

Case study:

Carillion - Provision of Automated External Defibrillators

Summary

When our *Health Like Safety* strategy was first launched in 2014, one of the key strategic aims of the strategy was 'mitigate the impact of cardiac arrest at work' with the strategic action to achieve this being 'implement a risk-based policy on the provision of automated external defibrillators (AEDs) to improve survival chances from cardiac arrest while at work'.

The risk of suffering a cardiac arrest is closely related to the size and age profile of the workforce while the survival chances are related to the speed with which emergency services can reach the affected person.

The implementation of this was so successful that in our 2016 version of the strategy, this requirement was removed as a key aim and added under the 'promote healthy lifestyles' strategic aim as it is now embedded in the way we do things.

Problem statement

There are an estimated 60,000 out-of-hospital cardiac arrests in the UK each year. The chance of a person surviving a cardiac arrest falls by 10 per cent for every minute that passes without an AED being used.

Learning from the 2012 Olympics construction project, in which we were involved, highlighted the value of AEDs on cardiac arrest survival: London 15%, elsewhere 10%, Olympic Park (where AEDs provided) 33%.

Solution/what you did

We started on the premise that an AED will be provided at all premises/projects and allowing for this to be scaled down if a risk assessment showed that the number or age profile of the workforce or the likely speed of response make it unnecessary.

Working with Cardiac Science, we developed the Powerheart G5 AED. This piece of kit requires no training to use, is fully automated providing voice prompts and will not deliver a shock unless it is required. In addition, the kit performs regular self-

checks on the defibrillation pads, battery and software and will indicate any problems with a red light. Our sites have the option to purchase or hire the units.

We recognised we needed to remove the myth that you had to be trained to deploy an AED and have worked with Cardiac Science to gain access for our workforce to "Cardioacademy" – Cardiac Science's online training facility. However, the training message is that you don't need training to use these units.



Figure 1: Automated External Defibrillator

Key challenges faced

- To help raise the awareness of the AEDs, our sites run dummy cardiac arrest events in the same way a fire drill is held to determine how long it takes to fetch the unit and for people to be prepared to deploy it, so that any shortcomings like one being too far away etc. can be managed out.

Outcomes and benefits

We have been advised by the ambulance crews involved at two separate incidents that two lives have been saved by the availability and use of AEDs:

On Tuesday 14 April, the site team at Carillion's Battersea Power Station contract discovered the value of having AEDs on site and knowing how to use them.

"Just before midday, a banksman working for a Carillion sub-contractor suffered a heart attack on site. A first aider attended the casualty within three minutes of him falling to the floor, immediately performing CPR and later assisted by another worker who cleared the casualty's airways. Another first aider then arrived with the defibrillator and immediately attached and activated the device following the instructions provided on-screen. Two site-based nurses then assisted and together they worked on the casualty for a further 20 minutes, during which time he received five further shocks from the unit.

By the time the emergency services arrived (around 30 minutes after the attack), the casualty (who had been completely blue and not breathing) had been returned to a condition where he was breathing and with a steady pulse and heartbeat.

The emergency services attended the casualty for a further 20 minutes until they were happy the casualty could be moved to the ambulance and transferred to hospital where the casualty underwent surgery and made a full recovery."

Working with Cardiac Science, we arranged for a free AED for every 25 purchased which we donated to charity. To date, 14 have been donated.

Two of these were donated to Acorns Children Hospice at its homes for youngsters aged up to 18 in Selly Oak, Worcester and Walsall, with a further unit being donated by West Midlands Ambulance Service.



Figure 2: Acorn hospice AEDs

Measures of success

Our UK construction business held a 'Fit For Life' week in 2015 focusing on a different element of our *Health Like Safety* strategy on each day. Over 80 contracts and 1,500 people participated and from the use of surveys before and after the event, we found

90% of people said they now know where the AED on site was kept. They also appreciated that you **DO NOT** need special training and would utilise one in the future - an increase of **20%**.

Lessons learnt

This has been a successful initiative and has become business as usual. Procuring an AED is now done during site mobilisation on all our new contracts and the location of the AEDs is communicated to all through the standard induction package

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