



Mobile phone that monitors health developed

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A mobile phone that will measure patients' vital signs and will deliver the results straight to GPs is being developed by academics at Leeds University.

The prototype 'next-generation' phone is being designed to allow patients to monitor their own health and receive advice from the comfort of their own home.

Using a Bluetooth connection, the phone would 'talk' with wireless devices attached to a patient and take measurements such as their vital signs, glucose levels or blood oxygen levels.

Research project leader Dr Alison Marshall from the Keyworth Institute explained the concept behind the phone to E-Health Insider: "Blood pressure, heart rate, blood glucose levels and many other physiological parameters are monitored by an individual, using a Bluetooth connection to their mobile phone or another mobile device, such as a PDA or a special 'bracelet' which reads and stores the data. This is uploaded to a remote server, where the general practitioner, specialist nurse of consultant is able to view the data.

She explained that the system could also provide individuals with access to their health data: "The individual may also connect via a website to see this more detailed information, if they are interested and have the technological skills."

Dr Marshall said benefits to individual are fewer visits to a clinic for routine monitoring and better information about their condition, which research has shown gives improved management. "The benefits to the healthcare system are in reduced costs of monitoring and improved clinical outcomes, meaning fewer expensive acute episodes."

Dr Marshall said that the aim was not to replace doctors, but to help patients suffering from chronic conditions to take control of their own health.

"Chronic disease of all types - obesity, diabetes, asthma, cardiovascular illness and so are on- are on the increase, especially as Western populations age. Research has shown that clinical outcomes and patient well being are significantly enhanced by self management. Regular measurement of vital signs and other key parameters mean that diet, exercise or medication can be controlled.

She added: "This shift in emphasis for healthy lifestyle management from the clinical professional to the individual is also evident in the growth of interest in consumer healthcare products."

She said there was a clear trend towards individuals taking greater control of their health: "Not only is gym membership growing in popularity, but sales of consumer self diagnosis tools are also growing. By 2014, the number of people over 65 living in the UK will exceed those under 16. We need to find technology solutions that provide a greater level of care for patients in new ways."

Patients would also be able to use the phone to track their own health progress, by manually entering nutrition-related data or by taking psychological tests on the phone.

For example, they could meet a friend for lunch and enter details of their meal into the phone, then instantly be told how many calories, sugar and fats they'd just eaten. The phone would recommend what dietary or exercise changes were needed to offset the damage.

A prototype phone will be tested on research volunteers next month to improve its design and functionality,



Bluetooth to pulse oximeters or blood pressure monitors and using manual entry for nutrition diaries.

Links

[Leeds University Mobile self management of health project](#)

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