

# New technology promoting early diagnosis to save lives

**Blood clot or internal bleeding? Correct diagnosis at an early stage can save lives and prevent serious complications at a later stage for people who have suffered a stroke. Swedish medical technology company Medfield Diagnostics has successfully developed new technology leading to the establishment of a revolutionary method for diagnosing a stroke, simply called the Strokefinder, enabling professionals to determine diagnosis earlier. In fact, the answer can be obtained on the way to the hospital, with access to the right diagnostic tools in the ambulance.**

Stroke is one of the most common causes of death in Sweden. It is estimated that some 30.000 people are affected by a stroke each year, statistics show that about 50 per cent are deceased or suffer severe disabilities. The rest are left with complications of different nature, most commonly altered motor skills and speech impediments. Aside from the strain on the patient, the cost for treatment and recovery presents a substantial economical strain on society at large. The amount has been estimated to reach a yearly figure of 16 billion SEK.

## The challenge – and possible solution

Patrik Dahlqvist, President of Medfield Diagnostics, gives us a brief outline of the problem at large:

“A greatly increased number of people would survive and get by with fewer or possibly no complications if the correct diagnosis could be set earlier, thus leading to the correct treatment to be initiated at an earlier stage. The problem is, however, that a stroke may also be caused by bleeding. If treatment is given to a patient with bleeding in the brain, it can complicate the condition severely. Therefore, treatment must be halted until the patient can be X-rayed at the hospital. If equivalent testing could be done sooner, i.e. on the way to the hospital, more lives could be saved”.

Two million brain cells die every minute at the beginning of a stroke. Applying tools for early diagnosis and treatment can in some cases save up to one hour, during which the patient otherwise would be more or less untreated.

“We have embarked on a second study in close collaboration with stroke expert Jan-Erik Karlsson and the Department of Neurology at the Sahlgrenska University Hospital in Gothenburg. We expect to have installed the equipment supporting our method Strokefinder at the University Hospital by late 2013, and by 2015 the ambulance version could be deployed”.

## Understanding Strokefinder

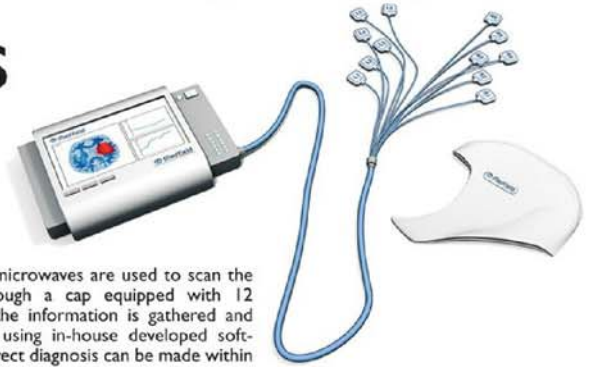
Medfield Diagnostics' Strokefinder is based on technology that was developed and patented by researchers Andreas Fhager and Mikael Persson at Chalmers University of Technology. Using microwaves of the same type as those used in a cellphone can identify possible bleeding in the brain. The microwaves are emitted by small antennas placed inside a cap, and are interpreted using software developed by Med-

field Diagnostics after which a diagnosis can be determined.

## Collaborating with health care providers

Medfield Diagnostics operates from the prestigious Sahlgrenska Science Park, in close vicinity of the Sahlgrenska University Hospital. Development takes place lar-

gely in collaboration with relating departments at the hospital such as the Department of Neurology and the Department of Neurophysiology. Interest in Medfield Diagnostics as a company as well as the innovation Strokefinder is growing rapidly, both among neurologists and possible future investors.



Strokefinder has been tested and developed in close collaboration with the Department of Neurology at the Sahlgrenska University Hospital. Stefan Kidborg, developer of Medfield Diagnostics, and the nurse Miriam Käveryd Holmström here performs a follow-up procedure on a patient who previously suffered from a stroke.



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