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## Press Release

### IS YOUR STADIUM EQUIPPED TO TACKLE THE BIGGEST KILLER?

Sudden cardiac arrest (SCA) is the biggest killer in the developed world. It is estimated that around 375,000 people in Europe suffer a sudden cardiac arrest each year, with as many as 75% of these cases leading to a tragic premature death.

Last year, 29.2 million people attended football matches in England, alone. Add to this the number of people visiting football matches across Europe and arenas for other sporting and entertainment events, and it is highly likely that, if stadium staff have not had to deal with a case of sudden cardiac arrest yet, they will at some point in the future.

Although heart disease is the most common cause of SCA and all known heart diseases can lead to cardiac arrest, it is not the only one. Other causes include, trauma; falls; electrocution; respiratory problems; and drug use.

Sudden cardiac arrest causes the heart's normal rhythm to suddenly become chaotic. The heart can no longer pump blood effectively and the victim collapses; stops breathing; becomes unresponsive; and has no detectable pulse. All of this happens quickly – within a few seconds. SCA can strike anyone and at anytime. Although the risk of SCA increases with age and in people with heart problems, a large percentage of the victims are people with no known risk factor. It could strike one of the participants on the pitch; a spectator in the stands; a board member; or one of the stadium employees.

SCA is often confused with a heart attack. A prior heart attack increases the risk for SCA, but SCA is quite different from a heart attack. Both disorders stem from problems with the heart but each has distinct risk factors, treatment options, and outcomes. A heart attack is caused by a circulation or pumping problem of the heart, when one (or more) of the arteries delivering blood to the heart is blocked. Oxygen in the blood cannot reach the heart muscle, and the heart muscle becomes damaged. This damage to the heart muscle can lead to disturbances of the heart's electrical system. A malfunction of the heart's electrical system may cause dangerous fast heart rhythms that can lead to SCA.

In contrast to a heart attack, SCA is caused by an electrical problem in the heart. SCA occurs when the heart's lower chambers (ventricles) suddenly develop a rapid, irregular rhythm (ventricular fibrillation) causing the ventricles to quiver rather than contract. The chaotic quivering motion of the ventricles renders the heart an ineffective pump that can no longer supply the body and brain with oxygen.

Treating a cardiac arrest is a race against time; the only definitive treatment for SCA is defibrillation – an electric current that “shocks” the heart so that a normal rhythm may resume. This “shock” must be administered within minutes of the arrest to successfully prevent death. In the event of a cardiac arrest, the victims chances of survival are reduced by up to **10%** for every minute that passes, without appropriate treatment they will be dead within 10 minutes. Cardio Pulmonary Resuscitation (CPR) can buy a little time but ultimately SCA requires a shock to restore a normal rhythm.

Mere seconds can mean the difference between life and death. The Lifeline AED was designed to be eye-catching so that it can be instantly located, carried to the patient quickly without fumbling, and used with minimal steps to analyse and treat the patient's

condition. From the moment someone suffers sudden cardiac arrest the inspired design features of the Lifeline AED shave precious seconds off the defibrillation process. Seconds that save lives.

The Lifeline AED was specifically developed to meet the demanding standards of professional emergency personnel yet be simple enough to allow non-medical staff to provide fast and safe lifesaving care to a victim in those 'golden' first few minutes before an ambulance crew can arrive.

The unit is designed to be very simple to use by non-medical personnel. Voice prompts guide the rescuer through the steps involved in saving someone's life, including calling an ambulance and performing CPR in compliance with new 2005 Resuscitation Council guidelines. The AED is self-contained with pre-connected pads and a lit status indicator. It also features an audible alarm to notify if an internal problem is detected when performing self-tests. Once the pads are attached to the patient, a computer inside the unit analyses their heart rhythm and determines if a shock is required to save the victim. If a shock is required, the AED uses clear voice instructions to guide the user through each stage of saving the person's life. Safeguards designed into the unit means that responders can't use the AED to administer a shock if the system determines that no shock is required.

The Lifeline AED was developed by experienced multidisciplinary engineering teams and incorporates state-of-the-art digital signal processing techniques and advanced ECG analysis algorithms. This enables the device to exceed the European Resuscitation Council and American Heart Association performance recommendations, giving the user confidence that correct therapy is being delivered.

The Lifeline AED uses advanced biphasic technology and automatically adjusts the shock delivered, depending on the patient's chest impedance, ensuring they receive the most effective treatment.

The unit is technologically advanced enough to include all the critical features necessary to provide the most advanced treatment for sudden cardiac arrest, yet so simple and un-intimidating to use so that even non-medical rescuers can effectively save lives. The unit is self-contained with pre-connected pads, reducing the actions required by the user to a minimum.

In today's financial climate, budgetary constraints play a large part in the procurement of new equipment. The Lifeline AED from Martek can provide a cost-effective solution without compromising on quality.

As standard, the units are supplied with a 5-year battery, however the Lifeline AED is also available with an industry leading 7-year battery pack giving a standby life of 7 years, 300 defibrillation shocks, or 16 hours of continuous operating time including daily, weekly, monthly and quarterly self-tests. The unit also contains a separate 9V battery to power the active status indicator ensuring the main battery's power is only used for life saving treatment.

The Lifeline AED can also double as a training unit with the simple application of a clearly labelled training kit consisting of a training battery, training pads and a data card containing the training software. These unique features eliminate the need to purchase both a live and a training unit, bringing down costs for the end user. If, however, a unit is preferred purely for training purposes, with no live application, Martek also provide a standalone training unit.

The unit can be stored in a wall-mounted cabinet to increase its visibility and protect the AED from theft or damage. An alarmed version is also available, which will sound whenever the cabinet is opened.

The Lifeline AED makes it possible for all arenas to provide the simple, immediate, cost-effective, treatment for sudden cardiac arrest in time to save their employees, members and visitors.

The Lifeline AED offers the following features & benefits:

- Active status indicator – shows unit status under all types of conditions
- Clear voice prompts –step-by-step guide through the operation
- Pad connectors – visible pad connectors show the pads are connected
- Handle – roomy rubberised handle makes carrying the AED easy
- Extremely lightweight at 2 kgs
- Big buttons – oversized & brightly lit 'power on' & 'shock' buttons mean even the most nervous hands will hit the mark
- Battery pack – easy to replace battery pack, also available with 7-year life
- Overmoulding – rubberised surfaces enhance grip & ruggedness of the unit
- Progress light – gives user a clear visual text guidance
- Rental options available

As a measure of the standing of the company, Martek were recently bestowed with 2 prestigious Queen's Awards for Enterprise (one for innovation), with specific recognition for the innovation of our systems, to add to the many other industry awards we have won during the last few years.

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