

NORWAY

Transforming primary health care during the pandemic

COUNTRY
VIGNETTE

USE OF EHEALTH TOOLS IN PRIMARY HEALTH CARE DURING THE COVID-19 PANDEMIC

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MOTIVATION

The digitalization of health services has been a key priority for Norway's Ministry of Health and Care Services in recent years. The Directorate of eHealth was established in 2016 and promotes a long-term strategy for eHealth. Included in the eHealth strategy is a specific roadmap (1) for primary health care. Together with government white papers, it embraces three main objectives set out for developing information and communication technologies in the health and care sector.

- Health professionals should have easy and secure access to patient and user information.
- Citizens should have access to simple and secure digital services.
- Data should be available for quality improvement, health monitoring, management and research.

The urgent COVID-19 pandemic response has resulted in the acceleration and rapid deployment of digital technology across care levels. The Directorate has been responsible for steering and coordinating eHealth through close collaboration within Norway's various levels of health care: regional health authorities, local authorities, technical organizations and care providers.

TRANSFORMATIONAL INSTRUMENTS AND POLICIES

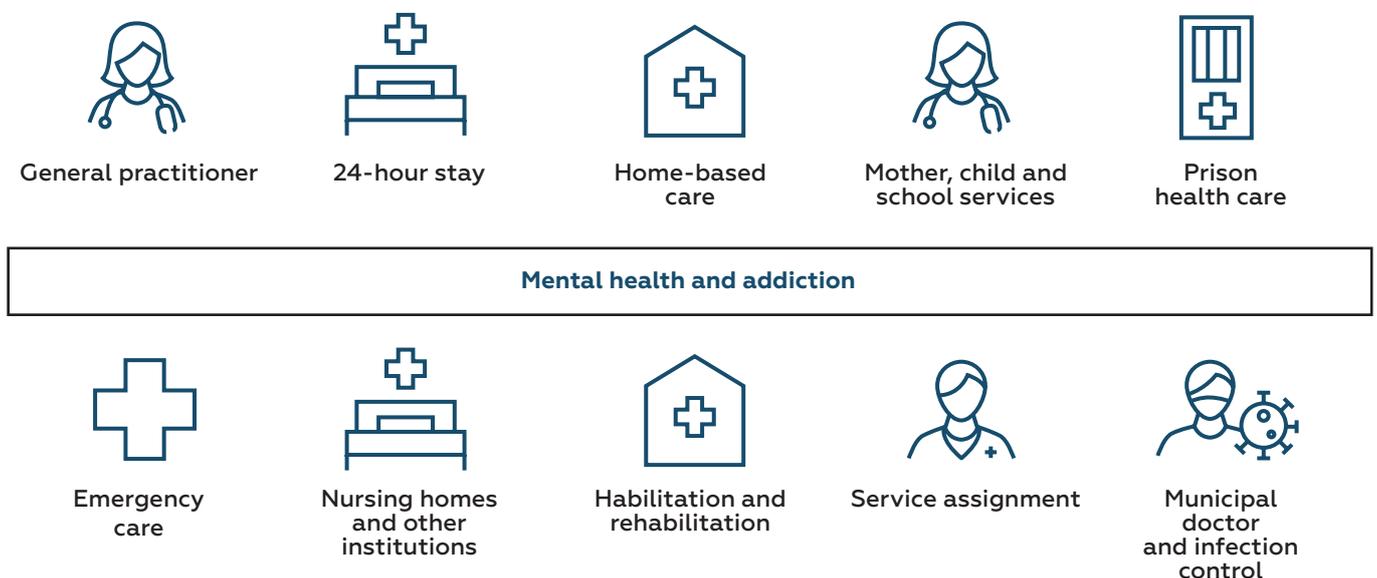
Decentralized primary health care services: opportunities and challenges for the municipalities in integrated eHealth solutions

Norway's 356 municipalities differ in size and geographical environment but provide their residents most health and welfare services, including primary health care, with a wide range of services and a comprehensive basket of competencies (Fig. 1). The national government is responsible for specialist care, including hospital services, through the state-owned regional health authorities.

Norway has several policy instruments for improving the health and well-being of the population. A recent one is the National Health and Hospital Plan (2020–2023), which stresses the need for linking digitalization targets with patient treatment targets. Among several objectives, municipalities and hospitals will work with users and general practitioners in 19 health care communities to plan and develop services. Also, an initiative named the Coordination Reform was launched in 2012 and gave municipalities more authority in delivering health services.

