

Follow-up Vision for eHealth 2025

Report on the Year 2022

S2022/04023, S2022/04135, S2022/04810 (partial)



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Preface

Since 2020, the Swedish eHealth Agency has been tasked with following the development of digitalisation in healthcare and social services and submitting an annual follow-up report to the Swedish Government. This year's report is partly based on the indicator-based framework for follow-up of Vision for eHealth 2025, which was developed for this purpose by the Agency, but other external follow-up that describes developments in the area is also highlighted. The report was prepared in collaboration with the National Board of Health and Welfare, the Swedish Association of Local Authorities and Regions (SALAR), Inera AB, the Swedish Medical Products Agency and the Swedish Agency for Digital Government (Digg). The conclusions presented in this report are the eHealth Agency's own.

In this year's report, the Swedish eHealth Agency also describes how the Agency itself contributes to the realisation of Vision for eHealth 2025.

This report is the third follow-up of the Vision for eHealth 2025, which will continue until 2025. The report is primarily aimed at policy makers at a national level. Regions and municipalities can also benefit from the report.

Decisions regarding this report have been made by Director General Gunilla Nordlöf. Investigator Morine Kalulanga is the rapporteur. Investigators Derya Akcan, Malin Hellner, Åke Nilsson and Anne Simmasgård, as well as lawyer Maria Bergdahl, of the Swedish eHealth Agency, participated in the work. In addition, Axel Fors (investigator, National Board of Health and Welfare), Charlotta Holm Sjögren (eHealth strategist, National Board of Health and Welfare), Julia Lindström (investigator, National Board of Health and Welfare), Stefan Laiti (investigator, Medical Products Agency), Andreas Leifsson (analyst, Inera), Camilla Eriksson (coordinator, SALAR) and Arvid Perbo (analyst, Digg) have participated in the work. Head of unit Susanna Wahlberg and head of department Annemieke Ålenius took part in the final preparation of the report.

Gunilla Nordlöf
Director General

Summary

In this report, the Swedish eHealth Agency presents the development of digitalisation in healthcare and social services. It describes developments through 2022 and is mainly based on data from other public authorities as well as national and international actors. Work on the report was carried out in collaboration with the National Board of Health and Welfare, Digg, Inera, the Swedish Medical Products Agency and SALAR.

The report also describes how the Swedish eHealth Agency contributes to the realisation of Vision for eHealth 2025.

During the year, the Swedish eHealth Agency has reported on several government assignments that, in various ways, contribute to the development of a national digital infrastructure for health, healthcare and social care.

Through the proposals presented in these reports, the Agency helps health and social care professionals to have better access to suitable information when meeting patients and clients.

The Swedish eHealth Agency's conclusions regarding the development of digitalisation in healthcare and social services are:

Citizens' access to welfare technologies and e-services is unequal across the country.

The State needs to support more equal access to e-services and welfare technology in municipalities and regions. This requires national support in the form of long-term investments. One way for the State to develop its governance through targeted government grants is to link government grants to performance or goal fulfilment with long-term conditions.

In addition, stakeholders must ensure that technology is user-friendly so that all interested citizens can use it.

Exchange of health data within and between regions and municipalities has not reached its full potential.

Several government initiatives were reported on or commenced during the year that may in the future contribute to better information provision in healthcare and social services. The results of various investigations need to be coordinated by a national actor, and a coherent common direction and action plan is needed to support the mandators in their continued work.

Information security work must be prioritised.

Information security issues must be given greater priority by organisations. This requires clear leadership, governance and resources for information security work.

The conditions for digital transformation in health and social services must be improved.

National support to promote the development of digitalisation in healthcare and social services must be updated and aligned with the needs of organisations. This requires long-term and clear conditions regarding funding and governance.

To accelerate efforts to develop and encourage the use of harmonised and reusable specifications, a nationwide governance and cooperation structure on issues related to interoperability and standardisation is needed.

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1 Introduction

In 2016, the Swedish Government and the Swedish Association of Local Authorities and Regions (SALAR) presented a joint vision for eHealth work in Sweden through 2025: Vision for eHealth 2025.¹ The Vision for eHealth 2025 states: *"In 2025, Sweden will be best in the world at using the opportunities offered by digitalisation and eHealth to make it easier for people to achieve good and equitable health and welfare, and to develop and strengthen their own resources for increased independence and participation in the life of society"*.

In order to implement the Vision for eHealth 2025, an action plan was drawn up for the period 2017–2019.² This action plan was followed by a strategy for implementation for the period 2020–2022.³ This strategy establishes three fundamental conditions and four objectives for achieving the vision (Figure 1).

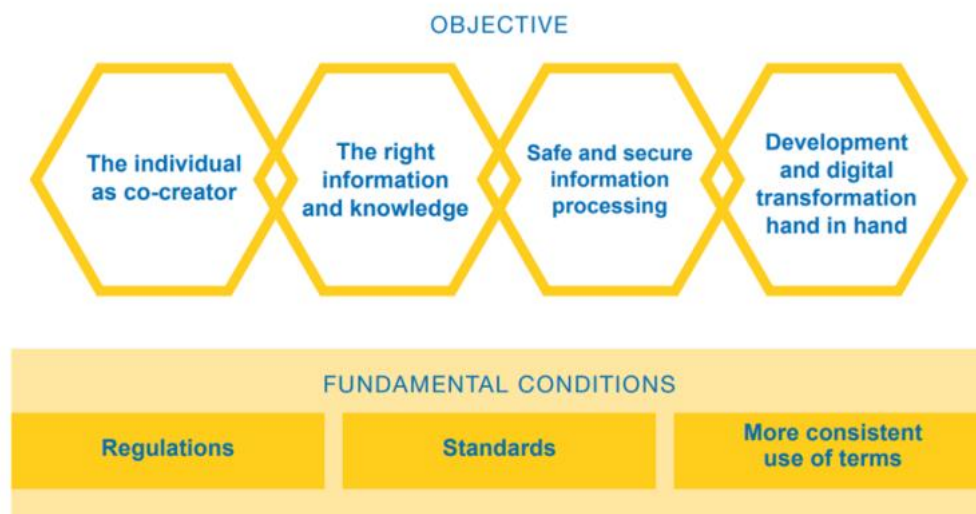


Figure 1. The objectives established in A Strategy for Implementing Vision for eHealth 2025: The Next Step, 2020–2022

¹ Ministry of Health and Social Affairs and SALAR (2016). *Vision for eHealth 2025*.

² Ministry of Health and Social Affairs and SALAR (2017). *Handlingsplan för samverkan vid implementation av Vision e-hälsa 2025 2017–2019* [Action Plan for Cooperation on the Implementation of Vision for eHealth 2025 2017–2019].

³ Ministry of Health and Social Affairs and SALAR (2020). *A Strategy for Implementing Vision for eHealth 2025: The Next Step, 2020–2022*.

In its appropriation directions for 2020, the Swedish eHealth Agency was tasked with developing an indicator-based framework for following up the Vision for eHealth 2025.⁴ The assignment was reported in autumn 2020, and was based on the National Board of Health and Welfare's criteria and requirements for the development of indicators.⁵

The Agency was subsequently tasked with submitting an annual follow-up report to the Swedish Government through 2025, built on the indicator-based framework.

With the appropriation directions for the 2023 financial year, a change was made to the assignment which entailed that the indicators need not exclusively form the basis for the follow-up. This year's report has therefore been supplemented with data from external follow-up that can help explain eHealth developments in relation to Vision for eHealth 2025 in other ways. In addition, the Agency has been assigned to submit a report on the Swedish eHealth Agency's contribution to the implementation of Vision for eHealth 2025.⁶

2 Implementation

The indicators that are followed up nationally were mainly identified in the report *Indicator Based Framework for Follow Up of Vision for eHealth 2025*⁷ and come from existing sources at public authorities and other organisations.

To the greatest extent possible, the most recent data are presented for each indicator. Certain indicators used in earlier follow-ups have been omitted, either because they are no longer recorded or because they have been replaced by other indicators. A number of previously unidentified indicators have been added as they are deemed relevant from a follow-up perspective.

Interpretations and comparisons with previous years' results should be made with caution, as the response rate in the different surveys sometimes differs from year to year.

⁴ Swedish eHealth Agency (2020). Indicator Based Framework for Follow Up of Vision for eHealth 2025.

⁵ National Board of Health and Welfare (2017). *Handbok för utveckling av indikatorer: för god vård och omsorg*. [Handbook for Developing Indicators: For Good Health and Welfare].

⁶ S2022/04023, S2022/04135, S2022/04810 (partial).

⁷ Swedish eHealth Agency (2020). *Indicator Based Framework for Follow Up of Vision for eHealth 2025*.

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Some surveys and data sources that recur frequently include:

- The National Board of Health and Welfare's survey *e-Health and Welfare Technology in Municipalities*⁸
- The National Board of Health and Welfare's survey *Application of digital care in the regions. A mapping*.⁹
- SALAR's survey *National Healthcare Barometer*.¹⁰
- Inera's statistics for its digital services.¹¹
- The SLIT network's survey *IT and digitalisation in healthcare*.¹²

The external follow-up included in the report primarily concerns government assignments that are deemed to contribute to the development of Vision for eHealth 2025. The work highlighted here is a selection and is not comprehensive regarding the initiatives underway in this area.

This work has been carried out in collaboration with, and with contributions from, the National Board of Health and Welfare, SALAR, Inera, the Swedish Medical Products Agency and Digg.

3 Conditions for digitalisation

The Vision for eHealth 2025 states that “Sweden will be the best in the world at using the opportunities offered by digitalisation and eHealth to make it easier for people to achieve good and equitable health and welfare, and to develop and strengthen their own resources for increased independence and participation in the life of society”.¹³ Sweden’s success depends in part on the development of digital technologies in this area, but also on the ability to create the conditions for using these technologies. This includes access to broadband, internet and digital devices, as well as digital skills among citizens.¹⁴

⁸ National Board of Health and Welfare (2022). *E-hälsa och välfärdsteknik i kommunerna 2022*. [e-Health and Welfare Technology in Municipalities 2022].

⁹ National Board of Health and Welfare (2023). *Tillämpning av digital vård i regionerna. En kartläggning*. [Application of digital care in the regions. A mapping].

¹⁰ Swedish Association of Local Authorities and Regions (2022). *Hälso- och sjukvårdsbarometern 2022*. [National Healthcare Barometer 2022].

¹¹ Statistics from Inera.

¹² The SLIT network for Swedish IT directors (2022). *IT och digitalisering i hälso- och sjukvården 2022*. [IT and digitalisation in healthcare 2022].

¹³ Ministry of Health and Social Affairs and SALAR (2020). *A Strategy for Implementing Vision for eHealth 2025: The Next Step, 2020–2022*.

¹⁴ Swedish Government Offices (2017). *For sustainable digital transformation in Sweden – a Digital Strategy*.

