

Research that goes straight to the heart!

EMERGENCY SERVICES

The Schiller- group is a leader in the area of cardiology, with more than 30,000 cardiac defibrillators operating across the world to date. Today, it offers a wide range of personalised solutions.

In France, cardiac arrests account for about 60,000 deaths every year, almost twice the fatality rate of road traffic accidents. The survival rate of victims is about 5 to 10%. The improvement of the management of "sudden death" is in the hands of researchers and manufacturers, but what is really indispensable is a collective awareness and forceful intervention by the authorities in the optimisation of the emergency care chain. The Schiller group, which was founded by the Swiss physicist Alfred E. Schiller, develops a complete range of devices devoted to cardiology diagnosis, spirometrie, remote medicine, medical IT, monitoring and cardiac defibrillation. SCHILLER handles all the stages of product manufacture, from designing to production. 70 R&D engineers, 25 of whom are based in the SCHILLER Medical facility in Wissembourg, France, work on continuous innovations in the area of defibrillation to position the company at the top of the range by offering solutions that use highly advanced technology.

For instance, the smallest defibrillator in the world (SCHILLER FRED® easyport®) won the Lépine invention competition in Strasbourg in 2005 for its technology and size (490 grams for a volume equivalent to a stack of three CD's). SCHILLER also offers an external communicating defibrillator named FRED® easy



FRED® easy Online, a communicating defibrillator that is already being used by several medical emergency organisations

Online, which can transfer some of the data recorded during treatment, particularly the electrocardiogram.

Leading edge technology

While the benefits of a lightweight compact defibrillator are quite clear, the ability of a device to communicate is also a major plus. Defibrillators that can transmit data via the Internet, enable to be continuously monitored remotely, which is essential to improve the chances of resuscitation of victims of cardiac arrests. The chance of survival drops by 10% every minute, so a simple thing like changing the battery before treatment can lead to loss of valuable seconds. A system that continuously guarantees the operational status of each defibrillator is particularly innovative. The ability to transmit patient data is also crucial in the treatment of cardiac arrests, because they can thus be made immediately available to paramedics, hospital staff, the patient's GP or cardiologist etc. The instant availability of the data is a crucial factor.

At last, communicating defibrillators make it much easier to manage large bases of devices such as those in Paris, which are spread all over the city. Maintaining such a base by sending someone to check the status of each device is time-consuming and expensive, and yet does not provide the guarantee that all the devices are indeed in good working order. The Schiller system makes it possible to review and maintain the whole base in a few clicks of the mouse. Even better, by generating an alarm whenever a device is defective, it makes it easier to maintain and manage the device base.

Véronique Parasote

“Our challenge is to imagine a device that is suited to all situations!”

Interview with Pierre Babocsay, General Manager of SCHILLER Medical SAS

Since 4th May 2007, anyone can use a defibrillator in an emergency. How are you adapting your range to that new type of use?

We now need to offer “smart” devices that can analyse the electrocardiogram of the patient and decide if a shock is recommended and give the “untrained rescue worker” all the instructions (particularly in voice form) to help them do what is required.

In order to offer a device that is effective regardless of the situation, we need to integrate as much technology as possible in compact devices that are easy to use, where correct working is guaranteed at all times.

Does that mean the emergency services need to be re-organised?

To be in the right place at the right time, an increasing number of defibrillators are being installed in public places – stores, companies, airplanes, trains etc. But that change must be supported by an effective tool that analyses the entire chain of emergency treatment.

There are still many ways of optimizing defibrillators (e.g. via GPS location) and a hi-tech defibrillator for a paramedic is very different from a hi-tech defibrillator designed for the general public that is installed in the street or in a store. Manufacturers cannot act alone, they need to know how their devices are going to be



used and where exactly they stand in the chain of survival.

To do that, it is crucial to bring together all the parties involved in emergency treatment in order to address the treatment of cardiac arrest, along with the authorities, who need to tackle this public health issue.

For our part, we will continue in our commitment to make major research efforts in an area that is increasingly competitive.