

Not all AED's are equal!



In Australia, survival rates from a Cardiac Arrest are only 9%¹

Survival rates of over 70% have been achieved in other countries²

The reason is simple:

- Access to AED's (Automated External Defibrillator)
- People who Know What To Do

If an AED is used within 3-4 minutes, the chance of survival is 70-75%

For every minute and AED is delayed the chances go down by 10%.

They are designed for members of the public to use and will only shock if they can help – you will never do any harm using an AED.

Given recent price reductions in AED's the case for them is compelling.

I initially (naively) thought all AED's were equal, built to the same standards and performance, but this is not true. This paper outlines the key attributes to look for in an AED.

¹ <http://www.takeheartaustralia.com.au/>

² Nolan J, Soar J, Zideman D, et al. European Resuscitation Council Guidelines for Resuscitation 2010 Section 1. <https://www.erc.edu/index.php/docLibrary/ru/viewDoc/1195/3/>

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Criteria to check.

1. Compliance with Australian and New Zealand Committee on Resuscitation (ANZCOR) guidelines 2016

ANZCOR recommendation: Default initial energy of 200J for biphasic waveforms: “The default initial energy level for adults should be set at 200J.”³

ANZCOR recommendation: Escalating energy to 360J “If the first shock is not successful and the defibrillator is capable of delivering shocks of higher energy, it is reasonable to increase the energy to the maximum available for subsequent shocks.”⁴

From my research, there are only 2 manufacturers of AED's that are 100% compliant with the ANZCOR 2016 recommendations.

2. Time to shock & ease of use

This is vital, there are research papers on this which show a large discrepancy between time to shock and ease of use. Every minute counts, 1.5 minutes is the benchmark.

There are really three main steps, turning the machine on, placing the electrode pads and then charging to shock.

Some machines have a successful completion rate of 100%, others as little as 44%!

3. Warranty and Total Cost of Ownership

Carefully check the warranty, lifespan of battery, pads and their replacement costs.

Some offer an 8 year warranty and battery/pad replacement that maximise the lifespan of the device and simplify maintenance.

A surprising fact I have found is that more expensive, does not mean better!

4. Local support and maintenance

Does your supplier have local engineers, replacement programs if there is a fault, where do you have to go if things go wrong and how quick will the fix be? There are suppliers who have Queensland based infrastructure.

5. Market share, R&D and on-going product development

It does make sense to go with a market leader with strong R&D and track record.

From our research there are only two manufacturers that are 100% compliant with the ANZCOR guidelines!

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³ ANZCOR Guideline 11.2 – Protocols for Adult Advanced Life Support. 2016;3(section 2.4).

⁴ ANZCOR Guideline 11.2 – Protocols for Adult Advanced Life Support. 2016;2(section 1).