3.1 Most of the population uses the internet and has access to broadband, e-ID and a digital device

Roughly 95 percent of households and businesses have access to fibre-optic internet or other technologies in their absolute vicinity permitting speeds of 1 Gbit/s, an increase of about two percentage points compared to 2021. Outside urban and rural areas, the corresponding access to fibre-optic internet is 65 percent of all households, which is an increase of more than five percentage points. More than 55 percent of all households are covered by 5G networks, an increase of 37 percentage points compared to 2021.¹⁵

Ninety-four percent of the Swedish population use the internet, most individuals daily. The six percent who do not use the internet at all are almost exclusively the oldest members of the population. Internet usage remains unchanged since 2021.¹⁶

Access to a digital device, such as a mobile phone, computer or tablet, is a precondition for accessing the digital services of healthcare and social services. According to the Swedish Internet Foundation's report *Digital Exclusion 2020*, there is currently no shortage of digital devices in the population. In 2020, three percent of the population reported not having a digital device.¹⁷

Several digital services require the ability to identify the user, requiring technologies for secure digital identification. There are currently three e-IDs approved by the quality label Swedish e-Identification that private individuals with a Swedish personal identity number can obtain: BankID, Freja eID Plus and AB Svenska Pass.¹⁸ According to the Swedish Internet Foundation, most people use e-IDs, and mobile BankID dominates with use by roughly 90 percent of the population. Compared to 2021, the use of mobile BankID has increased in all age groups, although use is lowest among older people. Among pensioners, for example, daily use doubled, with daily users of the service increasing from one quarter to one half of total users. Approximately one in three pensioners currently do not have a mobile BankID.¹⁹

Using digital healthcare and social services requires a certain degree of digital literacy. In 2022, around one in five Swedes could not use a healthcare app, and one in ten could not log in to 1177 or obtain a COVID-19 certificate

¹⁵Swedish Post and Telecom Authority (2023). *PTS mobiltäcknings- och bredbandskartläggning 2022 En geografisk översikt av tillgången till bredband och mobiltelefoni i Sverige*. [Mobile and broadband coverage in Sweden 2022].

¹⁶Swedish Internet Foundation (2022). *The Swedes and the Internet 2022*.

¹⁷Swedish Internet Foundation (2020). *Digitalt utanförskap 2020*. [Digital Exclusion 2020].

¹⁸[Obtain an e-identification | e-ID](#) [Accessed 22/05/2023].

¹⁹Swedish Internet Foundation (2022). *The Swedes and the Internet 2022*.

digitally. For all three digital services, it is the elderly who are unable to use them.²⁰

3.2 Sweden fourth in international survey

In the European Commission's annual comparison of Member States' digital progress in the *Digital Economy and Society Index* (DESI), Sweden with its 65.2 points fell from third to fourth place. Finland, Denmark and the Netherlands are ranked first, second and third in the DESI (Figure 2).

Sweden ranks third after Finland and Denmark in terms of *Integration of Digital Technology*, which is an index used to measure digital intensity in companies. Sweden's business community has a generally high level of use and integration of digital technologies in their organisations. However, when it comes to the use of certain technologies, such as AI and analysing Big Data, Sweden has potential for development. Sweden has a good innovation climate, but performs poorly in promoting open data, which can hamper innovation in the long run.²¹

Sweden fell from fifth to ninth place in terms of *Connectivity*. Compared to other countries, Sweden has a good broadband infrastructure, but the expansion of mobile 5G coverage is not as advanced as in several other countries.²²

In terms of *Human Capital*, Sweden ranks fourth in the DESI. Compared to the rest of Europe, Sweden generally has high levels of both basic digital skills and above basic digital skills.²³

Sweden is ranked ninth in the *Digital Public Services* ranking. People, businesses and the public sector are very digitally mature. It is possible that key digital services can be available online by 2030. However, there is room for improvement, especially in areas such as data exchange and re-use.²⁴

Compared to 2021, Sweden fell in all areas of the DESI, except for *Integration of Digital Technology*, which is partly due to the addition of new indicators to the index.

²⁰ Swedish Internet Foundation (2022). *The Swedes and the Internet 2022*.

²¹ Swedish Agency for Digital Government (2023). *Digitala Sverige 2022. En samlad analys av samhällets digitalisering*. [Digital Sweden 2022. A comprehensive analysis of the digitalisation of society].

²² Swedish Agency for Digital Government (2023). *Digitala Sverige 2022. En samlad analys av samhällets digitalisering*. [Digital Sweden 2022. A comprehensive analysis of the digitalisation of society].

²³ European Commission (2022). *Digital Economy and Society Index 2022*.

²⁴ European Commission (2022). *Digital Economy and Society Index 2022*.

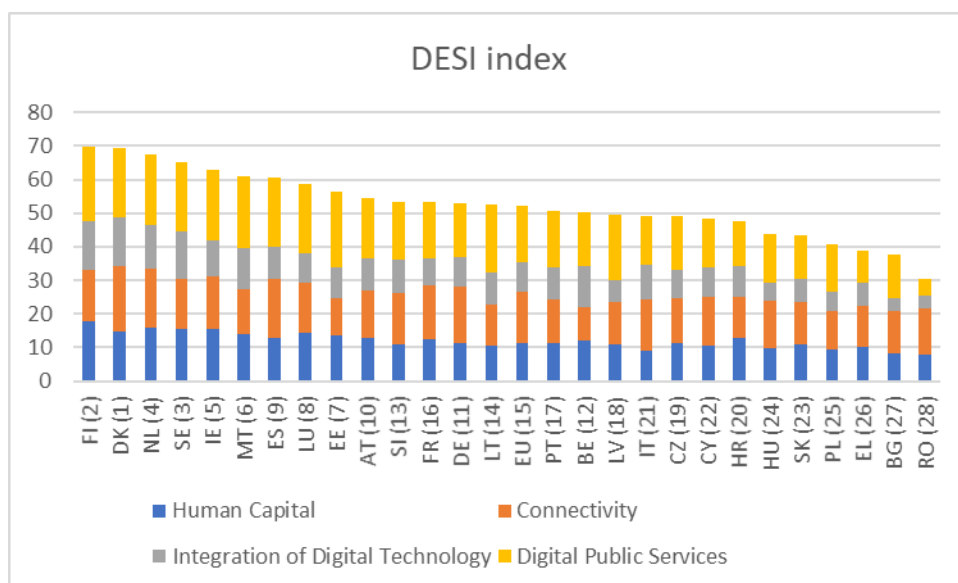


Figure 2. Figures in brackets show the previous year's ranking. Source: DESI index 2021 and 2022.

4 Reporting per objective

This chapter is divided into four sections based on the objectives of the Vision for eHealth 2025. Each section starts with a description of the objective. This is followed by a brief summary of the results. The development of the objective is then described on the basis of a number of indicators and/or other types of data which, together, provide an overall picture of the development. Each results section ends with a conclusion by the Swedish eHealth Agency.

Description of the development of objectives *The individual as co-creator* and *Safe and secure information processing* is mainly based on indicators. Description of the development of objectives *Right information and knowledge* and *Development and digital transformation hand in hand* is based on indicators as well as data from external monitoring. The description of results is based on the availability of indicators and the significance of the data in describing the development of the Vision for eHealth 2025.

4.1 Objective - The individual as co-creator

A prerequisite for person-centred care is starting with the needs and conditions of patients and clients with regard to being informed and active co-creators. This objective considers the possibility that those who can and wish to should be able to contribute to their own health and care. Using various

forms of digital support, the individual's resources can be utilised and different activities in healthcare and social services become more cohesive. Among other things, this involves moving healthcare and social services closer to citizens and being more location-independent.²⁵

One goal is to ensure that welfare technology and digital support in the home is offered to patients, clients and relatives outside of traditional care environments, thus increasing safety, independence and participation. Another goal is to make healthcare and social services accessible and present through digital services that facilitate contact and individual information management, so that citizens feel confident in and positive about eHealth.²⁶

This section presents the development of welfare technology, self-monitoring, e-services and citizen attitudes towards digital services.

Summary of results

- Uneven development of welfare technology in municipalities
- Hypertension and heart failure the most common self-monitoring diagnoses
- Some types of e-services are significantly more common than others in municipalities
- Fewer 1177.se logins
- A slight decrease in positive attitudes towards 1177's online services and digital technology

4.1.1 Uneven development of welfare technology in municipalities

Welfare technology is digital technology that aims to maintain or increase the safety, activity, participation or independence of a person who has or runs a greater risk of having a disability.²⁷ Some examples of common welfare technologies include: digital safety alarms, night-time camera supervision, digital communication tools, medication dispensers and GPS alarms.

²⁵ Ministry of Social Affairs and SALAR (2020). *A Strategy for Implementing Vision for eHealth 2025: The Next Step, 2020–2022*.

²⁶ Ministry of Social Affairs and SALAR (2020). *A Strategy for Implementing Vision for eHealth 2025: The Next Step, 2020–2022*.

²⁷ [Välfärdsteknik - Socialstyrelsen](#) [Accessed 1 February 2023].

The National Board of Health and Welfare annually follows up the development of eHealth and welfare technology in the municipalities.²⁸ The 2022 results show that the use of welfare technologies has generally increased slightly compared to 2021. For some types of welfare technologies, use has stagnated or even declined.

Digital night-time camera supervision is a relatively common welfare technology in ordinary housing. Almost 80 percent of municipalities report using digital night-time camera supervision in activities for older people in ordinary housing, a slight increase from 2021 (Figure 3). However, in activities for people with disabilities in ordinary housing, there has been a decline in the proportion of municipalities using digital night-time camera supervision - from 47 percent in 2021 to 43 percent in 2022 (Figure 4).

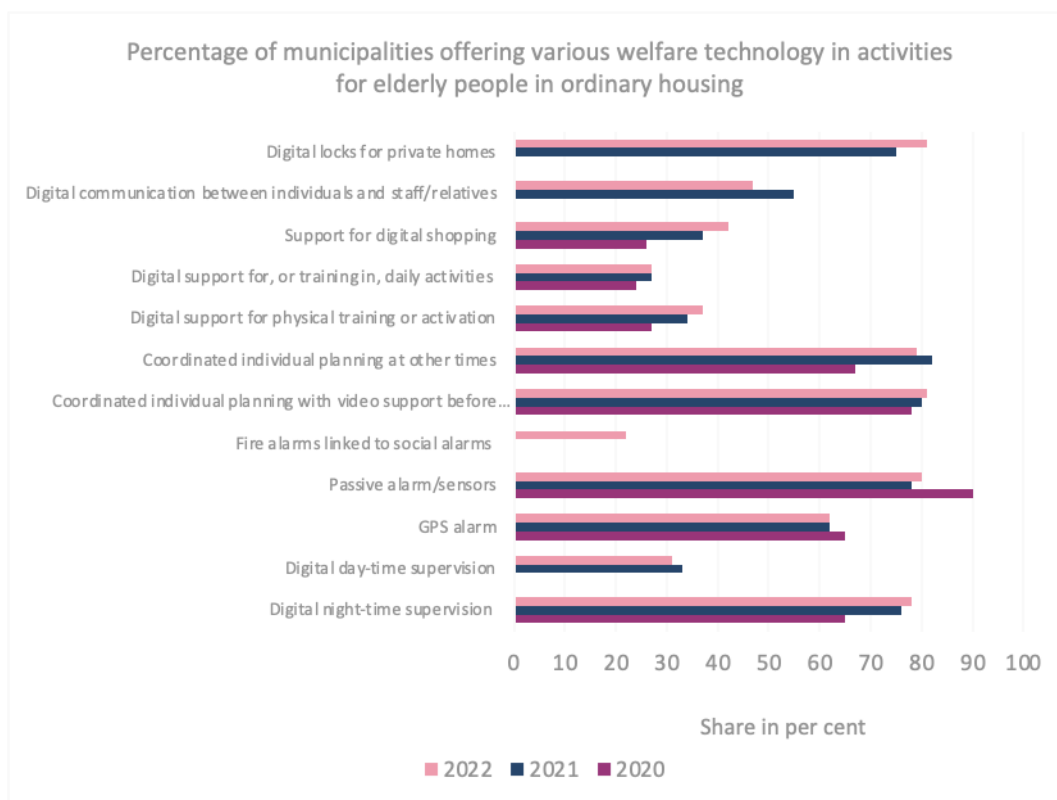


Figure 3. Percentage of municipalities offering various welfare technology in activities for elderly people in ordinary housing, reported in percent. Source: The National Board of Health and Welfare. *E-hälsa och välfärdsteknik i kommunerna* [e-Health and Welfare Technology in Municipalities], years 2020-2022.

