Agder gears up for the future with remote patient follow-up

The Agder region in Norway has taken the national lead on digital telehealth. Twenty-five municipalities have set up a regional telemedicine central for remote follow-up of patients, including patients with chronic illnesses, psychiatric patients, and, most recently, people recovering from Covid-19.

Getting the full benefit from these telemedicine services requires close cooperation between municipalities, hospitals and general practitioners.

Digital services transcend healthcare sectors

Since 2012, the municipalities in Agder have tested and implemented a broad range of eHealth solutions, focusing in particular on safety technology and remote follow-up. The development of remote patient follow-up took off in 2018 with support from the Norwegian National Welfare Technology Programme.

"Our regional telemedicine service in Arendal currently provides remote follow-up to 61 patients in ten municipalities," says Morten Lauknes, Project Manager for digital home monitoring in Agder. Remote follow-up is provided in two ways, either via the regional telemedicine clinic or within municipal home care and follow-up services. "Digital home monitoring is increasingly being integrated into our municipal health and care services, in some cases reducing the yearly cost of care for one individual by more than NOK 300,000."

Compared to safety technology implementation, remote patient follow-up adds a layer of complexity.

"Whereas our safety technology projects only involve the municipalities, here, we're also dealing with the region's three hospitals, specialist doctors, and 300 general practitioners, most of whom operate as

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– Morten Lauknes, Project Manager for digital home monitoring in Agder

independent companies," says Katrine Melby Holmerud, one of Agder's two RCG eHealth Secretariat managers. "For us, it's been a key priority to ensure commitment from top management in all these different organisations. To achieve our objectives, the digital transformation must be firmly anchored throughout all levels of the organisations."

Seamless patient journeys

Holmerud here touches upon one of the central issues of implementing welfare technology in the Nordic countries. Working across healthcare sectors and organisations, more often than not operating on separate budgets, is no easy task.

"What's important to keep in mind is that patients don't really care where they get their healthcare services from; they're just concerned with the quality of the care they receive." says Grete Kvernland-Berg, Partner at PA Consulting in Oslo. The company has been involved in Agder's eHealth projects at various stages, assisting in developing new digital services and measuring their effect on the health economy. Supported by VOPD*, their task this time was to propose recommendations on the future organisation of digital home monitoring in Agder.

"The patients expect to be met by one healthcare system. However, with the current structure, you have to combine three different sectors, each with its own objectives and economy. To be able to implement digital technology at a larger scale, we must organise our healthcare system differently."

PA Consulting recommended that Agder should initially focus on ensuring seamless patient transfer between care settings, notably between the municipalities and hospitals. Based on the recommendations, Agder has set up a regional steering group with representatives from all three healthcare sectors. The steering group has been tasked with developing a common strategy, defining joint criteria for patients to be eligible for remote follow-up, and deciding upon financing.

Digital healthcare is a long-term investment

Agder initially set up three telemedicine centrals in different locations, each of which was intended to serve the neighbouring municipalities. However, according to PA Consulting's analysis, the annual cost of staffing the three clinics was around NOK 2 million, and the average cost per patient amounted to around NOK 23,000 per year. As a result, the number of telemedicine clinics has been reduced to one to increase cost-efficiency.

"We're now able to present exact pricing models for each patient, depending on their diagnoses and the services they need," says Lauknes. "This puts us in an excellent position to expand our services to more patients and diagnosis groups. Currently, our main challenge is to convince the municipalities and hospitals to make the initial investments required, and then scale up the services, which will reduce the cost per patient."

Lauknes emphasises that the investment in digital home monitoring and remote patient follow-up must be seen in a long-term perspective.

"For a person living with diagnosed COPD, digital home monitoring is an incentive to take a more active part in managing their own health," he says. "This postpones the need for municipal healthcare, in some cases even for several years. However, the

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municipalities tend to look at the current expenses rather than the avoided costs. This has to change; we need to recognise that digitalisation of healthcare is a long-term investment."

Culture of change and digital innovation

In the longer run, PA Consulting recommends Agder expand its collaboration to more healthcare services, based on the commonly developed vision and a strong emphasis on improved data sharing and new financing models. Inspired by Eksote, a regional health organisation in South Karelia in Finland, Agder should develop its healthcare from a value-chain perspective, where all services are designed around the patient's needs. In South Karelia, all healthcare services have been merged into one organisation.

"Given the Nordic countries' geography and the demographic changes that are ahead of us, using technology to deliver healthcare makes perfect sense," says Kvernland-Berg. "However, welfare technology implementation is not about the technology itself; it's about being able to provide the best possible healthcare to the patients. In the healthcare system of the future, admission into hospital should always be the last resort."

Lauknes and Kvernland-Berg agree that creating digital healthcare is a cultural issue more than anything. Digital literacy remains a challenge, says Lauknes, as the patients who are most in need of municipal healthcare are often those who lack digital competencies.

"Also, within our healthcare organisations, we must ensure that everyone has the necessary competence to innovate and deal with this digital transformation," he adds. "It's about promoting a culture of change and building new digital competencies in organisations that consist of a highly diverse group of people."

Digital healthcare and care in Agder

eHealth Agder 2030 consists of six priority areas:

- Innovation Partnership Agder
- Safety Technology
- Digital Telehealth
- National eHealth Solutions
- One Citizen – One Health Record – Common Municipal Journal (FKJ)
- CRANE

In 2020, Innovation Norway granted Agder NOK 15 million to develop Innovation Partnerships and create new digital healthcare solutions in cooperation with private businesses. Based on its previous achievements, Agder received the largest grant available. In addition, the region has played an essential role in developing one electronic health record for each citizen in Norway (Felles kommunal journal – FKJ).

Agder has received international recognition for its efforts. The region is currently part of two EU projects: an EU-funded TWINNING project on digital telecare and telehealth together with Scotland and Andalusia; and CRANE, a Horizon 2020 initiative addressing the comprehensive treatment of chronic diseases in rural areas. One key objective of the project is to use digital technology to promote self-care management.

*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 telehealth services implemented in Agder, Norway.

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