

Automated External Defibrillators (AED) in the community

Approximately 30,000 Australians suffer a cardiac arrest every year.

A cardiac arrest can happen to anyone, at any age. Australian research shows that the chances of surviving an out-of-hospital cardiac arrest (OHCA) are significantly higher in people who receive early life support in the form of CPR and the use of an AED. For more people to survive a cardiac arrest we need more communities, workplaces, schools and clubs to have AED's available in the event of an emergency.

SA Ambulance Service (SAAS) is frequently asked about AED devices. This fact sheet will provide some guidance on what to consider when purchasing an AED.

Why do we need defibrillators?

When someone suffers a cardiac arrest, they collapse and stop breathing normally. The heart is no longer efficiently pumping blood to vital organs in the body. The longer this person is left without CPR and defibrillation, the harder it is to restart their heart. This is where the community can make an extraordinary difference.

In the event of *any* emergency and after calling triple 000 your AED should always be collected and taken immediately to the patient. Some conditions may not appear immediately life-threatening, but may quickly deteriorate into a cardiac arrest. Having the AED on standby with the patient ensures it is readily available for use without delay.

Early CPR is vital.

Early CPR is valuable as it buys us time to get an AED and emergency ambulance to the cardiac arrest victim. An AED is a machine used to deliver a controlled electric shock intended to restart the patient's heart. AED's are safe and easy to use, designed especially for non-medically trained people.

Can I hurt someone with an AED?

No. If you notice that a person has collapsed, is not responding appropriately and not breathing normally (has stopped breathing altogether, is only gasping or making "funny noises"), immediately call triple 000 for an emergency ambulance.

For every minute that we delay defibrillation, the chances of the person surviving a cardiac arrest decreases by 10%. So the early use of a defibrillator by members of the public can significantly increase a person's chances of survival.

Always follow the directions of the SAAS Emergency Medical Dispatcher Support Officers (EMDSO) call-taker and immediately send someone to get your AED. Start CPR without delay and the EMDSO will guide and support you through the whole process until the Paramedics arrive.



It's important to know that simply attaching a defibrillator to a person who is not in cardiac arrest will not harm them. If you are in doubt, attach the pads, turn the machine on and follow the AED's verbal instructions. If the person needs a shock, the AED will tell you.

REMEMBER - do not stop performing CPR even if no AED shock is advised. Keep performing CPR until the Paramedics instruct you to stop and they are physically ready to take over.

What defibrillator does SAAS recommend?

SAAS recommends semi-automatic and automatic devices (both routinely called AEDs).

Manual defibrillators should only be used by an appropriately trained healthcare professional, however in low acuity settings such as a General Practice or Specialist medical clinic, Allied Health & Dental clinics, we recommend an automated AED over a manual defibrillator for ease of use.

Things to consider when buying your AED

- It should be Therapeutic Goods Administration Australia (TGA) approved
- It should operate in accordance with current Australian Resuscitation Council (ARC) guidelines.
- Look for a device that is light weight and easily transportable
- Ensure it has a long life battery capable of multiple shocks and multiple resuscitations

- Your AED should be equipped with;
 - ✓ two sets of defibrillation pads
 - ✓ scissors
 - ✓ protective gloves
 - ✓ a razor
 - ✓ CPR mask/shield and a small towel

Your AED needs to be durable enough to withstand the environment it is to be placed in. So consider the environment in which you are likely to use it. Most AED's will have an International Protection (IP) rating indicating the devices ability to withstand dust, water, extremes of temperature or mechanical impact.

Ideally an AED should be cable of being used on both adults and children. This consideration is essential when purchasing devices for childcare centres, schools, sporting venues and medical clinics. Some AED's use a child "key" or different defibrillation electrode pads for children under 8 years of age.

AED's that provide visual cues and verbal instructions on how to perform CPR and early defibrillation are particularly beneficial and reassuring to non-medically trained users.

What defibrillator does SAAS use?

SAAS currently uses a combination of Phillips/Laerdal HeartStart and Cardiac Science defibrillators on operational ambulances.

Our **Community CPR30** public education program uses two popular community or public access AEDs; the Phillips/Laerdal HeartStart FRx & HeartStart First Aid/Onsite devices.

