CASE STUDY

Managing long term conditions using telehealth – an evaluation

NHS
Halton and St Helens
Community Health Services

The Challenge

17.5m people in the UK have a limiting long term condition and their management is one of the greatest strategic issues facing the NHS. As the population profile ages, the number of patients with long term conditions is expected to grow by 23% over the next 20 years[1], and developing new, more cost effective ways of supporting these patients is a priority for the health service.

In the NHS Halton and St Helens area, the total number of emergency admissions to hospital for people with long term conditions (Chronic Obstructive Pulmonary Disease, Heart Failure, Chronic Heart Disease, Diabetes) during 2009/10 was 2,876.[2]

NHS Halton and St Helens' vision is to improve the overall health and wellbeing of people in the community, and it has recognised the potential for telehealth to contribute to this vision by delivering improved outcomes and experiences for patients.

How could the PCT best utilise telehealth in conjunction with existing services to achieve greater operational effectiveness and thereby increase its capacity to provide high quality care and support for the growing number of people with long term conditions?

The Partners

Sefton Careline (part of Sefton MBC) was established in 1984 and provides telehealthcare, monitoring and reassurance to more than 6,800 people within the Merseyside area.

NHS Halton and St Helens looks after the health of approximately 300,000 local people, providing care to them from a range of service providers including other NHS and healthcare organisations, family doctors, optometrists, pharmacists and dentists.

"Telehealth has been a great benefit to me. It helps me manage my condition on a daily basis whereas before if I became unwell I would wait another day to see if my condition improves. Sadly it never did, and I would end up in hospital for long periods of time. I now know when I'm becoming unwell and it's acted on immediately."

Patient taking part in the NHS Halton & St Helen's telehealth pilot

[1] *Healthcare without walls: a framework for delivering telehealth at scale, John Cuickshank, 2020Health, November 2010*

[2] *NHS Comparators, 2009/2010*

All the reassurance you need Tunstall

The project

In order to fully assess the benefits telehealth could bring to the community, NHS Halton and St Helens financed a 12 month pilot to evaluate the most effective means of including telehealth within its care pathways for people with long term conditions. Sixty telehealth packages were commissioned and were offered to patients from three chronic disease areas - Heart Failure, COPD (Chronic Obstructive Pulmonary Disease) and Stroke.

The project aimed to:

- Reduce the number of unnecessary A&E attendances and hospital admissions from participating services
- Reduce the number of hospital acquired infections reported by Community Health Services (CHS)
- Facilitate early discharges
- Reduce the number of clinician home visits required
- Increase patient satisfaction as recorded by the PCT approved method
- Support improved caseload management, enhancing capacity thereby increasing productivity
- Improve patient care through a more timely, proactive service
- Support a diverse range of individuals to live at home
- Empower patients to manage their own conditions
- Give carers more personal freedom

How it works

Telehealth systems from Tunstall Healthcare are set up in patients' homes, and patients are given training on how to use the **icp mymedic**™ monitor and associated peripherals to measure their vital signs and symptoms. Each day, patients take their own blood pressure, oxygen levels, weight and temperature, and answer a series of health related questions.

This information is automatically transferred in real time down the phone line, via the **mymedic**™ unit, to Sefton Careline's monitoring centre. Here, operators use **icp triagemanager**™ software to view and manage the data received. Clinicians work with Careline staff to set up a record for each patient which includes contact details and information on their medical condition, and contains parameters for the patients' readings. If these parameters are exceeded, operators will receive an alert, and can contact the patient to request that they retake their readings. If the readings exceed the pre-set parameters for a second time, the appropriate community matron can be contacted.

Service delivery

A project lead was assigned from NHS Halton and St Helens who consulted with stakeholders and worked in conjunction with Tunstall and team members from other departments to:

- Agree the patient identification, referral and installation process
- Oversee the implementation of a central triage centre at Sefton Careline to securely receive confidential patient data
- Work with Newton Community Hospital facilitated discharge team to ensure effective deployment (10 of the 60 telehealth packages were allocated to the hospital)
- Establish access permissions to data for different groups of health professionals
- Agree which vital signs and disease specific questions should be offered to individual client groups
- Create an ongoing training plan to ensure all parties are familiar with equipment and processes
- Develop a communications plan, including regular contact between PCT and Sefton Careline, patient education videos, newsletters and attendance at meetings and events
- Establish an evaluation mechanism, including surveys and forums to gain feedback from patients and clinicians

"By deploying the telehealth system for community-based care we are empowering patients, reducing anxiety, promoting independence and so improving overall quality of life. Telehealth also educates patients to be aware of their symptoms, to proactively manage them, reducing part of the burden on healthcare providers. This can be seen as an excellent example of innovative partnership work being undertaken by Community Health Services (CHS) and Sefton Careline."

