

Telehealth Case Study

Sector: Management of Long Term Conditions
NHS Partner: South Eastern Health and Social Care Trust
Application: Diabetes Clinical Managed Service



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The Programme Outline

The South Eastern Health and Social Care Trust in Northern Ireland has been one of the early innovators in adopting Telehealth for the management of patients with chronic conditions. After a successful pilot and scaling up of their COPD programme, the Trust looked at ways to address other conditions.

Dr Roy Harper, Consultant Physician and Endocrinologist, has been promoting the use of Telehealth and Telemedicine for a number of years and sees the clear benefits of monitoring patients in their own homes. In November 2008, Alere Connected Health Ltd (Formerly Home Telehealth

Limited) started to deliver a Diabetes management programme with Dr Harper and his team at the Ulster Hospital, Dundonald. The main aims of the programme were to empower patients to become better self managers of their diabetes through patient education and self management as well as to efficiently titrate patients just starting on insulin to achieve optimal blood sugar control.

The Challenges

Optimal blood sugar control can reduce the risk of diabetes complications and ultimately lower healthcare costs, however, current approaches to insulin commencement and up-titration do not always deliver optimal blood sugar control. As a result the programme was designed to examine the usefulness of Telehealth in supporting patients to self-manage their diabetes while still under the supervision of a specialist diabetes nursing team.

The Telehealth programme has been designed to provide twelve weeks of monitoring to patients with Type 1 and Type 2 Diabetes who have received full education but who are having problems controlling

their blood sugars. These patients may be on a daily, twice daily or Basal Bolus insulin regime. Patients are identified for the programme through the diabetes clinics held at the Ulster Hospital. The patients are referred onto the programme by the team and Alere installs a Telehealth monitor in the patient's home within 3 working days. The patient is trained in the use of the monitor and shown how to connect their own glucometer to the Telehealth monitor.

Each morning for twelve weeks, the patient is asked to carry out a monitoring session using the Telehealth monitor. The monitor gathers the patient's blood pressure, heart rate, oxygen levels and weight if required. The patient is also asked a number of questions relating to their medical condition. Finally the patient connects their own glucometer to the monitor and all readings within the past 24 hours are transmitted. Patient's data is initially viewed by telehealth triage nurses based at Alere's clinically led care centre in Belfast. The telehealth nurses carried out a clinical triaging process on the patient's data which was based on a clinical protocol and escalation process developed with the specialist nursing team.

This triaging process includes contacting the patient to discuss the readings that are outside of normal limits and to provide education and support to the patient in diabetes management. A weekly report is also sent to the diabetes team detailing information about each of the patients. The diabetes team then hold a virtual clinic to review those patients who need extra support or titration of the medication.

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The Programme Results and Outcome

The programme so far has monitored 47 patients using the service delivered through Alere. The use of Telehealth has proved to be beneficial in

the management of patients with complications in diabetes management. Patients feel that they are getting the support they need in managing insulin control through the Telehealth programme.

Originally patients were being monitored for a period of twelve weeks but we are now starting to see in some case that patients are self managing in around seven to eight weeks. The track and trend information provided through the monitor is invaluable to the diabetes team. The team is able to see accurate data in real time without the need for the patient to visit the clinic.

Lessons have also been learned about the way data is presented and the team are working with Alere in the development of new reports that will allow the team to manage more patients on the programme.

Next steps and the future

The Trust is now looking at other areas in diabetes management, one of these being patients who are considering pregnancy or who are currently pregnant and having problems controlling their blood sugars.



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