²⁸ National Board of Health and Welfare (2022). *E-hälsa och välfärdsteknik i kommunerna 2022*. [e-Health and Welfare Technology in Municipalities 2022].

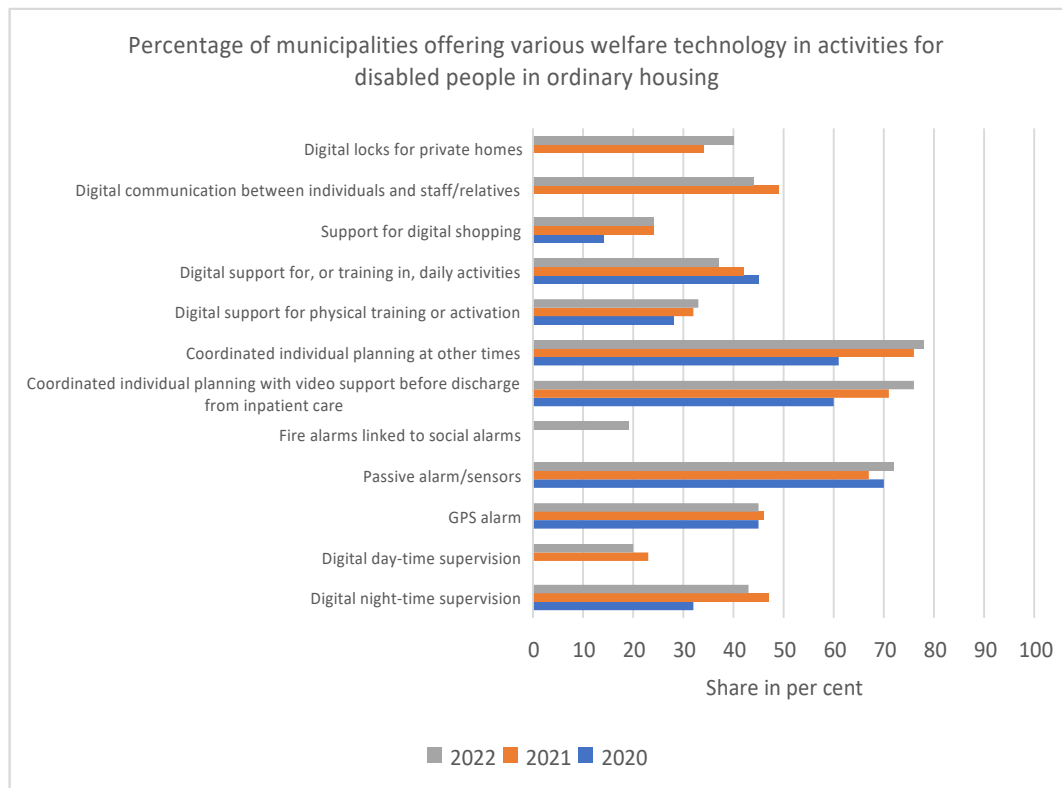


Figure 4. Percentage of municipalities offering various welfare technology in activities for disabled people in ordinary housing, reported in percent. Source: The National Board of Health and Welfare. *E-hälsa och välfärdsteknik i kommunerna* [e-Health and Welfare Technology in Municipalities], years 2020-2022.

The most common type of welfare technology in sheltered accommodation for the elderly is passive alarms, i.e., various sensors including door alarms, fall-detection alarms and motion detectors. In 2022, 95 percent of municipalities used passive alarms in sheltered accommodation for the elderly, compared to 92 percent in 2021 (Figure 5).

Passive alarms are also the most commonly used welfare technology in assisted-living accommodation for disabled people. In 2022, 78 percent of municipalities offered welfare technology in assisted-living accommodation for disabled people, which is an increase of five percentage points compared to the previous year (Figure 6).

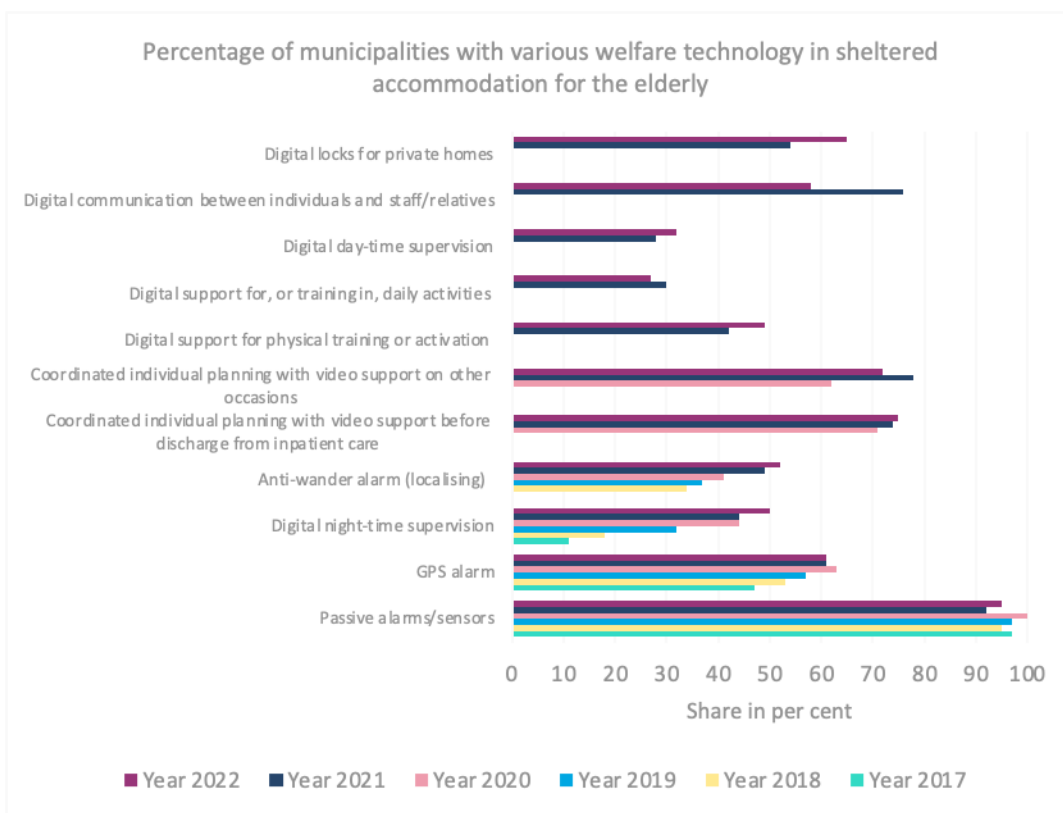


Figure 5. Percentage of municipalities with various welfare technology in sheltered accommodation for the elderly, reported in percent. Source: The National Board of Health and Welfare. E-hälsa och välfärdsteknik i kommunerna [e-Health and Welfare Technology in Municipalities], years 2017-2022.

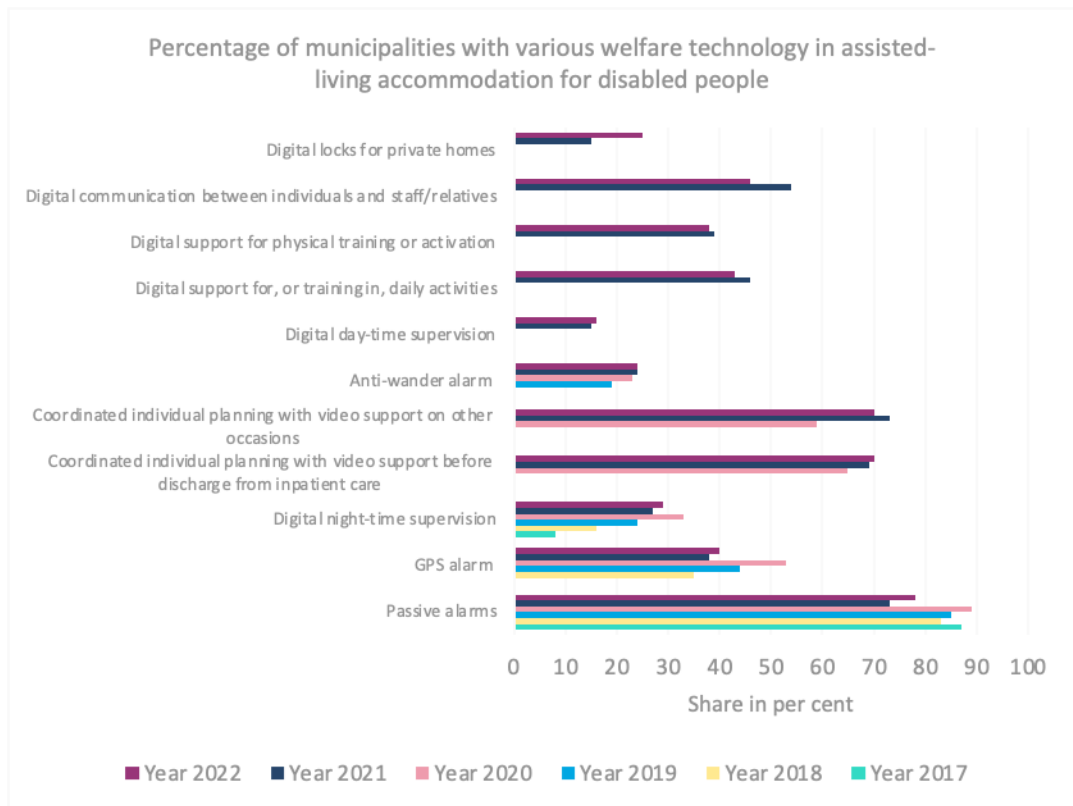


Figure 6. Percentage of municipalities with various welfare technology in assisted-living accommodation for disabled people, reported in percent. Source: The National Board of Health and Welfare. *E-hälsa och välfärdsteknik i kommunerna* [e-Health and Welfare Technology in Municipalities], years 2017-2022.

The most common type of welfare technology in municipal healthcare is video support for coordinated individual planning (SIP) upon discharge from inpatient care, which is available in 84 percent of municipalities, an increase of 2 percentage points compared with the previous year (Figure 7).

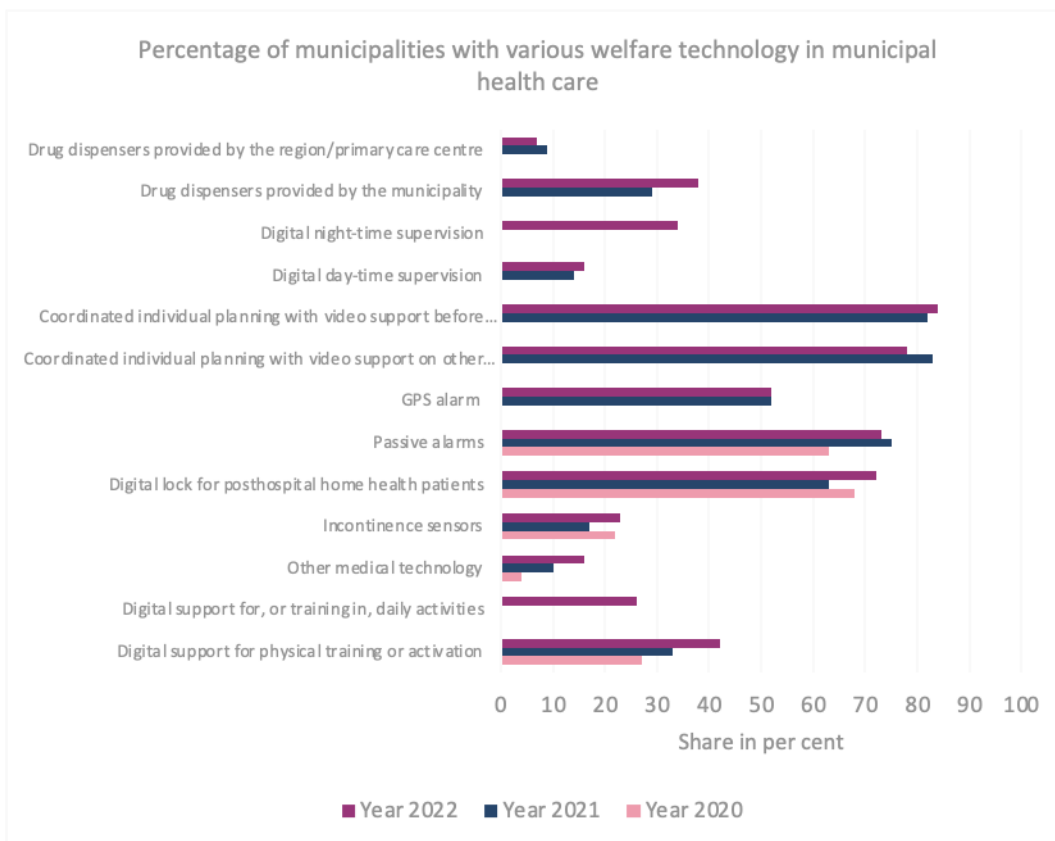


Figure 7. Percentage of municipalities with various welfare technology in municipal health care, reported in percent. Source: The National Board of Health and Welfare. *E-hälsa och välfärdsteknik i kommunerna* [e-Health and Welfare Technology in Municipalities], years 2020-2022.

