Remote Controls

The introduction of telemonitoring systems is benefiting patients while providing efficiency and cost savings. Here we look at three telehealth success stories.

Heart Failure Monitoring

As a specialist cardiothoracic centre, Royal Brompton Hospital in London treats patients from all over the country. But the introduction of remote monitoring means that many of those with heart failure no longer face frequent and sometimes long journeys to the hospital.

“The people who we are monitoring – about 30 of them at the moment out of around 2,000 patients of heart failure that we see – are the patients that either live hundreds of miles away or have had the most complex problems,” explains Martin Cowie, professor of cardiology at Imperial College London and consultant cardiologist at Royal Brompton.

The hospital has been using the telemonitoring system for two years. Patients monitor themselves by using a blood pressure cuff, taking their weight on scales, and answering a few questions. All of this information is submitted via a TV set-top box: patients just log in to an extra channel using their remote control and can even review their own progress over time.

Once the information has been submitted it is sent back to staff at Royal Brompton. The hospital itself has a web-based system and the nurses just log onto the internet to look at all of their patients – they do this twice a week. “If they don’t like the look of the information that they are getting from a patient, they will then call and ask him or her a few questions and they can give them advice over the telephone,” explains Professor Cowie.

If things look like they are going in the wrong direction for quite some time or if a patient is not doing so well, the nurses will move forward the patient’s hospital appointment. The result is that patient care is significantly improved and the number of unnecessary hospital appointments cut.

“We can tailor much more to their needs rather than giving them a regular clinic appointment,” says Professor Cowie. “It really helps rationalise and modernise monitoring of these patients. Instead of having routine appointments every six to eight weeks, we cancel those if patients are doing fine. At other times, when patients are not doing well, we arrange for them to come and see us tomorrow.”

By using the system, patients learn more about their condition so they actually self-care more. The only potential downside is the cost that is billed back to the patients’ GPs – it costs about £70 a month to rent the equipment.

“But you don’t have to prevent very many clinic appointments to see the return on that money quite quickly,” points out Professor Cowie.

The hospital also uses telehealth to remotely monitor those with an implanted pacemaker or defibrillator. “We can actually see all the information that those devices collect: a lot of it is about whether the device is functioning properly,” explains Professor Cowie, though the data also shows how active the patient is each day, how fast their heart rate is and how much fluid is in the lungs. “We can then monitor any heart rhythm problems or how those patients are doing from wherever they are without really any contact with the patient.”

Florence

Telehealth does not always involve complicated technology, as proved by communication tool Florence. The system uses mobile phones to help people who have a lower level need of health monitoring.

It is intended to aid communication between clinician and patient via the transmission of scheduled and freehand text messages. Patients can send their vital signs data to clinicians in a text message and receive appropriate advice back, again via text.

The system may be simple but its development involved careful thought. Clinicians first develop protocols in the form of a series of messages and possible responses that usually reflect the self-management advice already being given to patients.

Patients opt in to the service usually via their own mobile phone and then will start to receive prompts, questions and education or informative messages, explains project leader Phil O’Connell from NHS Stoke on Trent.

“When a patient is asked to respond with something like a blood pressure reading, the system automatically checks the content of the message to ensure the content is valid and can be understood and might then compare the reading with criteria entered by the clinician for that patient,” he says.

“For example, in the case of blood pressure, the clinician may have set a response following NICE guidelines to ask for a second reading from the other arm if the initial
reading was high. If the second reading also meets the criteria, Flo would send the clinician’s advice to the patient, who might be to contact their clinician straight away or make an appointment.”

The system was designed to be easy to use for both patients and healthcare professionals. The clinician interface is designed as an app, so it is intuitive and requires minimal training. Florence has already been taken up across the country, with patients in the North East, east coast, Midlands, London and south coast regions all benefiting from the system. The range of health areas for which it is used is equally wide and includes COPD, asthma and pain management, as well as more general issues such as smoking and breast feeding.

“The system can be used with most conditions and pathways and the scope of use is practically unlimited,” argues Mr O’Connell. “It is used across public health, mental health, community nursing, secondary care and some of the most innovative uses have been developed by GPs for use in their own practices.

“Although there are many anecdotal stories of the system helping to avoid admissions, what we have seen is tangible clinical outcome benefits as a result of improved, appropriate contact with patients where Flo has helped the patient to adhere to their prescribed treatment and clinical advice,” he continues. “We have also seen tangible productivity gains for providers.”

According to Mr O’Connell, a key difficulty for any telehealth project to be implemented is addressing preconceived ideas of what telehealth is and scepticism towards efficacy and cost-effectiveness. For the system to work, wide clinical support is necessary from the outset. “Without this any telehealth project will struggle,” he argues.

LONDON BOROUGH OF HILLINGDON

In common with the rest of the country, the London Borough of Hillingdon is facing the challenge of caring for an ageing population. The number of people in the borough who are over 85 currently stands at 4,716 but that is expected to increase by 8 per cent in the next five years – compared with a forecast overall population increase of 5 per cent.

In response, the borough has introduced a free telecare service to support all its residents who are over the age of 85. The project is a collaboration between Hillingdon Council and NHS Hillingdon and the aim is to maximise independent living in the community for older people. It represents a shift in service provision away from institutionalised care and towards home-based support, risk prevention and early intervention.

“Technology like telecare can play a vital role in helping care for an ageing population and that’s why in Hillingdon we are offering it to those aged over 85 for free,” explains Linda Sanders, corporate director for social care, health and housing. “For us, it is about positioning telecare at the forefront of our care provision to ensure no-one is admitted to residential care without being afforded the opportunity for telecare support at home. By enabling residents to stay in their own homes we can reduce the demand for residential or nursing care, which can in turn result in significant savings for the council.”

Initial evidence suggests that such benefits have already begun to be secured. After 12 months, a combination of telecare and reablement services have delivered savings of £4.7m and a 50 per cent reduction in residential care home admissions (which are at their lowest level since April 2008). The result of a more detailed evaluation of 195 telecare users showed that in about half of cases the service has delayed or reduced the need for further services.

Feedback from users and carers has also been very positive. The daughter of one user credits the system with having saved her mother’s life. Prompt emergency medical attention was made possible by her mother pressing the telecare button while collapsing due to a stroke.

The borough started offering the free service in April 2011 and has now completed 1,221 installations, of which 565 were self-referrals from Hillingdon residents. It is expected this will rise to a total of 3,000 new telecare users by 2015.