

Northeast Iceland plugs into digital healthcare



With support from VOPD*, a new eHealth and eWelfare cluster has seen the day of light in Northeast Iceland. The aim is to speed up the implementation of digital technologies across healthcare sectors in the area, as well as in other sparsely populated northern regions.

With 94 per cent of the population being urban, Iceland is at the same time one of the most urbanised countries in the world and the most sparsely populated in Europe.

Breaking down the infamous silos

One of the most significant challenges of implementing digital healthcare is breaking down the barriers between healthcare sectors and ensuring seamless communication between hospitals, municipal care services, and other service providers. That is one of the key motivations behind the Wel-

Tech Northeast Iceland cluster, which is currently funded mainly by SSNE, the regional association of the municipalities in the area.

"We see the cluster as an opportunity to develop a different type of service model, aimed specifically at sparsely populated and remote areas," says Halldor Gudmundsson, former General Manager of Heilsuvernd Nursing Homes in Akureyri. "We want to build our services on distance-spanning solutions. With the right infrastructure in place, we estimate that we could deliver between 60 and 80 per cent of our healthcare and social care services through technology."

Better life quality and self-reliance

The idea originates from digitalisation projects at Akureyri Nursing Homes, which are now operated by Heilsuvernd, and Akureyri Hospital, one of Iceland's two speciality hospitals. They are joined by the Health Care Institution of North Iceland (HSN),



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Akureyri Welfare Department, and Akureyri University. Furthermore, SSNE has played an instrumental role in setting up the cluster.

"What's unique is that you have all the different service providers gathered together," says Assa Cornelius van de Ven, IT Specialist at HSN. "If all these institutions were to use similar solutions and compatible security standards, a person that would initially receive digital home care services from the municipality could use the same system throughout life."

The cluster aims to improve the quality of life and self-reliance for the inhabitants by expanding digital solutions in health and social care and encouraging more research into welfare technology.

"Our task is to look into people's healthcare journeys and identify the ways in which they can be supported by technology," says Lisbeth Kjellberg of LiTh Consulting. She has advised on the establishment of the cluster. "The objective is to provide smarter eHealth services for the benefit of the people, whether service users or healthcare professionals."

Digital communication in elderly care

One of the first steps towards the collaboration was the implementation of the Memaxi telecare and communication solution in elderly care. Heilsuvernd Nursing Homes operates two elderly care facilities that provide a home to around 170 people and also offer short term stays, elderly daycare services and rehabilitation.

Memaxi is used to manage all information screens in the two institutions, which provide an overview of the daily programme and activities, and also produces a daily schedule for each resident and service user. In addition, the system offers a range of benefits in the communication between the elderly care homes, the residents and their relatives.



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"First and foremost, the system allows for better communication regarding the individual resident," says Gudmundsson. "Relatives can be granted access to different types of information, which facilitates better coordination and care. They can also enter information about the person's life story; personal information, and details relevant to their treatment. This has been very useful during the pandemic."

Streamlining diagnosis and treatment

At Akureyri Hospital, VOPD initially supported the development of a digital questionnaire form, enabling psychiatric patients to provide all the necessary information to the hospital before showing up for their appointment.

"Psychiatric services in rural areas in Iceland are in high demand, and due to workforce shortages, there are often long waiting times for treatment," says Chief Medical Officer Sigurdur Sigurdsson and adds that the digital questionnaires save time for everyone involved. "Now, patients can provide the information in the privacy of their own home and at their own time. Through Heilsuvera, the national citizen health portal, the data is transferred directly into the patient's electronic health record."

Based on the experience from the elderly care homes, Akureyri Hospital is now also implementing Memaxi in its geriatric ward in Kristnes. The implementation is carried out in close cooperation with the local institutions already using the system.

HSN takes the lead on data security

HSN has primarily used Memaxi to conduct secure video consultations with patients and their relatives. The institution operates four smaller hospitals, three nursing homes and eighteen health clinics all across North Iceland, serving around 35,000 people. During the pandemic, the demand for online consultations has reached new heights.

"We're talking highly personal and sensitive information," says Assa Cornelius van de Ven. "Most people agree on the perspectives of using more technology in health and care services, but far too often, the security issues are ignored. Data security should be a key concern for everyone developing and implementing welfare technology."

She explains that HSN has developed a data security solution that fully complies with the European GDPR, which is also available to the other institutions in the cluster.

Great perspectives for further collaboration

With a new service model comes a new type of jobs. Gudmundsson explains that attracting and retaining skilled healthcare professionals is an essential aspect of the collaboration.

"We want to support and empower health and welfare employees by creating new types of jobs within eHealth and eWelfare, and also across supporting sectors. We envision various types of location-independent jobs, supported by digital and distance-spanning solutions."

Apart from establishing a local network of healthcare providers and companies, the cluster has taken steps to establish cooperation across the Arctic and North Atlantic Regions based on the common traits between these areas.

"The advantages of further developing the cluster and the use of digital technology in healthcare and care touch upon everything from the environment, efficiency, reduced pressure on personnel, better security and more comfort in decision-making," says van de Ven. "I think we'll see an incredibly rapid progress in the next couple of years."



Akureyri Hospital - SAK

Akureyri Hospital - SAK is one of two speciality hospitals in Iceland. As in most other hospitals and healthcare institutions, 2020 was an unusual year. Due to Covid-19, the number of inpatients dropped by 15 per cent from the year before, from around 6,100 to 5,200, and the number of operations performed fell by almost 20 per cent, from approximately 3,500 to 2,800. SAK set up a Covid inpatient unit in March 2020, which treated 34 patients during the year. In total, the hospital employs around 520 people.

Heilsuvernd Nursing Homes

Heilsuvernd Nursing Homes runs two residential care homes in Akureyri, a municipality of 19,000 inhabitants, also serving the neighbouring communities. The two care homes provide a home to 171 people and offer short term facilities for an additional ten people. Moreover, the nursing homes provide elderly daycare and rehabilitation services to around 100 individuals every week. Heilsuvernd Nursing Homes in Akureyri employs 260 people.

Health Care Institution of North Iceland - HSN

The Health Care Institution of North Iceland – HSN operates eighteen health clinics all across North Iceland, four hospitals and three nursing homes, housing approximately 190 individuals. HSN has around 600 employees and serves a population of 36,000 people.

*Healthcare and care through distance spanning solutions

Healthcare and care through distance spanning solutions 2018-2021 (VOPD) is a priority project forming part of the Swedish presidency of the Nordic Council of Ministers.

VOPD 2018-2021 has over the years mapped out all existing distance spanning services within healthcare and care in the Nordics, and supported implementation by applying the practical guide *Roadmap for service innovation* and related tools. This article describes digital healthcare solutions implemented in Northeast Iceland.

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