
MCKELL INSTITUTE

# AEDs on Australian worksites:

## A low cost proposal to save lives (Appendix 1)

## Common questions about AEDs

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## COMMON QUESTIONS ABOUT AUTOMATED EXTERNAL DEFIBRILLATORS

***What is an AED for?***

AEDs are primarily used to treat individuals experiencing ventricular fibrillation. Ventricular fibrillation is when the rhythm of the heart becomes chaotic and an individual begins to experience Sudden Cardiac Arrest (SCA). When this occurs, the only way to restore the heart to a normal rhythm is to defibrillate the individual's heart and re-start its normal rhythm.

***Why should my workplace invest in an AED, SCA doesn't sound that common?***

Cardiac arrest is the leading cause of sudden death in Australia, ahead of prostate cancer, bowel cancer, breast cancer and road deaths. 23,000 to 33,000 people die from SCA every single year and 75% of these occur outside of the hospital setting. A significant proportion of these fatalities occur in the workplace.

For individuals experiencing SCA outside of the hospital setting, the survival rate is a worryingly low 6%. The main reason survival rates are so low is that the odds of survival decrease by about 10% for every minute that the patient's heart does not receive defibrillation. In NSW, the median ambulance response time is 10.93 minutes. For most people, quick access to an Automated External Defibrillator literally is the difference between life and death.

In contrast, for locations where AEDs have already been rolled out the survival rate has been as high as 86%. Some workplaces present higher risks than others. Ventricular fibrillation can be brought on by electric shock, which indicates a heightened risk for those employees working with live electricity. Electrocution is responsible for 15% of all workplace fatalities in the construction sector, while workers in the electrical transmission and distribution networks are also at high risk of fatality in the form of electrocution.

In many of these cases, fatality is entirely preventable through the use of an AED. Sometimes the individual is fortunate enough to survive until an ambulance arrives, but in most cases, even well trained individuals administering CPR cannot keep the patient alive until the paramedics reach the worksite. AEDs reduce risk and increase the likelihood of survival, particularly in instances of electric shock.

***What are the costs associated with AEDs***

Independent research has put the cost at $5,334 per year for a stand-alone AED system with appropriate staff training, while a fully monitored independent system will cost approximately $6,005 per year.

These costs are purely operational and do not include any savings to the company from reduced workplace fatalities. For fully monitored systems, this includes the cost of initial training, annual training, regular drills, regular servicing, parts replacement and replacement of the AED itself.

***Are they complicated to use? Won't my staff need medical training?***

No. AEDs are specifically designed to be useable by a completely untrained bystander. AEDs come with visual and audio prompts to guide users through the application process. Most AEDs simply require the individual to attach the pads, after which the AED will automatically analyse the patient's heart rhythm and determine whether or not to deliver the electric pulse. There is very little action required on the part of the user.

***What if a staff member uses an AED on a child or somebody with a pacemaker?***

This is a particularly understandable question given the liability implications in such an event. Thankfully, such fears are unwarranted. All AEDs automatically detect the heartbeat of a patient before administering the shock. An AED will only deliver a shock if the heartbeat is irregular to begin with. For individuals with pacemakers, if the pacemaker is working appropriately, the shock simply will not be delivered. AEDs will only ever deliver treatment when it is safe to do so.

***How common are AEDs? And are other organisations rolling these out***

AEDs are more common than many people realise. A number of large organisations including Qantas, Lang O'Rourke and NSW RailCorp have all adopted fully monitored AED systems across their worksites. These rollouts are already savings lives. In the case of RailCorp, since rolling out 104 AEDs at stations and on trains in 2009-10, a total of 14 lives have been saved.

***My employees often have to work in some pretty tough conditions, how fragile is AED technology?***

There are a range of different AED products available for purchase. Construction companies regularly purchase durable, portable units with protective casings. These cased units can easily endure sweltering heat, pouring rain, volatile movement and accidental drops. AEDs have been around for a long time. Whatever the needs of an individual company, there is almost certainly a product suitable for those needs.

***Isn't it cheaper just to encourage my employees to lead healthier lifestyles?***

Whilst efforts to encourage healthier lifestyles are certainly commendable, it needs to be remembered that SCA can occur to anybody, even a seemingly fit and healthy young individual. A common misconception about SCA is that it is similar to a regular heart attack. It's not. A heart attack is when the plumbing of the heart stops working, perhaps because of a build up of fat impacting the circulation of blood.

Sudden Cardiac Arrest is not a plumbing issue and instead has to do with the electrical impulses of the heart. It is not so much a question on the lifestyle habits of the individual in question. Lots of young, fit people undergo SCA every year, often immediately after experiencing an electric shock. 50% of SCA victims have no prior indication of heart disease. On worksites where live electricity is present, anybody can be involved in an accident leading to ventricular fibrillation and SCA.

***How much responsibility is involved? Do I just buy the unit or is there more to consider?***

Purchasing an AED is an important first step. However, simply purchasing the unit is not enough to ensure that lives are not needlessly lost. For example, purchasing a unit and then storing it in a locked cupboard could mean that staff are unable to access the unit should an life-threatening emergency occur.

Thankfully, guidelines do exist to assist employers with questions surrounding the appropriate placement, accessibility and visibility of AEDs on Australian worksites. These guidelines also provide advice for proper training in the use of AEDs. The national guidelines were launched late last year.

In addition to placement, AEDs will need to be regularly checked to ensure the unit is in working order and the battery is appropriately charged. If an employer chooses to go with a fully monitored AED system however, these responsibilities will largely be taken care of by the AED provider along with any OHS staff training requirements.