SAAS does not recommend any particular brand of AED.

What is required to maintain the AED?

Whilst modern AEDs are very reliable, there are essential components that have an expiry date and must be regularly checked and replaced including:

- Batteries. The average life of non-rechargeable AED batteries is 4 years. Battery lifespan differs between manufacturers.
- Defibrillation electrode pads. The average life of these pads is 2 years. This also differs between manufacturers.
- Ensure your AED provider gives you information on how to replenish your AED consumables and where to obtain supplies.

Part of your routine maintenance should include checking that the defibrillator electrode pads or batteries have not exceeded their expiry date as this may affect their use. The most common cause of defibrillator failure is due to expired electrode pads or battery failure. Simple routine checking will keep the device ready in the event of an emergency.

Most AEDs perform automated self-checks. However, simple owner checks of the defibrillator status should be conducted weekly as a minimum. Some AED units have a simple warning prompt in the form of a light or alarm which indicates that it has detected an issue during its self-test.

Ask your AED supplier to provide you with advice on how to manage functional alarms and specific advice on their recommended maintenance schedule for your device.

How should we store our AED?

We recommend that your AED should be stored in a visible, easy to access location available to everyone.

A variety of high visibility cabinets (some alarmed) or wall brackets are available from first aid and medical supply companies.

We do not recommend storing your AED in a locked cabinet. Some locations place their AED in areas monitored by staff such as reception/security desks or under CCTV video coverage. Many locations also choose to store a small workplace first aid kit with their AED device.

Does SAAS sell first aid equipment?

SAAS does not sell or specifically recommend a particular brand of first aid kit, defibrillator or defibrillator cabinet.

These items can be purchased from a variety of first aid and medical supply companies.

What about AED signage?

Whatever your choice, your AED cabinet or wall bracket should be clearly marked with the Australian Resuscitation Council approved AED symbol indicating the exact location of the AED. Placing a CPR/AED instruction chart next to the AED is also recommended.



Additional signs indicating the availability of an AED at your premises should be prominently displayed around the site indicating where the defibrillator is stored.

Further information on AED signage standards can be found at:

<https://resus.org.au/guidelines/aed-signs/>

Is my workplace or club legally required to own a defibrillator?

No, unless a specific code, regulation or internal directive applies to your organisation. The SafeWork SA Code of Practice Fact Sheet states *'an automated defibrillator (is advised) where there is a risk of electrocution or large numbers of members of the public are regularly in or around your workplace'* p10.

Safe Work Australia's National First Aid in the Workplace, Code of Practice states *'Providing an automated external defibrillator can reduce the risk of fatality from cardiac arrest. It is a useful addition for workplaces. Automated external defibrillators are designed to be used by trained or untrained persons'* p12.

Can I register my AED?

Yes! SAAS now has the ability to register your AED on a state wide database. For more information on SAAS AED Registration please visit:

www.saambulance.com.au or call us on telephone number 1300 136 272

What about CPR training?

Anyone can provide basic life support (BLS); perform CPR and use an AED. AEDs are designed for public use and no formal training is required to use one. Untrained members of the public will also be well supported by SAAS's triple 000

EMDSO's who will provide step-by-step instructions on how to perform CPR and use the AED while the Paramedics are enroute to your emergency.

For the most effective resuscitation we recommend that everyone should have some form of CPR/First Aid training. This may be as little as non-accredited training such as participation in the SAAS Community CPR30 session or a nationally accredited first aid training program.

SAAS does not presently provide nationally accredited First Aid training to the general public.

Let's Help Encourage Active Resuscitation Together

SA Ambulance Service

Help Encourage Active Resuscitation Together (HEART)



As a part of our H.E.A.R.T (*Help Encourage Active Resuscitation Together*) Program, SAAS now provides a small number of **Community CPR30** non-accredited training sessions to the general public to support the building of community health and resilience.

For more information contact

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REFERENCES

The Australian Resuscitation Council Guidelines – Automatic External Defibrillator - AED Signs. Accessed 19-10-2016 at <https://resus.org.au/guidelines/aed-signs/>

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