction with CPR. AEDs have been designed to be used by the general community without formal training, and are equipped with verbal and visual instructions to guide the operator.

NSW Health supports placing AEDs in targeted public areas where the device will meet community need, eg shopping centres, airports, large sporting events.

How to choose an AED

Where a community group decides to purchase an AED, there are a number of issues to consider. NSW Health does not recommend a particular brand or model of AED for public use. Below are some considerations that may assist in deciding what AED is right for your community situation. Please ensure your unit of choice:

- is purchased from an Australian supplier
- has Therapeutic Goods Administration (TGA) approval
- is within your budget
- meets your requirements (eg child electrode pads, storage cabinets, 24/7 security option)
- includes training for AED use and maintenance

- confirms maintenance requirements and warranty periods

AED program implementation

After purchasing an AED, it is important to consider the following factors to implement an effective AED program for your organisation.



Remember: the best AED is the one that is closest to a person suffering a Cardiac Arrest!

- **Location:** Nominate an accessible location specific for your organisation, eg first aid station, reception desk, entrance hallway
- **Visible:** AED must be visible to all users and visitors
- **Security:** AED must be secure from theft and vandalism
- **Accessible:** AED must be easily accessible in a real life event (within 1-3 minutes). **Battery & electrode pads must always be inserted**
- **Communication:** Communicate AED placement to staff, volunteers, nearby premises, larger community, etc.
- **Training:** Provide training for CPR and AED use, and ensure first aid qualifications of staff and volunteers are up to date
- **Signage:** Use accepted green AED signage to communicate there is an AED at your premises
- **Maintenance:** Ensure unit is regularly monitored & maintained to manufacturer's recommendations. Appoint a responsible person(s) to take responsibility for the equipment.
- **Policies:** Ensure AED forms part of the operations of your premises, eg Fire Evacuation, First Aid response, risk assessments, training & induction programs.
- **Response:** Consider your organisation's response to a cardiac arrest event at your premises.
- **Debrief:** Debrief with those who are involved in or witness a real life cardiac arrest.