

E-health services available for everyone and at all times in Iceland



Þjónustuvefsjá

Þjónusta í boði um allt land - Vakt sími
1700

[Finna næstu heilsugæslustöð](#)

Mínar síður ⓘ

Skráðu þig inn með rafrænum
skilríkjum

[Innskráning](#)

[Leiðbeiningar](#)

Á VEFNUM: [Fósturhreyfingar](#) [Tóbak og meðganga](#) [Hlaupabóla](#)

Efniso

[Kjörkort, frávík, einkenni](#)

[Meðganga og fæðing](#)

[Börn og uppeldi](#)

[Ungmennni](#)

[Lorðnir](#)

[Eldra fólk](#)

[Ferðafólk](#)

[Þjónustuvefsjá](#)

Summary

The Citizen Health Portal "Heilsuvera" in Iceland is a centralized web application that offers citizens secure, digital access to their own health information and eHealth services. The portal is integrated into the Electronic Health Record (HER) and provides access to health information and eHealth services for citizens through a single access point, whenever and wherever needed, regardless of which hospital, primary health care or private practice delivered the healthcare services. As health data are sensitive personal data, eID is the request for accessing the health portal. Parents have access to their children's health data up to 16 years of age. The ultimate goal of the Citizen Health Portal is the effective use of eHealth services to support increased patient safety and quality of healthcare delivery.

Main effects of the solution

The expected benefits of the Citizen Health Portal include increased access to health care, increased patient safety and quality of care, better compliance with treatment and increased collaboration between patients and their caregivers, more empowered patients, improved patient outcomes, increased efficiency and reduced costs. The main effects of the Citizen Health Portal include the following:

Equal access for rural and urban citizens via internet connection and electronic ID. Citizens/patients can:

- Make an eBooking for visits to all primary care clinics and some private specialist outpatient services.
- Engage in secure messaging with healthcare professionals.
- Engage in video conferences with healthcare professionals (available summer 2019)

Access to own health information supports increased patient safety and quality of care

- Citizens can view information about their allergies that has been entered into their EHR.
- Secure messaging with healthcare professionals in which messages are saved in the patient's EHR.
- Citizens can view their immunization history.
- Maternal health records are accessible to expectant mothers.
- Patients can answer tailored questionnaires, i.e. Hospital Anxiety and Depression Scale (HADS). Answers will be saved in the EHR and abnormal scores will trigger a response from the on-call nurse (available at the end of 2019 for patients treated for cancer).
- Online drug renewal requests reduce errors relating to drug usage.

Better compliance with treatment

- Citizens can view their medication profile.
- Citizens can view and request e-Prescriptions (Primary health care, hospital).
- Citizens can view medication that has been dispensed.
- Patients can access tailored educational material.

Increased patient empowerment

- Better informed patients.
- Access to educational material tailored to patients.
- Citizens can enter their own measurements (i.e. vital signs, blood sugar levels, weight) for self-monitoring.
- Citizens can submit organ donation requests.
- Citizens can view hospital admission dates, primary care visit dates and certain visits to private specialists.

Increased efficiency and reduced costs

- Reduced workload: healthcare professionals
 - Less time spent on calling patients due to secure messaging.
 - Eliminates time spent on drug requests over the phone.
 - Less time spent on drug renewal.
 - More time spent with patients.
- Reduced workload: receptionists
 - Less time spent on scheduling visits over the phone.
- Time saved and reduced levels of stress: citizens
 - Can make an e-Booking whenever required.
 - Reduced need to call the clinic.
 - Reduced number of visits to the clinic/hospital due to secure messaging.

Users

Users of the health portal are Icelandic citizens aged 16 years and over. For younger children, parents have access. The number of users has grown significantly since the portal was first implemented and 27% of the total population aged 16 years and over used the health portal in 2018. The number of users more than doubled between 2017 and 2018. Women comprise 63% of all users and women in the age group from 30–59 years are the most frequent users. Users come from all districts of the country.

Quotes/Testimonials

Quotes from users of the health portal:

"How convenient it is to be able to log on to HeilsuVera and take care of your own business. I must compliment you for this website".

"This clearly is a super gadget 12".

And more quotes on Twitter:

"I hate having to use eID to log on to HeilsuVera.is".

"HeilsuVera.is is simply super!"

"HeilsuVera.is is just super; everyone should log on and try it".

Elaboration

Needs and challenges

Health care has been lagging behind in the implementation of online services compared to other sectors in recent decades. Moreover, there is increased emphasis on a global level to accelerate the use of eHealth solutions within health care in order to promote enhanced quality of health care and patient safety. It is believed that empowered patients with access to their own health information and eHealth services are more involved in their own treatment in support of better quality of care. The annual increase in users and usage of the health portal clearly shows that there is a need for this health portal and the number of users more than doubled between 2017 and 2018, as did the number of log-ins.