The Norwegian Public Health Act (2) aims to improve equity in health by addressing the social gradient in health. The Public Health Act's main policy measures are delegating responsibility for identifying and targeting underserved groups to the municipalities and the role of municipalities in implementing the health in all policies approach. Health in all policies encourages coordination and collaboration, both horizontally across various sectors and vertically among public authorities at the municipal, regional and national levels to achieve high levels of public health broadly shared. Government plans highlight a person-centred approach and the citizen as a resource. In the plans, empowering people and self-management facilitated by digital solutions are focal points.

Fig. 1. Grouping of primary care services at the municipal level



The numerous services under the competence of the municipalities benefit from the advanced level of digitalization and the eHealth strategy. This has resulted in a key enabler in securing health care access during the COVID-19 pandemic and a cornerstone for maximizing the coordination of the care levels at the municipal level but also at the regional and national levels.

This country vignette presents a range of diverse instruments and pilots designed to facilitate the adoption and dissemination of digital health in Norway.

Governing for a unified eHealth system in a decentralized context

A key challenge for deploying eHealth solutions is that many organizations at different levels and in different regions were involved in their deployment. To overcome this challenge, the Directorate of eHealth was established as a subordinate of the Ministry of Health and Care Services with the mandate for steering and coordinating eHealth. The multilayer governance model makes identifying the overarching status of the work and progress in deploying the eHealth solutions more complex. In addition, the number of primary health care services provided or commissioned by municipalities is not homogeneous and varies between municipalities. Therefore, the Directorate developed a landmark roadmap for national eHealth solutions. The roadmap gives priority to some key areas for eHealth development in primary care services for 2021–2025.

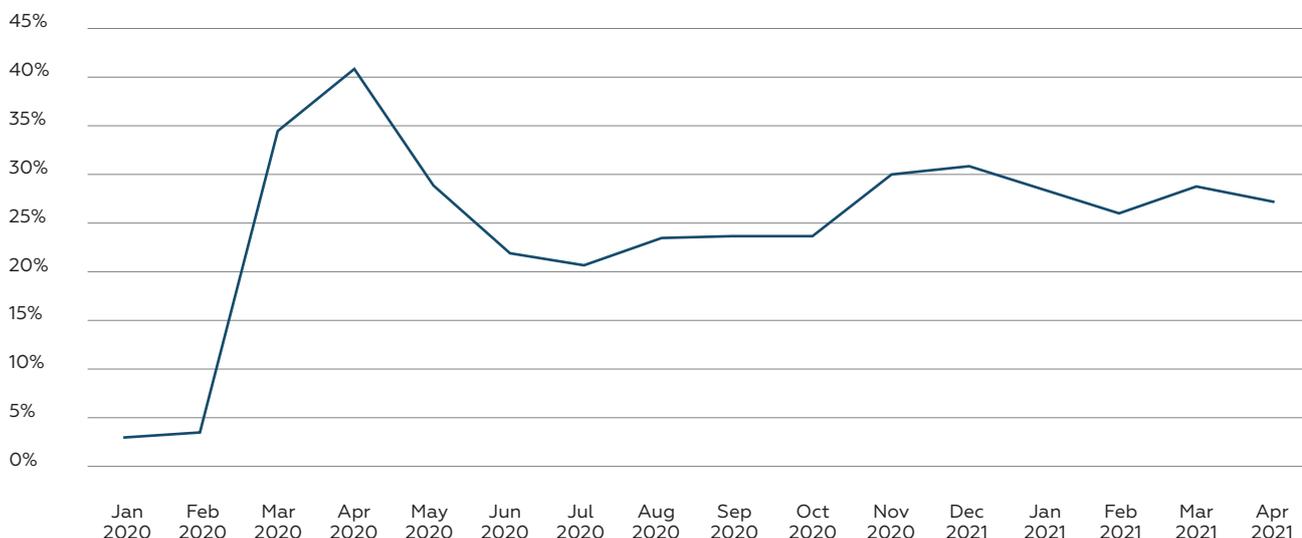
- Citizens will be able to book doctor's appointments and digital consultations and see which health care personnel have accessed their patient information through helsenorge.no.
- Health care personnel will have access to electronic health record information, critical patient information, laboratory and radiology results and a shared medication list – regardless of where the person received health care services.
- People will be able to receive remote or digital home-care services (cross-sectoral collaboration).