The group of the second-largest municipalities, those with between 50,000 and 100,000 inhabitants, are slightly ahead in terms of implementing welfare technology. At the same time, large cities do not differ significantly from the smaller cities.²⁹

²⁹ National Board of Health and Welfare (2022). *E-hälsa och välfärdsteknik i kommunerna 2022*. [e-Health and Welfare Technology in Municipalities 2022].

4.1.2 Hypertension and heart failure the most common self-monitoring diagnoses

Self-monitoring allows patients to record and track their own results while granting healthcare providers access to the same data. Self-monitoring contributes to greater independence and fewer healthcare visits for the patient, and it is an important part of the transition to Good and Close Care.³⁰ With early detection of poor test results, care can be more preventive and interventions more needs-driven.³¹

Several regions now offer self-monitoring for common diseases such as hypertension, heart failure and diabetes. This involves, in part, technology that has been implemented as well as pilot activities. Of the diagnoses listed below, self-monitoring is most common for the diagnosis groups hypertension and heart failure. Seven regions have implemented self-monitoring and three have pilot programmes for patients with hypertension. Regarding self-monitoring for patients with heart failure, five regions have implemented the technology and six regions have launched pilot programmes (Figure 8). As part of the transition to Good and Close Care, the regions are investing in monitoring several diseases and diagnoses such as Parkinson's, inflammatory bowel disease (IBD) and sleep apnoea.³²

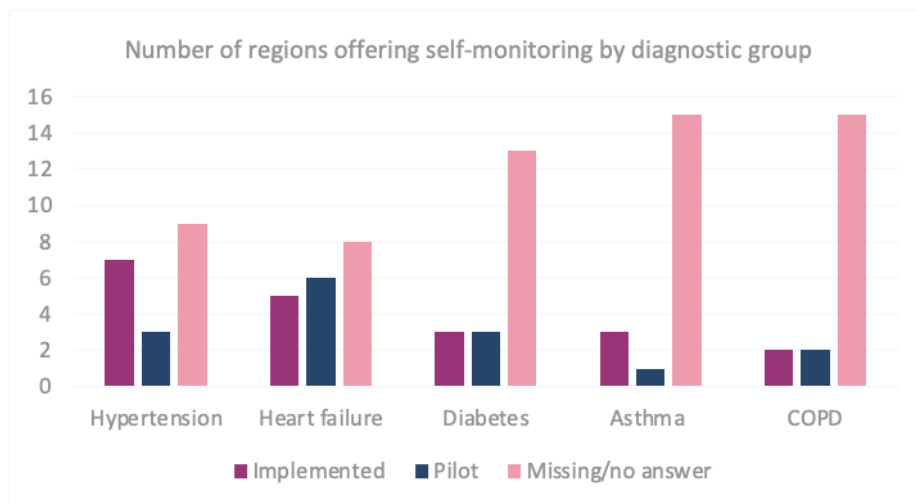


Figure 8. Number of regions offering self-monitoring by diagnostic group Source: The SLIT network for Swedish IT directors. *IT och digitalisering i hälso- och sjukvården* [IT and digitalisation in healthcare], 2022.

³⁰ The SLIT network for Swedish IT directors (2022). *IT och digitalisering i hälso- och sjukvården 2022*. [IT and digitalisation in healthcare 2022].

³¹ [Dags för egenmonitorering att komma ur startblocken – för ökad trygghet, vårdkvalitet och resursutnyttjande!](#) CGI Sweden [Accessed 03/02/2023].

³² The SLIT network for Swedish IT directors (2022). *IT och digitalisering i hälso- och sjukvården 2022*. [IT and digitalisation in healthcare 2022].

4.1.3 Some types of e-services are significantly more common than others in municipalities

E-services³³ permit individuals to find information and contact social services. This includes making appointments, applying for assistance and making a notification of interest. With support from e-services, individuals can gain greater self-determination and become more involved in their situation.

The National Board of Health and Welfare has reviewed the municipalities' websites in 2022 to see which e-services municipalities offer within social services. To meet the needs of citizens, e-services must be available on municipal websites and must be easy to find. The services assessed by the National Board of Health and Welfare as digital include e-services that require a login as well as web forms without a login.

The review shows that roughly 70 percent of municipalities offer digital notifications of interest in interventions for children and young people. For example, you can report your interest in providing a family home, a shelter home or a contact family.

Another commonly used e-service is the application for financial aid, offered by 60 percent of municipalities.

Broken down by social services activity area, it appears that most municipalities offer at least one e-service in the area of children and young people, the disability area LSS interventions and financial aid. The activity areas where municipalities offer the fewest e-services are family counselling, adults with addiction and family law offices (Table 1).

Larger municipalities offer e-services to a much greater extent than smaller municipalities.³⁴

Comparisons with previous years could not be made, as data-collection methods changed from municipal surveys to a review by the National Board of Health and Welfare of municipalities' websites. However, in both 2021 and 2022, the application for financial aid was a commonly used e-service, and the areas of activity of adults with addiction, family counselling and family law offices showed the lowest levels of e-services.³⁵

³³ The National Board of Health and Welfare uses the term e-services in their survey, which is why the Swedish eHealth Agency also chooses to do so in the section concerning the National Board of Health and Welfare's survey.

³⁴ National Board of Health and Welfare (2022). *E-hälsa och välfärdsteknik i kommunerna 2022* [e-Health and Welfare Technology in Municipalities 2022].

³⁵ National Board of Health and Welfare (2022). *E-hälsa och välfärdsteknik i kommunerna 2022*. [e-Health and Welfare Technology in Municipalities 2022].

Area of activity	Appointment booking (percent)	Application for assistance or intervention (percent)	Notification of interest (percent)	At least one digital service (percent)	Report of concerns (percent)
Children and young people	8	7	71	78	36
Financial aid	-	60	-	68	-
Family law office	5	18	-	28	-
Family counselling	21	-	-	25	-
Addiction in adults	4	7	-	26	11
Disability (LSS)	2	29	60	72	-
Disability (SoL)	2	26	-	38	-
Elderly care	2	31	-	42	-

Table 1. E-services in social services, by area of activity and type of e-service, reported in percent for 2021/2022. Source: The National Board of Health and Welfare. E-hälsa och välfärdsteknik i kommunerna [e-Health and Welfare Technology in Municipalities], 2020.

4.1.4 Fewer 1177.se logins

Swedes can access a number of e-services by logging in to 1177.se³⁶. These e-services enable patients to read their medical records, renew prescriptions and book/cancel appointments, for example. E-service offerings vary between regions.³⁷

In 2022, the total number of logins on 1177.se was just under 135 million, which is a decrease compared to 2021 when the number of logins was just under 168 million³⁸. The high number of logins in 2021 can be linked to needs that arose during the pandemic. For example, many people logged in to book appointments for vaccinations and PCR tests.³⁹

The average number of logins is higher among women for all age groups up to 70. For age groups above 70 years, men have a higher average number of logins than women. For women, the average number of logins varies more between age groups, while men have a more even distribution between age groups.

During the pandemic, the average number of logins increased across all age groups. The increase was significant for both men and women. In 2022, this pandemic effect subsided (Figure 9).

³⁶ Inera uses the term e-services, which is why the Swedish eHealth Agency also chooses to do so in sections concerning Inera's statistics.

³⁷ 1177 e-tjänster - Inera [Accessed 16/04/2023].

³⁸ Statistics from Inera.

³⁹ 2021 rekordår för 1177.se - Inera [Accessed 26/04/2023].

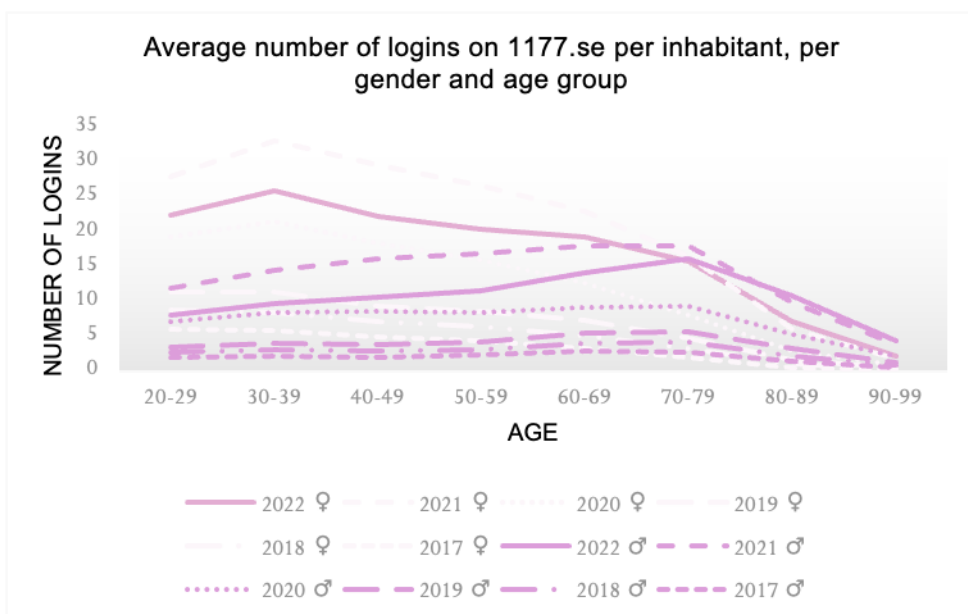


Figure 9. Average number of logins on 1177.se per inhabitant, per gender and age group.
Source: Inera, 25/01/2023.

Digital Medical Record most used

As in previous years, the Digital Medical Record (*Journalen*) was the most used e-service on 1177.se. In 2022, it was used almost 63 million times⁴⁰, which is an increase from 2021, when it was used almost 60 million times. Use of the service has increased every year since 2019.⁴¹

The Digital Medical Record is an e-service offered to people aged 16 or over with a valid personal identity number. Parents and guardians can also obtain information about their children until they turn 13 years of age. Using the Digital Medical Record, citizens can access their medical records, which are made available by the healthcare providers connected to the e-service. Municipal, regional and private healthcare providers financed by public funds can all connect to the service. Different healthcare providers display different information in the Digital Medical Record, as it is the healthcare providers themselves who decide what information should be made available.⁴²

There are 16 value sets that can be added to the Digital Medical Record by all healthcare providers. As of 2022, most healthcare providers in the regions have made between 7-10 value sets available in the Digital Medical Record.

⁴⁰Statistics from Inera.

