MYCARE - THE ‘CARD’ THAT COULD SAVE YOUR LIFE

MAKING LIFE-SAVING DATA MORE ACCESSIBLE

It looks like a credit card... it slips into a wallet or purse... but it could mean the difference between life and death in a medical emergency.

The MyCare Card stores personal medical data (e.g. information on existing medical conditions, allergies and medication being taken) and plugs into a laptop’s USB port, enabling the data to be accessed in just a few moments. It is the first device of its type to have been trialled in the UK.

This working prototype has been developed by City University London and Coventry University, with funding from the Engineering and Physical Sciences Research Council (EPSRC).

If the card’s owner is taken ill or involved in an accident,

“OUR DEVICE MAKES POTENTIALLY LIFE-SAVING DATA EASILY ACCESSIBLE”

Professor Panicos Kyriacou

...paramedics can simply retrieve the card from their pocket or handbag and use the data to gain instant access to their full medical history.

AVAILABLE FOR PATIENT USE WITHIN 4 YEARS

As well as using the data to inform their on-the-spot decisions, paramedics can phone key information ahead to a hospital if necessary.

Initial trials have been successful and the development team now hopes to work with organisations in the healthcare sector to undertake a full-scale pilot programme. If that programme is also completed successfully, the system could be available for patient use within around 3-4 years.

“When dealing with a medical emergency, patients may be unconscious or unable to communicate with paramedics for some other reason,” says Professor Panicos Kyriacou of City University, “our device makes potentially life-saving data easily accessible. For example, it’s vital to know whether a patient is allergic to latex. If they are, use of latex gloves by a paramedic might be fatal.”

ALL DATA WOULD BE SECURE

The MyCare Card is designed for voluntary use by patients. All data would be held on the card securely so that it could not be accessed if the card were lost.

A patient would keep the card in their possession and add or alter a range of personal information (e.g. on next of kin) on their home PCs. A plug embedded in the card is simply slid out and inserted into a computer; bespoke software then automatically runs from the card. This personal medical data-browsing software was also developed as part of the project.

When treated at a surgery, clinic or hospital, the patient would hand the card over to the medical professionals and the medical information on the card would be updated.

Card updates could also be made at pharmacies when collecting prescription medicines. The patient themselves would be able to view but not alter any of this medical data.

Although patient-held electronic health record cards have been trialled in some parts of the world, the
MyCare Card has a number of unique features:

- The software underlying the system is written in a portable way using Python programming language, meaning it can be ported easily between different computers and different computer operating systems.
- The software is very modular and easy to extend, which means it is simple to add new features and database record types.
- The MyCare system has been developed on an open-source basis, enabling a wide range of people to be involved in reviewing and contributing to the development process.

As part of the project, detailed surveys have been undertaken by Coventry University, led by Professor Andree Woodcock, to assess attitudes to the MyCare Card among health professionals and the public, including those with and without computer skills. These surveys have highlighted the need for a full pilot-scale study to enable all the key issues to be examined in detail (e.g. would GPs be happy to use such a system?).

"The MyCare Card has specifically been designed to be easy to use regardless of your level of computer literacy," says Professor Kyriacou.

The 3-year ‘NHS MyCare’ project received total EPSRC funding of just over £260,000.

Access to information stored on the card is secured using user authentication protection similar to online banking. The card prototypes were developed at Coventry University, where the user surveys were also organised; the system’s underlying software was developed at City University London.