DIGITAL ACCELERATORS FOR TACKLING THE DUAL-TRACK APPROACH TO THE PRIMARY HEALTH CARE RESPONSE TO COVID-19

Existing digital solutions and communication platforms in the health care sector enabled health personnel and laypeople to quickly adapt to the new situation in spring 2020. Several digital accelerators already in place have resulted in a better response for prevention, diagnosis, isolation and treatment for COVID-19 while maintaining the essential services in primary health care: the WHO dual-track approach to the primary health care response to COVID-19. The accelerators below are good examples of how digital solutions have improved the management of essential services during COVID-19 outreach. The examples shown comprise the boost in eConsultations and the significance of the national health portal Helsenorge.no.

Accelerator 1: boost in eConsultation

Before the pandemic, the uptake of eConsultations among GPs was slow even though solutions for digital consultations were available. In January 2020, about one third of all general practitioners offered eConsultations (text, video and telephone), but this comprised only 3.1% of all consultations (Fig. 2) (3).



In a 2021 report on eHealth trends, the Directorate of eHealth describes how the requirement for reduced physical contact during the pandemic led to a striking increase in the use of eConsultations. Soon after the first lockdown in March 2020, eConsultations experienced a boost, enabled by several determinant factors such as technology readiness, population digital literacy, absorptive capability by health care professionals and financial incentives. eConsultations peaked in April 2020, with 41% of the consultations being by video, text or telephone. A year after the first lockdown in Norway, almost all general practitioners have implemented eConsultation, and in April 2021, 27.3% of all consultations were eConsultations.

Box 1. Digital monitoring at home – Larvik

- Larvik (in southern Norway) is one of several municipalities testing digital monitoring at home as part of the National Programme for Personal Connected Health and Care in 2018–2021. The technologies tested have been ear thermometer, blood pressure monitor, pulse oximetry, spirometry, blood sugar analysers and C-reactive protein analysers.
- Through a new app, people report regularly on various parameters, and health care personnel can rapidly follow up if needed. Often chat or video is sufficient. Thermometers and pulse oximeters can identify people at risk of hospitalization.
- In 2020, they included people with suspected or confirmed COVID-19, to detect a worsened condition earlier and give support to people in isolation.
- The project team (*Helsehjelpen*) coordinates the work and collaborates with general practitioners, the emergency care, infection control team and the hospitals, each with their own responsibilities.
- Patients report increased empowerment and feeling more secure. Health care personnel can follow up more patients, and the risk of infection is reduced.
- To succeed with digital home monitoring, municipal authorities should be aware of the importance of clear responsibilities, training and close cooperation with vendors.

Accelerator 2: the digital portal Helsenorge.no enabled better self-management and more effective care-seeking

The health portal Helsenorge.no, a strategic instrument resulting from the eHealth strategy, enables people to log in and access a range of options concerning their health and health care services. This includes scheduling an appointment with the general practitioner – in person or as a video consultation – sending an electronic message to the general practitioner, renewing a prescription for medicines and accessing patient health records. In the past few years, the portal has included a list of digital self-management tools. It includes apps, videos, and eLearning courses to help cope with somatic and mental symptoms and problems. More eHealth solutions have been added to Helsenorge.no during the pandemic. Notably, a new section offers information about COVID-19, including rules and recommendations. The portal also has a COVID-19 self-checker tool and information about testing and quarantine. Appointments for COVID-19 testing are usually booked via the municipalities' websites, but the test results are available on Helsenorge.no.

Primary health care, specifically general practitioners, has a critical role in identifying high-risk patient groups given priority for vaccination. A new digital tool was developed during the pandemic to aid the selection of patients from the general practitioners' electronic health records. In addition, the Norwegian Institute of Public Health recommends using a wide range of means for the general practitioners to reach these patients, such as telephone, text message or email.

Box 2. Following up older patients in northern Norway

A study was conducted at the University Hospital of North Norway in 2020 to investigate the use of videoconferencing to provide care to older people with complex long-term needs (4). The study collected data from both urban and rural districts.