⁴¹ Swedish eHealth Agency (2022). *Follow-up Vision for eHealth 2025. Report on the Year 2021*.

⁴² *Journalen* - Inera Accessed [16/04/2023].

Healthcare providers in all regions have made information on test results, healthcare contacts and notes available in the service. During the year, healthcare providers in one region removed information on radiology referrals, while healthcare providers in six regions made additional information available to citizens. Information on functional status and ADL has not been made available by any healthcare provider within the regions, and information on care plans has only been made available by healthcare providers in one region (Figure 10).

In addition to the Digital Medical Record, the most commonly used e-services are prescription renewal, contact requests, changing appointments and booking appointments.⁴³

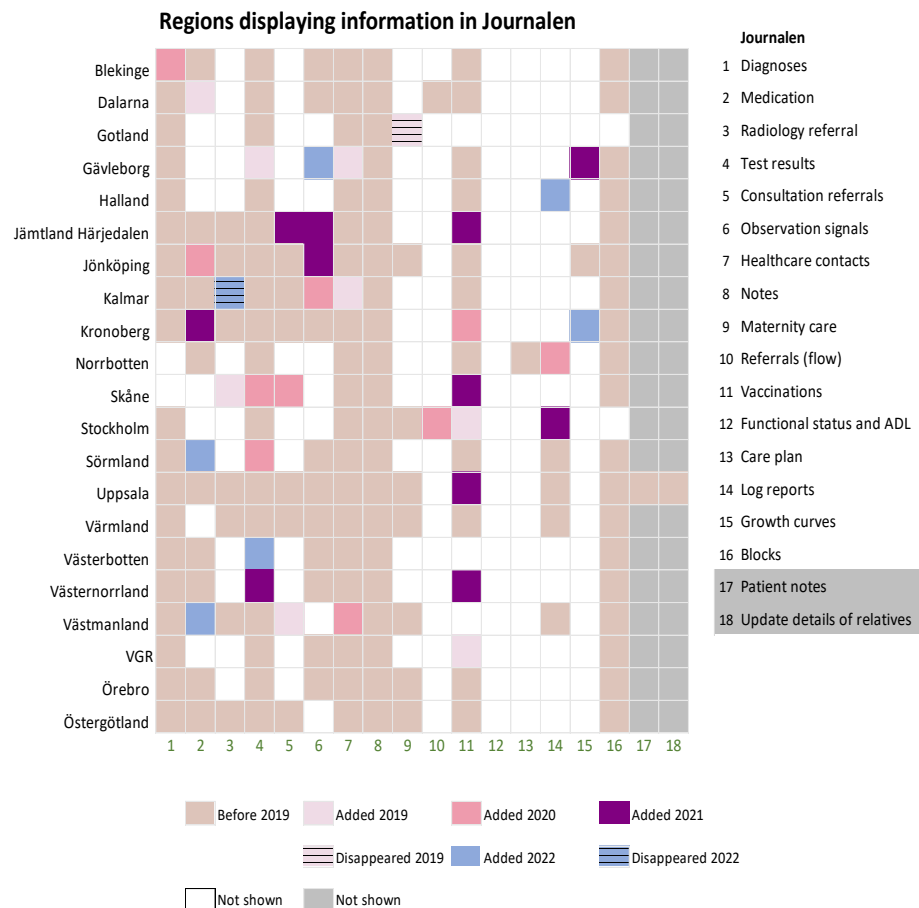


Figure 10. Value sets available to patients in the Digital Medical Record. Value sets 1-16 in the Digital Medical Record can be added for all regions, while value sets 17-18 require special conditions. Source: Inera, 25/01/2023.

⁴³ Statistics from Inera.

4.1.5 A slight decrease in positive attitudes towards 1177's online services and digital technology

To achieve the objectives of the Vision for eHealth 2025, it is not enough to ensure the existence of technical conditions and the security of digital services. People in Sweden must also *want to* use digital services. It is therefore important that citizens trust the systems/services, and that the systems/services are easy to use.

Through the annual National Healthcare Barometer (*Hälso- och sjukvårdsbarometern*), SALAR has monitored the development of residents' attitudes towards 1177's e-services and care, consultation and treatment using digital technology, as well as their attitudes towards greater opportunities for home care through home visits by healthcare professionals interspersed with the support of digital technology.

The latest survey shows that the proportion of respondents that are positive toward using 1177 e-services has decreased from 81 percent in 2021 to 78 percent in 2022.

The proportion of positive attitudes toward care, consultation and treatment using digital technologies was 45 percent in 2022. Compared to the 2021 survey, the proportion of positive responses has decreased by 2 percentage points.

The proportion of positive attitudes toward greater opportunities for home care through home visits by healthcare professionals interspersed with the support of digital technology has decreased from 59 percent in 2021 to 56 percent in 2022 (Figure 11).

The oldest citizens are least positive about 1177's e-services. The same applies to care, consultation and treatment using digital technologies, as well as to greater opportunities for home care through home visits by healthcare professionals interspersed with the support of digital technology.⁴⁴

⁴⁴Swedish Association of Local Authorities and Regions (2022). *Hälso- och sjukvårdsbarometern 2022*. [National Healthcare Barometer 2022].

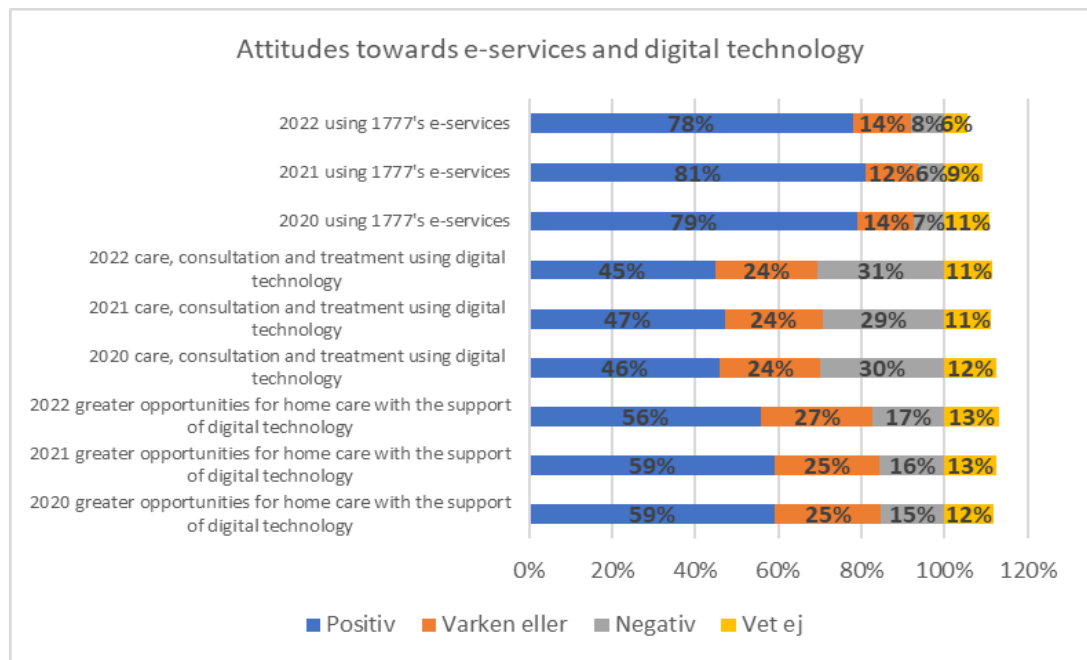


Figure 11. Attitudes towards e-services and health with support from digital technology Source: SALAR Hälso- och sjukvårdsbarometern [National Healthcare Barometer], years 2020-2022.

4.1.6 Conclusions of the Swedish eHealth Agency

This year's follow-up shows a varied development of welfare technology and e-services in municipalities and regions. Access to welfare technology has generally increased in municipalities, but in some areas development has stalled or even declined. Some e-services are used significantly more than others by municipalities. One example of a more widely used e-service is: Digital application for financial aid.

When it comes to 1177's e-services, the number of logins has dropped substantially from the peak levels of the pandemic years, which is probably because the need for e-services that arose during the period has declined. The Digital Medical Record remains the most widely used e-service. In 2022, most regions made between 7-10 value sets, out of 16, available for all healthcare providers to add to the Digital Medical Record.

The availability and supply of welfare technology and e-services varies between municipalities and the areas of activity, as well as between regions. This means that citizens countrywide have unequal opportunities to be active participants in their health and social care.

Citizen access to welfare technologies and e-services largely depends on their place of residence and the type of intervention needed.

The oldest members of society are least positive about e-services and digital technologies, which is probably partly linked to their level of digital literacy and habits. To avoid creating further inequalities in use, stakeholders must ensure that services and technology are as user-friendly as possible, so that all interested citizens can use them. Furthermore, it is important that it is possible to use the help of a relative when using e-services by being able to give their consent to this. The importance of citizens being able to use e-services to support relatives also emerged in the Swedish eHealth Agency's 2021 *General population survey*.⁴⁵

In the work ahead, the State must support more equal access to welfare technology and e-services in Sweden. Despite targeted government grants over several years, there is still a need for increased digitalisation in municipalities and regions. One way for the State to develop its governance through targeted government grants is to link government grants to performance or goal fulfilment with long-term conditions. Initiatives such as the Welfare Technology Centre of Excellence (*Kompetenscenter välfärdsteknik*⁴⁶) also create knowledge and experience that businesses can benefit from.⁴⁷

4.2 Objective - Right information and knowledge

A prerequisite for equal healthcare and social services of good quality is that employees have the right information and knowledge in their encounters with patients and clients. This objective includes access to appropriate and clear documentation about the patient or client as well as about the individual's contacts with healthcare and social services. It also includes access to decision support and the best available knowledge, at all times, in the activity's processes. The necessary condition for this is structured documentation and effective information management in healthcare and social services, where the results of data processing can also be used to improve activities.⁴⁸

This section presents government assignments to public authorities and government public inquiries. In addition, the current situation regarding the

⁴⁵ Swedish eHealth Agency (2022). *Invånarundersökningen 2021*. [General population survey 2021].

⁴⁶ [Kompetenscenter välfärdsteknik | SKR](#) [Accessed 24/04/2023].

⁴⁷ Swedish Agency for Health and Care Services Analysis (2021). *Digital teknik med äldre i fokus. En delredovisning av överenskommelsen om digitalisering i äldreomsorgen*. [Digital Technology for the Elderly: An interim report on the agreement regarding digitalisation of elderly care].

⁴⁸ Ministry of Health and Social Affairs and SALAR (2020). *A Strategy for Implementing Vision for eHealth 2025: The Next Step, 2020–2022*.

National Medication List and the digital exchange of patient summaries and ePrescriptions across national borders is described.

Furthermore, development is presented based on the National Patient Overview (NPO) and the Electronic Expert Support (EES) for medicines. Developments regarding mobile documentation opportunities for municipal staff in operating systems are also presented.

Summary of results

- All regional healthcare providers, and 15 percent of municipal healthcare providers, produce information in NPO
- Pharmacy use of EES is increasing
- Staff have the opportunity to document mobile in the operating system in more and more municipalities
- Several government initiatives that may eventually improve information supply
- Legislative amendments needed for digital exchange of ePrescriptions across national borders
- Requirement to join National Medication List postponed

4.2.1 All regional healthcare providers, and 15 percent of municipal healthcare providers, produce information in NPO

Inera's national service platform⁴⁹ enables municipal, regional and private healthcare providers who are publicly funded to use the NPO service.