Approximately 30% of the total population aged 16 years and over now use the health portal and the number of users and usage is still growing significantly. The need to access, for example, own immunization records, was clearly visible over a weekend in March 2019 following an outbreak of measles in the country. Usage of the health portal increased more than 400% over this weekend alone, compared to usage on any other weekend.

The main challenges involve human factors. Resistance from a number of doctors who were not keen on using this solution delayed the implementation for months. It appears that these doctors were worried that they would lose a degree of control, especially with regards to secure messaging between health professionals and their patients.

Solution and function

The health portal has now been implemented on a national level within all primary health clinics, a few hospital units and a number of private practice clinics. There is a single access point for citizens to access their health information and available eHealth services, no matter which hospital, primary health clinic or private practice services they have used. This is possible because health records are inter-connected in Iceland on a national level. Every person has a unique ID and patient data are transferred via the Icelandic HealthNet and by using patient index services. Access to the health portal is free of charge to individuals and healthcare institutions.

The main effects of the health portal are described above. However, new features are being continuously developed. Some additional features that will soon be available include, but are not limited to, the following:

- Information on who has accessed a health record.
- Access of status on a waiting list., i.e. scheduled surgery.
- Guidelines tailored to patient's interventions.
- Laboratory test results.
- Measurement of satisfaction with the health services rendered.
- Increased support for population health care.
- Further implementation within the hospital setting and private practise outpatient clinics.
- Further development of more evidence-based self-rating questionnaires that are fully integrated into electronic health records.

Implementation

Critical factors for implementation of the health portal include national co-ordination, shared vision, support from administration, user involvement and government funding. Furthermore, promotion of the application, networking and collaboration must be in place and site visits for follow-up are necessary. The application has to be user friendly and easy to use for everyone ("self-taught"). Moreover, it must be free of charge to users.

Iceland has a national infrastructure that uses the Icelandic HealthNet to share health data on a national level. All government owned healthcare institutions, as well as the majority of private practise clinics and nursing homes, share health information via the HealthNet and inter-connected electronic health records. The citizen health portal is connected to electronic health records via the HealthNet.

Economy

The health portal is valuable to Icelandic citizens because of the expected outcomes for users. These include time saved, safer patient care and increased health and well-being.

Process

The Directorate of Health, National Centre for eHealth unit, is responsible for both the continuous development of the health portal and implementation on a national level. Each healthcare organization is responsible for implementation in their own organization.

Organization and politics

To support implementation on a national level, policy and law must be in place on a national level.

Follow-up/monitoring

To monitor whether an implementation has been successful, indicators for measuring eHealth must be in place. The Directorate of Health, unit of National Centre for eHealth, monitors the usage of eHealth services and availability by analysing log data and surveys as recommended by the Nordic eHealth Research Network (NeRN, Nordic eHealth Benchmarking, 2014).

More about effects

It is presumed that the health portal will empower patients in their interaction with the healthcare system. Empowered patients are expected to be more involved in their own care and decision-making processes. Patient interaction with their healthcare professionals will be more frequent and the need to schedule appointments at healthcare institution should decrease, as well as hospital admittance. The solution supports increased collaboration, continuity of care and quality of care. To enable patients to answer evidence-based questionnaires that measure, for example, level of pain and nausea, receiving a rapid response from their healthcare professional regarding suitable interventions and being give tailored educational material could impact patients' wellbeing and promote improved patient outcomes.

Increased effectiveness is anticipated as valuable time will be saved in phoning patients (healthcare professionals) and the clinic/hospital (patients/citizens) and processes such as renewal of medication will be streamlined.

The ultimate goal is to achieve secure and equal access to health services and patient data for citizens, in which seamless sharing of timely information supports patient safety, increased quality of health care and improved patient outcomes for better health and well-being.

Learning and tips

The health portal is user friendly and easy to use. It does not require users to have any special skills. However, citizens must have their eID to be able to log on the portal in order to protect sensitive health information.

More information

Some information in English on the health portal can be found in the

- [National Strategy for eHealth in Iceland 2016–2020 »](#)

The health portal has received both national and international recognition. In 2014 it received the Icelandic Web Award and in 2015 it received Recognition for Innovation within the Public Sector. Moreover, in 2017 it became part of the OECD Observatory of Public Sector Innovation.

Context

The health portal can be used for both regions and the entire country, as well as across international borders, assuming the necessary infrastructure is in place.

Contact details

Guðrun Auður Hardardóttir, PhD, RN, National Project Manager
National Centre for eHealth, Directorate of Health
audur@landlaeknir.is

Ingi Steinar Ingason, Bsc, team leader
National Centre for eHealth, Directorate of Health
ingist@landlaeknir.is

Name of the service

My pages at [Heilsuvera.is](https://heilsuvera.is)

Service provider

Directorate of Health, National Centre for eHealth unit in co-operation with the private IT company Origo and all healthcare organizations in Iceland.