- A factor in the success of the multidisciplinary care team is that it comprises a combination of hospital and municipal health care personnel: general practitioners, nurses, physiotherapists, ergonomists and secretaries.
- An important goal was to coordinate care in the patient's transition phase between hospital and municipal care to prevent rehospitalization.
- The team had to adjust to the pandemic lockdown and physical distancing measures.
- Health care personnel found that videoconferencing gave new opportunities for interaction, and they could maintain and improve the person-centred care approach.
- It reduced travelling times for patients.
- Support from relatives or care personnel was needed for patients with reduced cognitive capacity.
- Successful use of videoconferencing in clinical practice required training in video technology and available information technology support.

A health care professional said:

"We health care personnel often have the most prejudice about which patients to include in videoconferencing. However, we had meetings with several patients with cognitive impairment and other disabilities that worked surprisingly well."

Accelerator 3: Mental health services went digital

In Norway, most mental health services have traditionally been face-to-face meetings, either between the patient and the provider or in groups. This practice was challenged when physical meetings were discouraged, which led to the introduction of more digital services in addition to regular meetings when this was possible.

Prompt mental health care started as a national pilot project in 2012 to offer a free, low-threshold evidence-informed service for people with mild anxiety or depression. Not all mental health problems need long-term treatment, and a multidisciplinary approach helps to achieve better treatment and rehabilitation. The service is easily accessible and does not require a referral from a general practitioner. The team has at least one psychologist and collaborates with general practitioners and other actors at both the municipal and secondary care levels. This service is established in several municipalities, some of which quickly went digital when needed. Not only have digital tools been helpful in the pandemic but, in many places, people must travel long distances to get to their nearest service. Attending a course online saves travel time, and digital courses could therefore also be an option in the future. Some municipalities have reported that digital consultations have been successful but that a mixed approach is probably better in the future.

"HEALTH CARE PROFESSIONALS AND PATIENTS QUICKLY ADOPTED DIGITAL SOLUTIONS THAT WERE ALREADY IN PLACE BEFORE THE PANDEMIC, SUCH AS ECONSULTATIONS. THE SITUATION SPED UP THE DEVELOPMENT OF DIGITAL CITIZEN SERVICES."

SUSTAINABILITY PROSPECTS AND NEXT STEPS

- There have been ongoing modernization efforts to improve efficiency, quality of care and coordination between levels and organizations. General practitioners and other care providers use different electronic health record systems, which poses challenges in getting the necessary flow of important patient data between the actors. One long-term objective is to create a common electronic health record for municipalities, which will enable information exchange across the health care services, beginning with connecting the primary care entities. In April 2021, an expert commission delivered a report that concludes that the municipalities have been central to the success of the pandemic response, which includes the readiness of primary health care in health care crises. The report highlighted areas that needed improvement: a lack of an infection control plan in some municipalities and insufficient local disease surveillance systems. On a positive note, digital solutions were key enablers for patient care and follow-up, and coordination between primary health care and the hospitals was effective. There was a high level of trust between units and levels.
- A study of general practitioners in Norway shows that 50% of them will continue to use video consultations once the pandemic is over, but 3 of 10 will not. General practitioners estimated that every fifth consultation will be on video in the future, but not every reason for contacting a doctor is suitable for video consultation (5).

LESSONS LEARNED

1. Technical solutions and information technology infrastructure were in place before the pandemic and made it easy for most general practitioners and other health personnel to adapt to a new situation in which they could not meet patients in person.

It is too early to say whether, for example, video meetings will continue to be used as much as today.

2. A recent survey of health literacy in Norway shows that a significant proportion of the population has challenges in dealing with health information (6). Research has also shown that those who need and use health services most are least able to use the digital tools to get the necessary help.

3. There is a need to enhance data collection and knowledge-sharing and give access to real-time data and analysis. Surveillance systems should be digitalized.

4. Nursing homes used technologies already available, such as tablets, to facilitate communication and reduce the risk of isolation between residents and relatives when physical visits were not possible (7). The experiences are positive for everybody; as an example, the municipality of Sømna plans to continue using tablets for communication after the pandemic. The Nursing Home Agency in Oslo together with Oslo Metropolitan University has received funding to distribute easy-to-use tablets to nursing homes and evaluate the effect of the technology (8).