NPO is a web-based tool that provides a glimpse into a separate medical-records system that closes again after you leave the service. The information cannot be changed, printed or saved to one's own medical-record system. The information is displayed in the same way regardless of which medical-records system it is displayed in.⁵⁰

In NPO, healthcare providers can be producers, by making information available, and/or consumers, by accessing information produced by another healthcare provider.⁵¹ The figures below illustrate the information that

⁴⁹ The National Service Platform is a technical platform that simplifies, secures and streamlines the exchange of information between different IT systems in health and social care, for example between NPO and regional systems. When an activity wants to retrieve a certain type of information from another organisations, a call can be made to the National Service Platform.

⁵⁰ <https://vardgivarguiden.se/it-stod/e-tjanster-och-system/nationell-patientoversikt-npo/> [Accessed 25/05/2023].

⁵¹ [NPÖ - Nationell patientöversikt - Inera](#) [Accessed 16/04/2023].

municipal, regional and private healthcare providers who are publicly funded produce in NPO.

Regional healthcare providers produce 5-9 value sets in NPO. During the year, healthcare providers in five regions added additional value sets. All regional healthcare providers produce the value sets diagnosis, test results, healthcare contacts and notes (Figure 12).

In total, 43 of 290 municipal healthcare providers produce some form of information in NPO. The number of municipal healthcare providers has gradually increased year by year. Most produce 1-3 value sets, with the most common value sets being disability status and ADL (activities of daily living) and care plan (Figure 13).

The number of private healthcare providers producing value sets in NPO has also increased annually since 2020. The most common value sets produced by private healthcare providers are notes, diagnoses and care contacts (Figure 14).

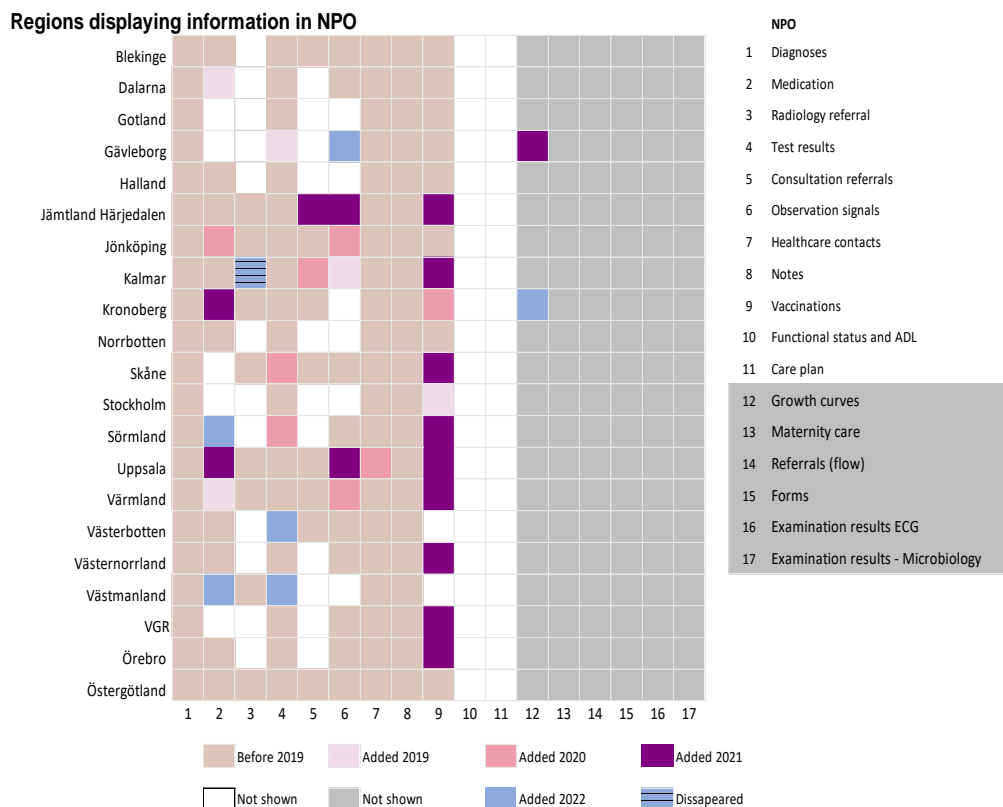


Figure 12. Value sets that regions display as producers in NPO. Dark-grey dots indicate value sets in development where not all conditions for displaying this information are in place. Source: Inera, 25/01/2023.



Figure 13. Value sets that municipalities display as producers in NPO. Dark-grey dots indicate value sets in development where not all conditions for displaying this information are in place. Source: Inera, 25/01/2023.

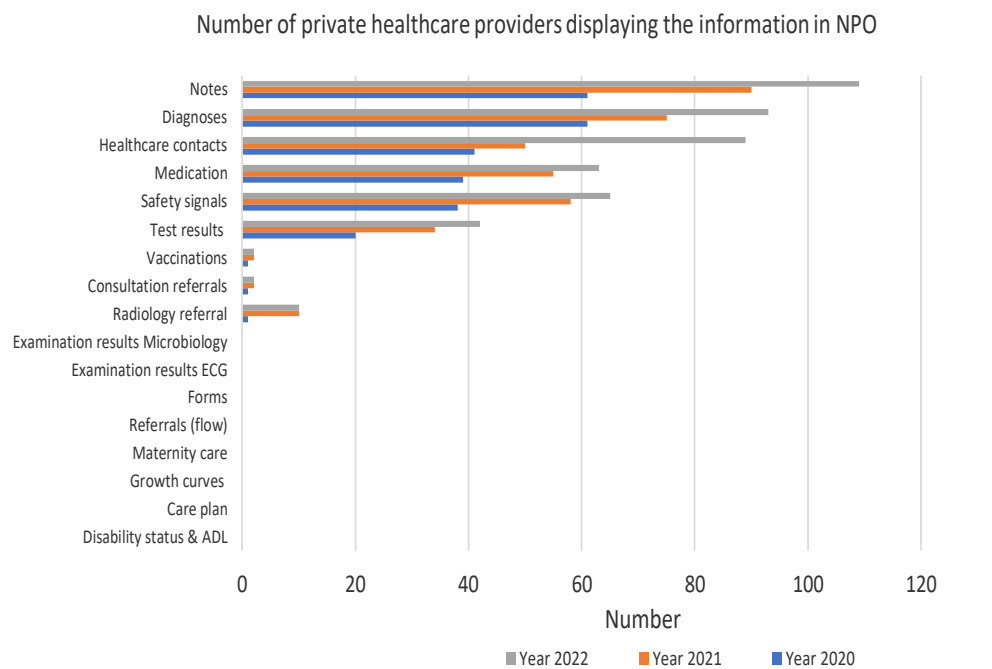


Figure 14. Value sets that private healthcare providers display as producers in NPO. Source: Inera, 25/01/2023.

4.2.2 Pharmacy use of EES is increasing

Today, the majority of prescriptions in Sweden are electronic. This means that prescription information is available in all pharmacies, which makes it easier to use decision-support tools such as the electronic expert support system (EES). The aim of the EES is to support pharmacists in checking for potential drug interactions, inappropriate medicines or incorrect dosages. The decision-support tool is available at all outpatient pharmacies in Sweden. Use of the EES has increased over the years. The share of dispensed prescriptions analysed by EES has increased from around 20 percent, in early 2020, to around 55 percent by the end of 2022 (Figure 15).⁵²

⁵² Statistics from the Swedish eHealth Agency.

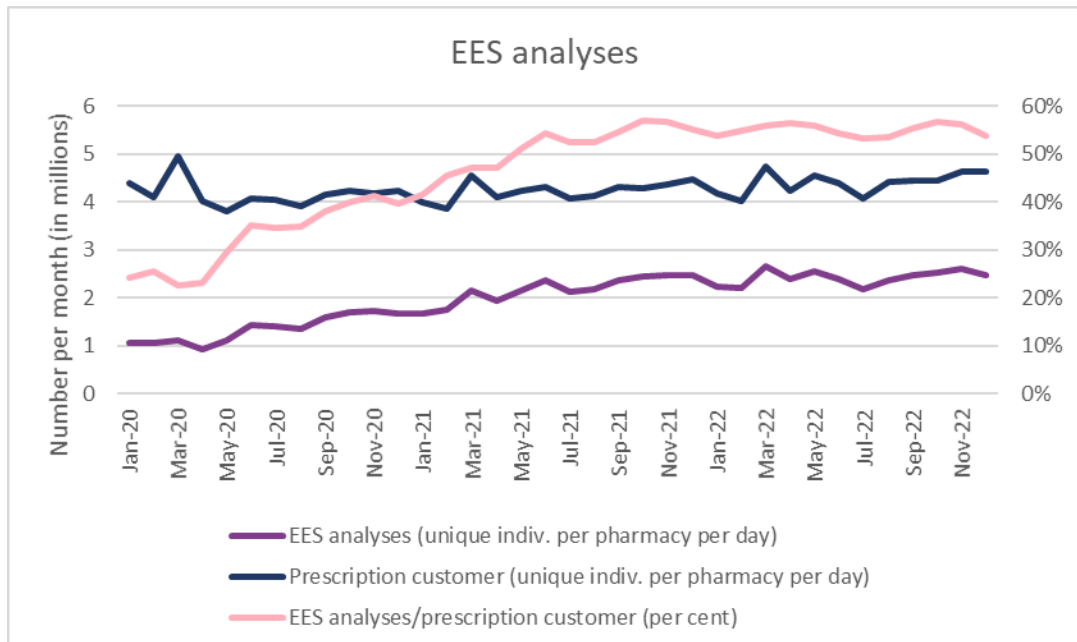


Figure 15. Number of EES analyses and prescription clients, including proportion of EES analyses per prescription client over time. Source: Swedish eHealth Agency, 25/01/2023.

4.2.3 Staff have the opportunity to document mobile in the operating system in more and more municipalities

When staff visit individuals in their homes, they may need information from the municipality's operating systems. They may also need to document the result of their visit. There are various solutions for mobile reading and documentation, including mobile phones, tablets, digital pens and laptops.

In 51 percent of municipalities, qualified healthcare professionals can document mobile in the operating system. This is an increase of six percentage points compared to 2021 (Figure 16).

For social services staff, this figure varies between 31 and 62 percent depending on the area of activity (Figure 17). Compared to previous years, the trend is positive in all areas of activity. The development in home care services is particularly noteworthy, where 62 percent of all home-care staff have the possibility to document mobile in the operating system. ,

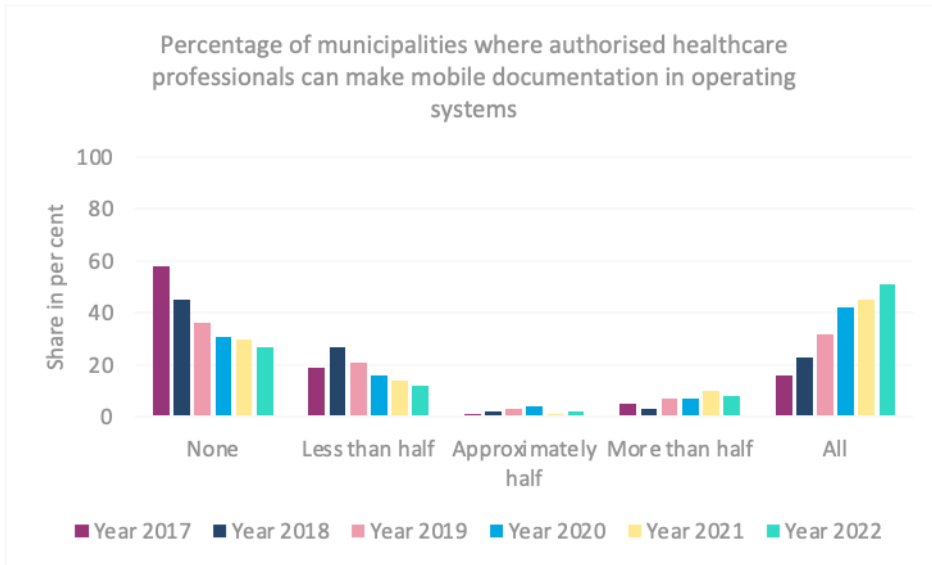


Figure 16. Percentage of municipalities where authorised healthcare professionals have equipment for mobile documentation in mobile operating systems, reported in percent. Source: The National Board of Health and Welfare. E-hälsa och välfärdsteknik i kommunerna [e-Health and Welfare Technology in Municipalities], years 2017-2022.

