Observatory of Public Sector Innovation

OECD BETTER POLICIES FOR BETTER LIVES

Horizon 2020 European Union Funding for Research & Innovation

IT Support for Advanced Care in the Home

Published On: 14 January 2015

Organisation: Lund University

Country:

Level of government: Central government

Sector: Health

Type: Digital, Public Service

Launched in: 2012

Overall development time: 4 year(s)

Link to the innovation's website

Description

The IT Support for Advanced Care at Home system supports advanced medical home care through the use of information and communication technology (ICT). Advanced care in the home which is provided by hospital staff, needs a different kind of support compared to hospital care. The initial focus of the system was for palliative care of terminally ill patients, but the scope has now been widened to include care of chronically ill patients.

The new system supports homecare by:
- Nurses visiting patients at home use on-line touch-pads for the information they need during the visit and for reporting back to the hospital
- Equipment at patients' homes is remotely connected to the hospital providing measurements and other information for monitoring.
- Communication between patients and staff is supported including through the use of video.
- Supports organisation and planning of work at the hospital by providing a dynamic overview of what needs to be done, staff activities and information regarding about each patient.

Why the innovation was developed

- With an ageing population the number of people with cancer as well as chronic disease will continue to increase. The consequent demand for health care in many cases can be covered by home-based care.
- Most patients prefer to be treated at home when possible, assuming they feel safe.
- The ICT systems in use at hospitals in most cases are developed for use on-site and are not appropriate for mobile use by individual staff members. A dedicated homecare ICT system is required.
- The project was initiated as a response to the need from the hospital to provide support for home-based care in growing volumes.

Objectives

Develop staff capacity, Improve access, Improve effectiveness, Improve efficiency, Improve service quality, Improve user satisfaction

- To enable more patients with the need for terminal palliative care to stay at home for longer when receiving care.
- Provide an ICT system that supports improved safety for patients.
- Facilitate the treatment of patients with more demanding homecare requirements e.g. through video consultations and remote monitoring.

Main beneficiaries

Elderly people, Families, General population, Government bodies, Government staff

- Patients can stay at home longer at end of life.
- Hospitals can be more efficient in providing homecare in larger volumes.
- Traditional technology and paperwork are replaced by digital information providing shorter turnaround, better access, more flexibility and better overview of the work.

Results

Results not available yet

Development

Design

Participatory design

The system was designed in close cooperation between medical staff and the technical developers. The method of ‘participatory design’ was used to capture the changing demands of the system’s users as it was being used in practice.

Testing

- Agile development - testing the system with professional users was an integral part of the ‘agile development’ process.
- During weekly meetings with users their experience from using the system were discussed, appropriate refinements developments and prioritised.
- From the often long list of suggested improvements and additions users were asked to select the five most important for next week’s work. Developers and users thus worked closely together to develop the sys-tem in many small steps.

Implementation

Tools used:

- The middleware platform 'PalCom' supporting Cloud and mobile Internet of Things (IoT) systems, originating from an European Union project was used as the integration platform for implementation.

Resources used:

- Total SEK 50 million over 4 years

Diffusion

- Initially the system was used at a single site for palliative home care. It has now been implemented at another such site.
- The ward for palliative care at the hospital has started to use the system, following their own request to do so.
- Plans are in place for implementing the system at all the sites for palliative homecare in the Skåne region.
- The system has also been adapted for the homecare of patients with chronic diseases. Initially this will focus on kidney disorders and dialysis.

Challenges and solutions

- Challenge - understanding the need and how to answer that; Solution - prototyping.

Partnerships

Lund University and Region Skåne
Other Public Sector
The system is the result of a joint effort between the university, the university hospital and industry.

Supported by VINNOVA as part of the program for Challenge-Driven Innovation

Sony Mobile, Verisure, HemoCue, Gambro/Baxter, Axis, Hill-Rom, STV, ConnectBlue
Private sector
Industry partners who supported developed and implemention of the system.

Lessons Learned

Lessons Learned

- The resulting system is very different from what we imagined at the start of the project.
- ICT systems for professional use should be built in close cooperation with the users, in small steps with continuous evaluation.

Conditions for success

- Close cooperation between partner organisations.
- Committed resources that make sure professional users can take part.