5. Primary care services in Norway are lagging behind specialist health care in research and innovation, according to a report in 2019 (9). There is not enough knowledge about how to improve quality and effectiveness in the primary care sector. Specialist health care receives 90% of research funding. The primary care sector requires modernized electronic health records to deal with more older patients with complex needs. The future electronic health record will not only be used for documentation but to harvest, analyse and present data and choices related to diagnosis and treatment through the entire patient process.

6. According to the Norwegian Medical Association, citizen services needed to be rapidly digitalized during the pandemic. The challenges have been in the municipalities with administration and information technology infrastructure because of registries based on old technology and a lack of digital solutions in municipal infection control measures and the testing, isolation, infection tracing and quarantine strategy.

7. Early in the lockdown, the health authorities published a list of digital solutions already in use within health care and recommended using these. The list both includes video tools that can be integrated with the Helsenorge.no portal and other independent solutions. A guide on how to get started with video consultations was also published.

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REFERENCES

1. Veikart for nasjonale e-helseløsninger [Roadmap for national eHealth solutions]. Oslo: Directorate for eHealth; 2020 (<https://ehelse.no/publikasjoner/veikart-for-nasjonale-e-helselosninger>, accessed 1 July 2021).
2. Public Health Report – Meld. St. 34 (2012–2013) Report to the Storting (White Paper). Oslo: Government of Norway; 2012 (<https://www.regjeringen.no/en/dokumenter/meld.-st.-34-2012-2013/id723818/?ch=12>, accessed 1 July 2021).
3. [Percentage of general practitioner consultations as eConsultations.] Oslo: Directorate of Health; 2021 (<https://www.helsedirektoratet.no/statistikk/statistikk-om-allmennlegetjenester/e-konsultasjoner-hos-fastleger>, accessed 1 July 2021).
4. Silsand L, Severinsen GH, Berntsen G. Preservation of person-centered care through videoconferencing for patient follow-up during the COVID-19 pandemic: case study of a multidisciplinary care team. *JMIR Form Res.* 2021;5:e25220.
5. Johnsen TM, Norberg BL, Kristiansen E, Zanaboni P, Austad B, Krogh FH et al. Suitability of video consultations during the COVID-19 pandemic lockdown: cross-sectional survey among Norwegian general practitioners. *JMIR Form Res.* 2021;2:e26433.
6. Le C, Finbråten HS, Pettersen KS, Guttersrud Ø, Joranger P. Befolkningens helsekompetanse, del I: The International Health Literacy Population Survey 2019–2021 (HLS19) – et samarbeidsprosjekt med nettverket M-POHL tilknyttet WHO-EHII [The population's health literacy. Part 1: International Health Literacy Population Survey 2019–2021 (HLS19) – a collaborative project with the M-POHL network affiliated with WHO-EHII]. Oslo: Directorate of Health; 2021 (https://www.helsedirektoratet.no/rapporter/befolkningens-helsekompetanse/Befolkningens%20helsekompetanse%20-%20del%20I.pdf/_attachment/inline/e256f137-3799-446d-afef-, accessed 1 July 2021).
7. Isaksen KS, Olsen O-C. Isolerte beboere på sykehjem får iPad-opplæring for å kunne ringe familie [Isolated residents of a nursing home learn how to use an iPad to be able to call family members]. Oslo: Norwegian Broadcasting Corporation; 2020 (<https://www.nrk.no/nordland/vil-bekjempe-ensomhet-pa-sykehjem-med-ipad-og-facetime-1.14956053>, accessed 1 July 2021).
8. Simple and secure communication between caregivers and recipients. Oslo: Research Council of Norway; 2020 (<https://prosjektbanken.forskningsradet.no/en/project/FORISS/315207?Kilde=FORISS&distribution=Ar&chart=bar&calcType=funding&Sprak=no&sortBy=score&sortOrder=desc&resultCount=30&offset=0&Fritekst=komp>, accessed 1 July 2021).
9. Sluttrapport februar 2019 til HelseOmsorg21-rådet, fra Kommunenes strategiske forskningsorgan (KSF) [Final report in February 2019 to the Health & Care 21 Strategy Committee from the Municipal Strategy Research Agency (KSF)]. Oslo: Norwegian Association of Local and Regional Authorities; 2019 (<https://www.ks.no/globalassets/KS-ksf-rapport-F43-interaktiv.pdf>, accessed 1 July 2021).