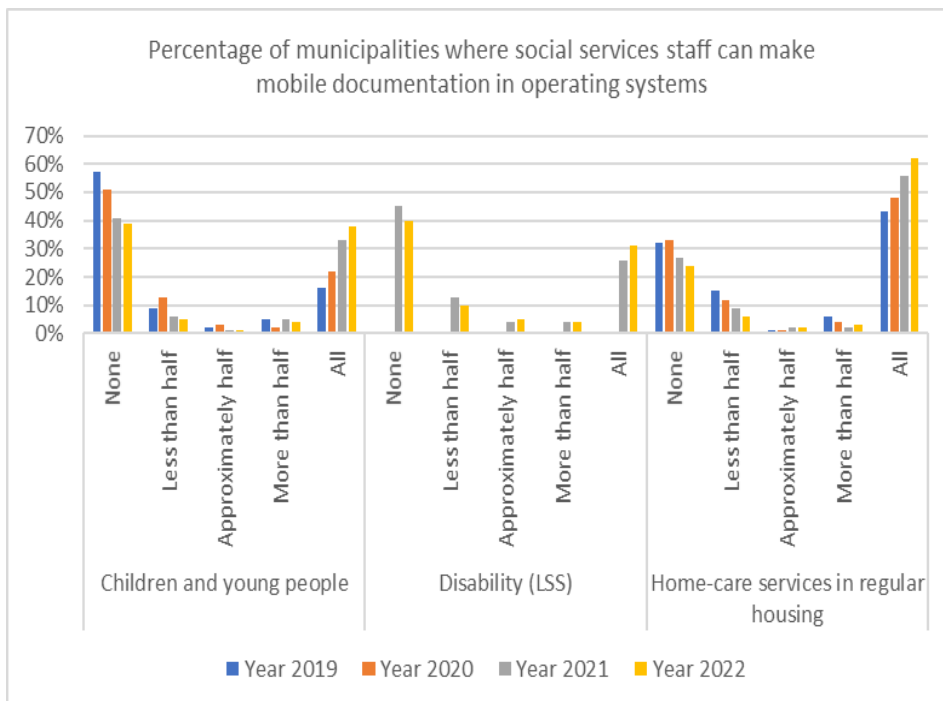


Figure 17. Percentage of municipalities where social services staff can make mobile documentation in operating systems, reported in percent. Source: The National Board of Health and Welfare E-hälsa och välfärdsteknik i kommunerna [e-Health and Welfare Technology in Municipalities], years 2019-2022.

4.2.4 Several government initiatives that may eventually improve information supply

Good access to health data for employees in healthcare and social services is a pre-condition for offering patients and clients high quality health and social care. The ability to process large amounts of health data is also important for research and development, to create new and safer treatments and more effective preventive measures.

In 2022, the Swedish eHealth Agency reported on a number of government assignments presenting various proposals to increase the utilisation and sharing of health data. One of these assignments dealt with how coherent medical-record keeping can be utilised to a greater extent⁵³. Another example is a pilot study on a governmental nationwide data space for diagnostic imaging⁵⁴. All government assignments are presented in the matrix in chapter five.

Several of the assignments involve various national digital-infrastructure features benefiting employees in healthcare and social services as well as the public. In several of the reports on these assignments, the Agency describes a need for a standardised format and uniform data quality to effectively share information between different actors.

In 2022, other public authorities also commenced or reported on government assignments that were aimed at increasing the utilisation and sharing of data. Several government inquiries are also ongoing in this area. Below is a selection:

The National Board of Health and Welfare has been assigned to map data sets in the health data area that can be considered to be of national interest.⁵⁵ The final report on this assignment shows that the need for national data is great and covers many different areas. Particularly significant are the needs for data from primary care, data on the use of requisitioned drugs and data needed for crisis preparedness and management.⁵⁶

ENA - Sweden's Digital Infrastructure is an ongoing collaboration led by the Swedish Agency for Digital Government since 2019. Its aim is to exchange information in an efficient and secure way among and with public actors. This infrastructure consists of a number of so-called building blocks, a framework

⁵³ S2021/03119.

⁵⁴ S2021/05259.

⁵⁵ S2021/05369.

⁵⁶ National Board of Health and Welfare (2022). *Kartläggning av datamängder av nationellt intresse på hälsodataområdet – slutrapport. 2022. Delredovisning* [Mapping Healthcare Data Sets of National Interest: Final report 2022 Interim report].

for national basic data and a governance structure.⁵⁷ The Swedish eHealth Agency has sectoral responsibility for health, healthcare and care in the collaboration, and is the responsible authority for developing a domain for national basic data in this sector.

The Inquiry on infrastructure for health data as a national interest shall analyse and propose appropriate and socio-economically efficient measures that are deemed justified to achieve a better and more secure information supply of health data between systems and actors. This assignment shall be reported no later than 30 April 2024.⁵⁸

The Inquiry on health data as a national resource for future healthcare will analyse existing opportunities for secondary use of health data and make proposals for expanding such opportunities. The aim of the assignment is to develop the possibilities for secondary use of health data in order to directly or indirectly strengthen healthcare. This assignment shall be reported no later than 21 September 2023.⁵⁹

In 2022, the Swedish eHealth Agency and the National Board of Health and Welfare have monitored and contributed to the extensive work underway in the EU with negotiations on a European Health Data Space (EHDS). The Swedish eHealth Agency has also participated in other groupings at EU level aiming to strengthen the health data area, such as Towards the European Health Data Space (TEHDAS) and X-eHealth.

4.2.5 Legislative amendments needed for digital exchange of ePrescriptions across national borders

The European Commission provides the eHealth Digital Service Infrastructure (eHDSI) for EU countries, for which they can create "generic services" to connect national eHealth systems through so-called *National Contact Points for eHealth*. These services enable the digital exchange of electronic prescriptions and patient summaries across borders. The objective is to implement these services by 2025. Several European countries are connected to varying degrees with the infrastructure. As of late 2022, Sweden was not yet connected to this infrastructure in a way that enables exchange of health information.⁶⁰

⁵⁷ I2022/00102.

⁵⁸ S2022:10.

⁵⁹ Terms of reference 2022:41.

⁶⁰ Electronic cross-border health services | Public Health (europa.eu), [Electronic cross-border health services \(europa.eu\)](https://public-health.europa.eu/electronic-cross-border-health-services). [Accessed 16/04/2022].

Document name: Follow-up Vision for eHealth 2025: Report on the Year 2022

Cross-border ePrescriptions and patient summaries: a long-term opportunity

At present, the technical conditions exist, but there are no legal conditions in Sweden for implementing the ePrescription service across national borders.⁶¹ An inquiry chair was appointed by the Government to investigate the legal issues arising from the processing of ePrescriptions across national borders.⁶² On 31 December 2021, the inquiry chair submitted his interim report "*E-recept inom EES*" including proposals for a new law and regulation, which will enter into force on 1 May 2023.

In 2022, the Swedish eHealth Agency has been assigned to maintain features for ePrescriptions across national borders. The Agency has continued to develop the operational and technical elements of cross-border ePrescriptions. The work is progressing as far as possible pending the establishment of the legal conditions required for dispensing ePrescriptions abroad and foreign ePrescriptions in Sweden.⁶³

To accelerate the work on cross-border patient summaries, the assignment of the Inquiry on ePrescription in the EEA⁶⁴ was expanded to include issues related to cross-border patient summaries in the EEA. In SOU 2023:13 Patient summaries in the EEA and Sweden, the inquiry proposes, among other things, that the Government ensure legal and organisational conditions to enable digital exchange of patient summaries across national borders.⁶⁵

4.2.6 Requirement to join National Medication List postponed

The National Medication List Act (NLL) entered into force on 1 May 2021. The aim of the NLL is to provide a nationwide source of information, giving healthcare professionals, pharmacies and patients access to the same information about patient's prescribed and dispensed medicines, assistive technology or food products dispensed in pharmacies, while protecting patient's privacy.

Requirements for healthcare actors to connect and provide information would have initially applied from 1 May 2023. After healthcare actors indicated that it would be difficult, and in some cases impossible, to connect to the National

⁶¹ Swedish eHealth Agency (2022). *E-recept över landsgränser 2022* [ePrescriptions across national borders 2022].

⁶² Terms of reference 2020:80. *Vissa frågor om förskrivning och expediering av elektroniska recept inom EES* [Issues in prescribing and dispensing ePrescriptions within EEA].

⁶³ Swedish eHealth Agency (2022). *E-recept över landsgränser 2022* [ePrescriptions across national borders 2022].

⁶⁴ SOU 2021:102.

⁶⁵ Swedish Government Offices (2023). *Slutbetänkande av Utredningen om e-recept och patientöversikter inom EES* [Final report of the Inquiry regarding ePrescriptions and patient summaries within the EEA].

Medication List, the Parliament decided to postpone the requirement to connect. The new date for healthcare and pharmacy stakeholders to connect their healthcare information systems is 1 December 2025.

The Swedish eHealth Agency's continued work on the medication list is focused on providing implementation support to healthcare and pharmacy stakeholders for connection and maintaining the security of prescription processing for patients.

4.2.7 Conclusions of the Swedish eHealth Agency

This year's follow-up shows that the exchange of health data within and between regions and municipalities has not reached its full potential. For example, few municipal healthcare providers make information in NPO available to other healthcare providers, which means that regional healthcare providers have very limited insight into the documentation made by municipal healthcare providers.

Improving access to information for health and social care professionals across activities has been a long-standing goal. In 2022, several government assignments and government investigations were reported on or commenced, with the aim of increasing the utilisation and sharing of health data within and between healthcare and social services. Together, these reports indicate the need of a national digital infrastructure of health data, not only for primary use but also for secondary use, such as research.

That numerous assignments, initiatives and development projects are currently underway is positive, but it can be difficult to get an overview of everything going on. This can lead to redundancy and missed opportunities for synergy. It is therefore important that the results of different studies and projects are coordinated by a national actor and that a plan exists for when and how the proposals will be implemented. Otherwise, there is a risk that the time and resources invested by the Government and public authorities in the assignments will be lost, and the objectives set will not be achieved.

Another important aspect is that the work carried out at a national level aligns with development work underway at EU level, and can meet the requirements of the European Commission's proposal for a regulation on a European Health Data Space (EHDS). This regulation is likely to be a driving factor in the further development of healthcare services and infrastructure.

A prerequisite for achieving the above is a coherent and unified orientation that supports healthcare mandators in their continued work with digitalisation

in healthcare and social services. A unified orientation could be realised in an action plan where the State, together with relevant stakeholders, clarifies the national digital infrastructure, including national digital e-services, that must exist, including their purpose. In addition, responsibilities for development, implementation, financing and management must be clarified.

4.3 Objective - Safe and secure information processing

This objective addresses the ability to manage and protect information appropriately. At the same time, it is important that data is accurate, that individuals have the opportunity to influence how data is used and by whom, and that it is possible to learn what data exist. For the citizens to want to share their health data with healthcare and social services, they must feel confident that such data are handled securely by municipalities, regions and government actors.

To maintain public trust, avoid incidents and enable digital business development, information management must constantly evolve as the world changes. The war in Ukraine and threats to European security make systematic security work even more essential.

This section presents developments based on: follow-up of information on security needs and risks, management and analysis of information security risks, classification of information, strong digital identity authentication for access to sensitive personal data, reporting of personal data incidents, development of global cyber threats, National Cyber Security Index, reporting of adverse events and incidents of medical devices and national health information systems.