Mike Ore, Head of Service Delivery, Community Health Services

Outcomes

The evaluation period was July 2009 to March 2011, during which time a total of 104 patients had used the service. Positive benefits have been reported by patients, carers and staff alike, and both health and Careline staff were pleased to say that the project facilitated increased partnership working.

Impact on patients

A post service questionnaire was issued to 50 patients who used the telehealth service for a minimum of 6 weeks, and 33 (66%) responded. Patients reported increased satisfaction, due to feeling in control of their condition, and having increased peace of mind because of being monitored daily.

- 85% improved their understanding of the impact of their condition on daily life
- 79% answered 'yes' to having coped and managed with their condition better
- 89% of patients benefited 'a lot' from using the telehealth service
- 76% of patients and 79% of patients' families/carers reduced their anxiety about their condition
- 81% of patients who had the telehealth system removed said they will continue to benefit

Impact on clinicians

Community Matrons reported that as a result of the telehealth project:

- Home visits were reduced and they were better able to prioritise their workloads
- Interaction with Sefton Careline enabled a more preventative approach
- An improved quality of service was offered to patients and exacerbations of their conditions were reduced
- Patients benefited from reduction in anxiety, better medication compliance, increased knowledge and self management
- Integrated working between health and social care was increased

However, it should be noted that in some cases, clinicians recorded an initial increase to workload due to:

- Initiation of the scheme leading to shortlived technical issues, ie alert parameters required adjusting
- Telehealth equipment helping to identify previously undiagnosed health conditions which required attention

These issues were quickly resolved and the vast majority of Community Matrons reported that face to face contact with patients has reduced significantly in some instances, allowing the more appropriate use of support.

Case Study

Mr X is 59 years old and has been managed by the Community Stroke Service for over two years. In addition to having suffered a stroke, Mr X also has secondary factors including hypertension, type 2 diabetes, morbid obesity and shortness of breath. His activities of daily living were severely curtailed and quality of life reduced. Mr X was keen to be part of the telehealth project and measured his blood pressure, oxygen saturations, pulse, temperature and glucose levels at least daily. As a result he:

- Gained a good understanding of his condition and takes more responsibility for his wellbeing
- Stopped smoking, has become more physically active and lost 3 stones in weight
- Reduced his blood pressure considerably
- Reduced blood sugars, therefore reducing the amount of Insulin he required dramatically
- Is less short of breath, and feels better in general
- Has not needed as many visits from his Community Stroke Nurse
- Has required fewer visits to the GP practice
- Has had no A&E attendances or hospitalisation since the introduction of telehealth

Summary of results and financial savings

As well as achieving improved outcomes for patients, the project has delivered significant cost savings as demonstrated in the table below:

Effect of telehealth on emergency admissions

	12 months before telehealth installed	12 months after telehealth installed	% change
No. of emergency admissions relevant to LTC	41	29	-29.3%
Average length of stay (days)	10.63	5.86	-44.9%
Average admission cost	£2,773	£2,429	-12.4%
Total cost of admissions	£113,717	£65,223	-42.6%
Saving (cost of admissions)		**£48,494**	

This provisional data has been collected via the HIT (Health Information Team) to provide the most accurate data; however there are some caveats to be considered:

1. Problems with EIS (Executive Information System) and the uploading of SUS (Secondary Uses Service) information led to concerns as to the completeness, however it is believed that the information for the categories required was robust.
2. Due to changes in the Healthcare Resource Group structure in the period the evaluated, £ figures are not directly comparable. That said the results showed the reason for admission or attendance – so the elimination of any non-related illness/ issues from the results was applied.
3. The data used was extracted from 37 patients enrolled on telehealth programme for a period of 12 months or longer.
4. These figures have not been annualised.

Next Steps

The benefits realised so far have led to an increased budget for NHS Halton and St Helens telehealth service, and the team continues to work in conjunction with Sefton Careline and other key stakeholders to expand and develop the service.

In future, the objectives include:

- Extending the patient groups and settings telehealth is offered to, including a multi user telehealth facility (using Tunstall's **my**clinic) in residential care schemes
- Continuing to cultivate partnership working between health and social care
- Embed telehealth into reablement programmes
- Further embed telehealthcare into Sefton Careline's model of care and develop the service offering
- Engage further with the acute sector and with GP practices

This service will continue to support the ability to provide the most appropriate care, as close to home as possible, building on the principles of delivering excellent care in the most efficient way, ensuring that many more patients throughout Halton and St Helens will benefit from telehealth in the future.

For more information on telehealth please call 01977 660479

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