

# e-Health

“A more extensive and systematic implementation of e-health solutions will allow us to make the service more flexible, improve the health of people by exercising more efficient preventive measures, increase the awareness of patients and also save billions of euros.”



**Toomas Hendrik Ilves**, former President of Estonia

The Estonian National Health Information System (HIS) has been in operation since 2008. Healthcare providers are connected to HIS and patients' health data is stored centrally. There are more than 40 million different documents (summaries of visits or treatments and discharges, referrals, diagnostic study reports and procedures) stored in the health information system.

The Estonian Genome Center has collected the genome data of 200 000 individuals. This data will be used in personalized medicine, where genome data and health data collected in the health information system will be combined in order to offer specific diagnoses and treatments.

As the fundamental principle in Estonian e-governance states, this kind of data belongs to the citizen concerned. All healthcare providers must send data to the Health Information System. Access to HIS is granted only to licensed medical professionals and each patient has the right to see his/her own data collected in the central database. Patients can close their data if they wish (opt out) and monitor visits to their HIS. Health data and healthcare e-services are accessible to patients through the patient portal [www.digilugu.ee](http://www.digilugu.ee)

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## e-Health Record

Each person in Estonia who has visited a doctor has his/her own online e-Health story that can be tracked. Around 1,3 million people have documents in the central database. HIS integrates data from Estonia's different healthcare providers, creating a common record for each patient (since 2015, 99% of health data has been digitised, 97% of hospital discharge letters are sent to the central database). This gives the doctors easy access to the patient's electronic records (test results, X-ray images etc.). Patients have access to their own and to their underaged children's records, and the records of persons who have given authorization to them for seeing their medical data. By logging into the patient portal (ID-card/m-ID), they can review past visits to the doctor, current prescriptions, and receive general health advice.

## e-Prescription

The e-Prescription is a centralised paperless system for issuing and handling medical prescriptions — 99% of all medicine is issued to Estonian patients using a digital prescription. This is a very efficient system connecting every hospital and pharmacy in Estonia, cutting down on paperwork and doctor visits and saving untold amounts of time and effort. Doctors can prescribe medicine electronically, and all a patient needs to do at the pharmacy is present their ID card. The pharmacist then retrieves the patient's information from the system and prepares the prescription.

## Questions & answers

### What kind of information and e-services are provided in the patient portal?

Overview of case summaries, immunization data, dental care documents, examination results, health certificates and access to medical bills reimbursed by the Estonian Health Insurance Fund.

### How is the patient data securely accessed?

Authentication is based on the Estonian digital ID and associated via a secure infrastructure. In order to ensure the transparency of the system, the patient can review data about the doctors visits and current prescriptions, and check which doctors have had access to their files. Patients have access to their own records, as well as those of their underaged children. It is possible to delegate data access and control the rights to that.

## Facts and figures

- There are close to 40 million health documents in the e-Health system.
- e-Prescriptions cover 100% of the used prescriptions. 98% are prescribed digitally, remaining 2% are entered at the pharmacy.
- Blockchain technology has been adopted to ensure the integrity of health data.
- 2,5 million queries are made to HIS by doctors every month.
- Close to 100% of patients have a countrywide digital record.