

Report

Assistive technology: helping patients to monitor vital signs at home

Vince Ion

National Health Service Consultant – United Kingdom

“The benefits for clients are quite amazing. They really do become empowered and are more in control of their own health. It’s fabulous to watch.”

Project manager Hazel Price is describing the early results of the Kent TeleHealth Evaluative Development Pilot – a scheme to promote the self-management of long term conditions in older people.

Research shows that clients would prefer to stay in their own home for as long as possible. The Kent pilot involves patients using technology which allows them to monitor their vital signs at home rather than attending their GP practice or having a nurse visit them. The information gathered by clients is then accessible to GPs who can take action if required.

Hazel says: “TeleHealth is very client-centred. Patients know their information is being picked up, they have become self-managing and are thinking more about appropriate use of services such as their GP or hospital.

“We are experiencing better outcomes through regular consistent monitoring. Patients and carers find it reassuring to know there is daily monitoring which can often indicate changes in conditions which would not normally be spotted until a crisis develops, and we have some client testimonials to that effect.

“The benefits to GPs and nurses are significant with efficiencies in time and resources clearly evident as such an early stage in the pilot.”

Kent County Council is now rolling out 250 pieces of equipment to clients, all with one or more chronic conditions such as lung disease, heart disease and diabetes.

Clients are able to record measurements such as blood pressure and blood sugar using touch screen monitors. Data is sent to a central server which can be accessed – using a secure web link and passwords – by GPs.

Patient information is displayed using a ‘traffic light’ coloured system, enabling GPs to see instantly where an intervention may be required.

The system has already helped to avoid unnecessary hospital admissions. One female patient had 50 bed days

before the introduction of the TeleHealth scheme – down to just one after she began using the technology.

In addition, the patient’s GP has reduced the number of home visits from once a fortnight to only needing to see her once a month at the regular check up at the practice.

The community matron has also reduced her visits, from twice a week to once a fortnight, and the patient’s son – who had given up work to care for his mother – is now looking for part-time work.

Hazel said: “We know the technology works but we need to evaluate its impact on clients and their health and quality of life. We also need to look at how it impacts on the provision of services.

“To this end, the project has been approved through Health Ethics and a full cost benefit analysis will be undertaken.

“Technology is very much where we are going to be in the future. We have an aged population with not enough younger population to serve it. So we have to think of new and innovative ways of providing care.”

NHS CONNECTING FOR HEALTH TO ADVISE ASSISTIVE TECHNOLOGY INDUSTRY

The work being done by Kent, other local authorities and the NHS will help inform the future of assistive technology (telehealth and telecare) in the health and social care arena.

They are demonstrating that assistive technology can help people retain independence and improve their quality of life. Funding of £80 million has been allocated to local authorities over the next two years as part of the Preventative Technologies Grant to support even more people in their own homes.

The Government’s White Paper, our health, our care, our say, makes it clear that assistive technology is set to grow as health and social care services move to provide people with more independence, choice and control.

The White Paper highlights the “exciting new possibilities opened up by assistive technologies” and makes a commit-

ment to demonstrate how assistive technology can make a difference to people's lives through a series of pilot sites.

NHS Connecting for Health (NHS CFH) is contributing to the debate by exploring how assistive technology might be provided on a bigger scale but in a sustainable way for the longer term.

George MacGinnis, programme manager with NHS CFH, said: "There are bespoke services at the moment being delivered to small numbers of patients.

"We are trying to create an integrated approach and greater coherence in the field of telecare/telehealth."

To this end, NHS CFH encouraged the formation of the recently-established Continua Health Alliance, which brings together leading health and assistive technology companies to help NHS and social care services deliver even better care to people with long term conditions.

The alliance aims to develop technologies that work together to provide an opportunity to improve quality of life, help reduce unnecessary hospital use and enable more efficient use of resources. Universal standards will also help improve safety.

NHS CFH will play an advisory role within the alliance, helping to ensure the industry is informed and can tailor developments in products and services to meet the need of patients.

George added: "We can bring to bear our experience of developing information systems which aim to deliver information to the right place to improve patient care and safety."

REMOTE MONITORING IN BARNSELEY BOOSTS CARE OF PATIENTS WITH CHRONIC HEART FAILURE

Clinicians from Barnsley Hospital and Barnsley PCT are also examining the impact of home monitoring involving 40 patients with chronic heart failure.

Dr Simon Brownsell, a research fellow at Barnsley Hospital, said: "If we are to move from projects like ours, innovative early adopters, to mainstream use, then we need to understand the implications of these new systems – do users like them, does it make a clinical difference and when compared to other service delivery options, is it cost-effective.

"By addressing these fundamental issues, decisions can then be made on how services are offered in the future."

Interim results from the three-year project, running until March 2007, has resulted in positive feedback from patients who use remote monitoring equipment in their homes to answer a range of questions about symptoms and provide blood pressure and body weight on a daily basis. The data are then reviewed by a joint hospital and PCT response team.

"The system helps us to deliver more personalised and preventative care," said Simon. "One of the interesting developments has also been how the boundaries between different service providers have been blurred and how increased communication has resulted."

In addition to the 40 patients involved in the pilot, a control group of 20 patients has been recruited to enable comparison with similar people who do not receive the home monitoring system.

The Barnsley project is funded by the Engineering and Physical Sciences Research Council (EPSRC), the Department of Health and Barnsley PCT.

HOME MONITORING SCHEME CUTS HOSPITAL ADMISSIONS IN NEWHAM

A pilot scheme supporting patients in Newham with long term conditions in their own homes reduced hospital admissions by more than a third.

The scheme – involving the Newham Network (NN) Community Alarm System – was based on a vital signs monitoring kit which enabled patients to measure their own weight, blood pressure, blood oxygen and respiratory output.

The information was relayed from the patient's home to the scheme's nurse at the NN call centre, enabling the patient to be monitored regularly and providing a quicker alert to any deterioration in the patient's health.

Evaluation of 16 patients over four months showed a reduction in inpatient costs by 58 per cent and hospital admissions by 38 per cent.

The project co-ordinators have recommended that the scheme be rolled out to 500 patients, with the potential to reduce inpatient costs by £1 million a year.