Distance monitoring — Sweden

Home monitoring of patients with chronic diseases

THE GLOBAL GOALS

Nordic Council of Ministers

Government Offices of Sweden
Ministry of Health and Social Affairs

region västerbotten

Summary

Home monitoring of patients with chronic diseases allows district nurses to take care of their patients with a system that makes it possible for the patients to manage a number of medical tests on their own, in their own homes. Patients are given a fitness tracker, blood pressure monitor and/or a set of scales depending on the needs of the specific patient. All devices communicate with a smartphone app that transfers the readings to the care provider. All readings are monitored by the system and if something appears to be wrong or outside of the set limits, a nurse will contact the patient. Assessment forms in the app can be used to screen for mental illness.

Main effects of the solution

Effects for the user

- The patient feels free and does not have to wait by the phone to book an appointment or take time off work to visit a health centre.
- White coat syndrome (a phenomenon resulting from the anxiety that can be experienced when visiting a clinic) is not a factor when the patient conducts the monitoring at home. It is also easier to fine-tune medication.
- Prevention of stroke and cardiovascular disease.
- Screening for mental illnesses.

Effects for the care giver

- Nurses can handle more patients.
- Patients who can and want to manage their own care have the opportunity to do so. The nurses can focus on patients who have greater needs.
- Better working environment.

Other effects

- Less travel – good for the environment.
- Lower cost of health care.

Users

- Patients with chronic diseases in need of regular medical testing.
- Patients at risk for chronic diseases when it comes to prevention, i.e. weight loss.
- Patients under medication.
- Patients with diagnoses that cause an elevated risk of high or low blood pressure/blood glucose or weight loss/gain.
- District nurses in primary care.
- Doctors are consulted by nurses, when needed.

Quotes/Testimonials

"We check blood pressure around 50 times per day. We would not be able to carry out this number of checks at the clinic. You could say that I meet around 50 people, but this is in the digital world".
— District nurse

"I can control my life in a new way. I am part of my own care".
— Patient

Elaboration

Needs and challenges

Region Jämtland Härjedalen wants to provide a good level of health care with the available funding and for geographical conditions that involve long distances. The average age in the population is rising, leading to a higher burden on healthcare providers. Tax revenue is also decreasing as a result of there being less people of working age. The region has a high number of health centres and nursing stations, which are very costly to run. Finding smarter ways of working could solve some of these challenges.

Solution and function

Patients who have a smartphone can install an app that communicates with a health tracker, blood pressure monitor and a scale. Blood glucose can be recorded manually using the app. All readings are sent to a cloud service and are monitored and assessed using artificial intelligence – AI. If any readings appear wrong or outside the set limits, a nurse will contact the patient. The nurse is given different priorities depending on the seriousness of the reading. Nurses communicate directly with patients, using text chat or video communication.

Economy

- The solution costs SEK 200 per patient, per month – including equipment.
- Reduced healthcare utilization at hospitals, fewer bed days, fewer ambulance journeys.
- Education and training is provided by the service provider. The company hires an assistant nurse who trains patients in how to use the equipment.
- Great potential for scaling up to the entire region.
- 25 new patients added each week.

Process

Procedures have been developed during the project. These routines involve testing everything early and cancelling it if it does not work. Weekly meetings are held with the project manager, IT, service provider and people working with monitoring in order to identify problems at an early stage. Innovation procurement has been used.

New workflows have been developed for the districts nurses who monitor the patients. Healthcare staff have been able to participate and influence the work. It is very important to find people who become interested and that interest grows. Eventually, even reluctant staff will follow.

Organisation and politics

The politicians had already taken decisions on implementing good and near healthcare, according to Anna Nergårdh's report. The Director of Primary Care fully supports the project.

Follow-up/monitoring

Statistics are easy to view and everything is followed up on a weekly and monthly basis. Questionnaires can be sent through the system.

Communication

The health centres have their own Facebook pages that include information about how to participate and how to sign up. Open house days are held to provide information about the service. Personal invitations are sent to patients to download the app, which is not openly available.

More about effects

Personal contact is preserved using the system which also leads to a closer relationship. Health care comes closer to both the caregiver and the patient. Patients with chronic diseases have an improved quality of life and sense of freedom as they no longer need to wait for an appointment or wait on the phone to reach their health centre.

Even if a patient hasn't noticed that something is wrong, the nurses can see early signs in the readings and treatment can commence right away. Patients are empowered and can take greater responsibility for their own health.

District nurses can handle many more patients when tests are carried out by the patients themselves, and follow-up can take place on a daily basis.

Learning and tips

- Patients must have a tablet or smartphone or a more recent version of an iPod.
- Patients may need help configuring and handling the app and medical equipment.
- It is important to start by identifying individuals who are enthusiastic about this type of solution. This applies to both patients and staff.

Further information

- The Swedish solution to Chronic Care Management - ImagineCare »
  (movie with english subtitles)
- 87-year-old Eva checks her blood pressure at home » (article and movie in swedish)
- District nurse Linda checks 50 patients at the same time » (article and movie in swedish)

Context

The solution can be used in both rural and more urban areas and can be upscaled to the entire region. Use of the solution for COPD and exhaustion syndrome has started, as well as prevention activities regarding weight, exercise and anti-smoking measures. Cooperation has started with specialist care regarding heart failure and there are plans to start cooperating regarding asthma/COPD, as well as diabetes.

Contact details

Elisabeth Sundequist, e-Hälsoutveckling Primärvården / Områdesansvarig Cosmic Primärvården
Primärvårdsstaben, Region Jämtland Härjedalen
Phone: +46 70-2567033
elisabeth.sundequist@regionjh.se
regionjh.se

Name of the service

ImagineCare

Service provider

LifeCareX

Contact person

Gustav Hjelmgren +46 72-5461539