Summary of results

- Barely half of municipalities and regions have followed up risks and needs for development of information security
- Most municipalities and regions have adopted an approach to managing and analysing information security risks
- One in five municipalities and regions have classified all information
- An increasing number of municipalities require strong authentication in all operating systems that process sensitive personal data
- Several reported personal data incidents related to unauthorised accesses

- Cyberattacks in healthcare have increased dramatically worldwide
- Sweden's cyber security has increased significantly, according to the National Cyber Security Index
- Under-reporting of adverse events and incidents related to medical devices and national health information systems

4.3.1 Barely half of municipalities and regions have followed up risks and needs for development of information security

Regular follow-up of risks and development needs is essential to ensure the right level of information security. In its survey on eHealth and welfare technology in municipalities, the National Board of Health and Welfare followed up on whether municipalities follow up risks and information security development needs.

Just under half (48 percent) of the municipalities have carried out a follow-up of risks and needs for development of information security in social services in 2021. The corresponding figure in municipal healthcare is 40 percent.⁶⁶

There is no significant difference in the proportion of follow-ups carried out after breaking down the social services' areas of activity. Among municipalities, 44 percent report carrying out a follow-up of risks and needs for development of information security in elderly care and individual and family care. The corresponding figure for disability activities is 42 percent (Figure 18).

⁶⁶ National Board of Health and Welfare (2022). *E-hälsa och välfärdsteknik i kommunerna 2022*. [e-Health and Welfare Technology in Municipalities 2022].

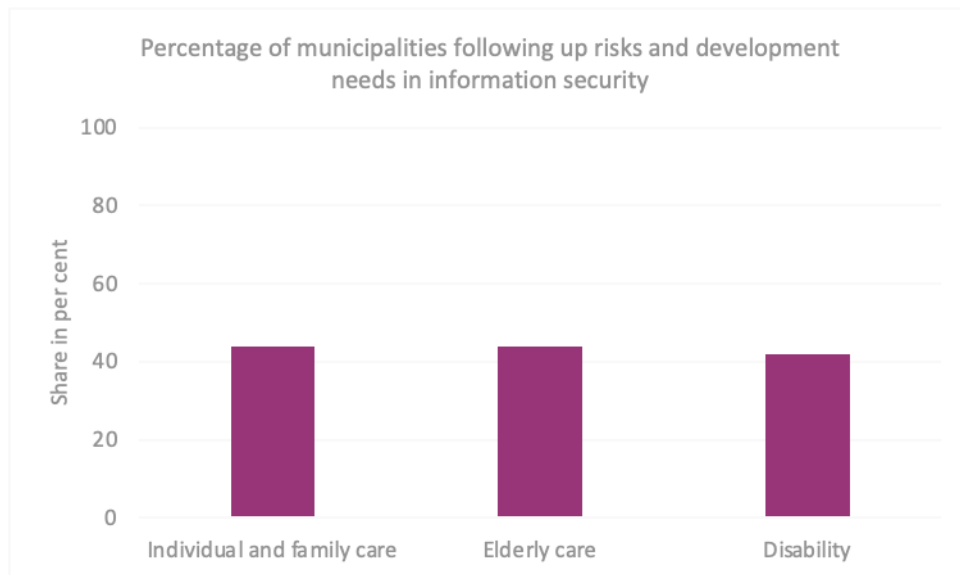


Figure 18. Percentage of municipalities following up risks and development needs in information security 2021 Source: The National Board of Health and Welfare. *E-hälsa och välfärdsteknik i kommunerna [e-Health and Welfare Technology in Municipalities]*, 2022.

In the National Board of Health and Welfare's report *Application of digital care in the regions: A mapping*, a similar question was asked to regions regarding follow-up of risks and development needs in information security. The results show that almost half of the regions (44 percent) carried out follow-up of risks and development needs in information security in healthcare in the past year.⁶⁷

4.3.2 Most municipalities and regions have adopted an approach to managing and analysing information security risks

According to the MSB's latest report on systematic information-security work in public administration in 2021, four fifths of reporting regions had an approach for managing and analysing information security risks over the past two years. Their approaches were generally decided or otherwise deliberately chosen by the organisation. This included the allocation of roles and responsibilities as well as an organisation-wide model for analysing information-security risks, and was described in support and guidance for staff as well as being monitored and evaluated at least once.

Around two thirds of reported municipalities have had an approach to managing and analysing information security risks in the last two years.

⁶⁷ National Board of Health and Welfare (2023). *Tillämpning av digital vård i regionerna. En kartläggning.* [Application of digital care in the regions. A mapping].

During this period, more than half of the municipalities lacked practices similar to those described above for the regions.⁶⁸

4.3.3 One in five municipalities and regions have classified all information

The classification of municipal and regional information is essential to ensure that information and resources are protected, accurate and available to authorised staff. By classifying data sets, it is also possible to identify information requiring protection due to data protection and confidentiality rules.

By 2022, 20 percent of municipalities have classified all information objects in social services, which is an increase of 4 percentage points compared to 2019. Just over half (55 percent) of municipalities have classified some information objects in social services. A quarter of municipalities have not made any security classification in social services (Figure 19).

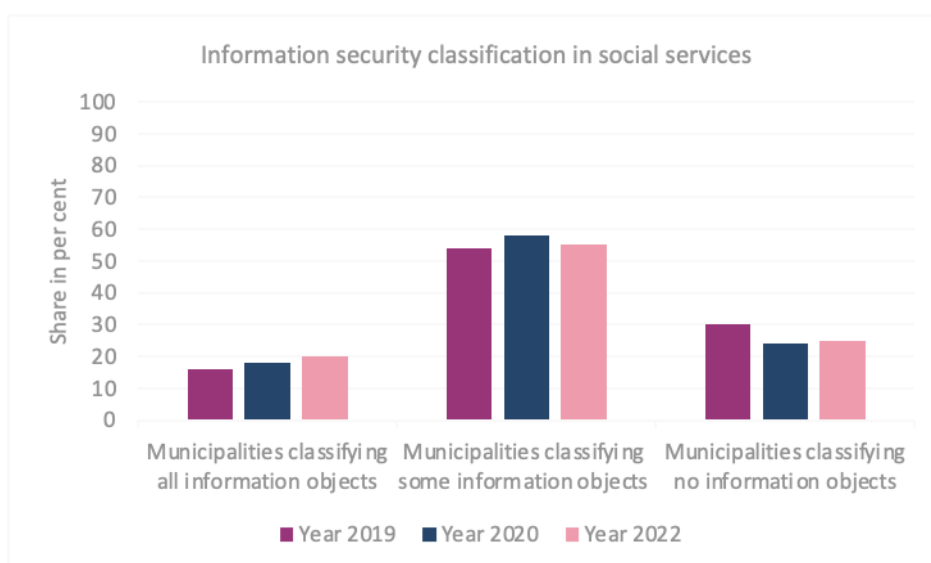


Figure 19. Percentage of municipalities that have classified information related to confidentiality, accuracy and availability in social services, share in percent. Source: The National Board of Health and Welfare. E-hälsa och välfärdsteknik i kommunerna [e-Health and Welfare Technology in Municipalities], years 2019-2022. * In 2021, the question applied to both social services and municipal health services.

⁶⁸Swedish Civil Contingencies Agency (2022). *Det systematiska informationssäkerhetsarbetet i den offentliga förvaltningen. Resultatredovisning Infosäkkollen 2021* [Systematic Information Security Work in Public Administration: Infosäkkollen a report 2021]

Roughly 20 percent of municipalities have classified all information objects within municipal healthcare, and just over 40 percent have classified some information objects. The remainder have not classified any information in municipal healthcare (Figure 20).

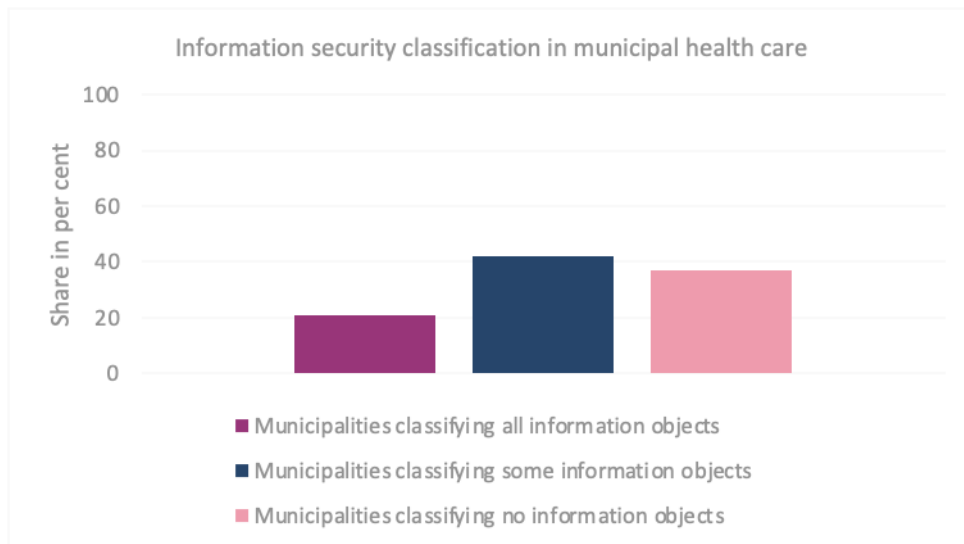


Figure 20. Percentage of municipalities that have classified information related to confidentiality, accuracy and availability in municipal healthcare, 2022 reported in percent. Source: The National Board of Health and Welfare. E-hälsa och välfärdsteknik i kommunerna [e-Health and Welfare Technology in Municipalities], 2022.

Among regions, 22 percent have classified all information objects and 67 percent have classified some information objects in healthcare. More than 10 percent of regions do not know whether any classification of information is done (Figure 21).

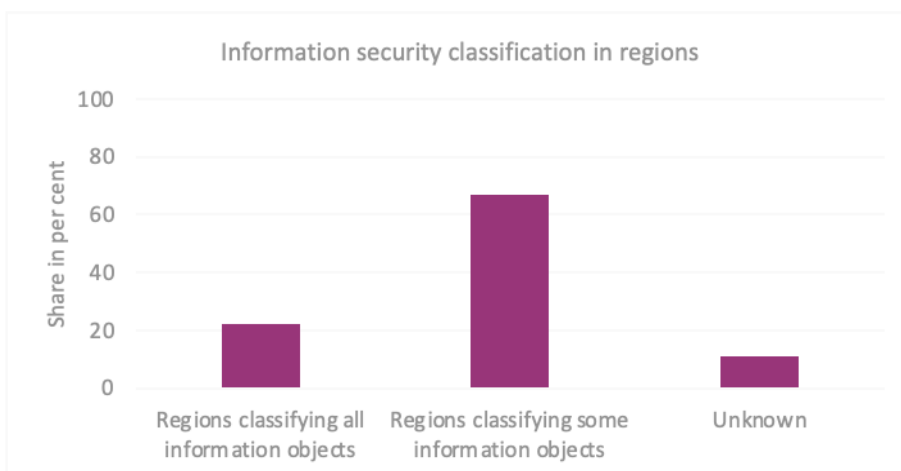


Figure 21. Percentage of regions that have classified information related to confidentiality, accuracy and availability in healthcare, 2022 reported in percent Source: The National Board of Health and Welfare. Tillämpning av digital vård i regionerna [Application of digital care in the regions. A mapping], 2022.

4.3.4 An increasing number of municipalities require strong authentication in all operating systems that process sensitive personal data

An important aspect of information security is that only authorised staff have access to personal data. Systems must therefore be equipped with, e.g., login and access routines. In addition to the available e-identification technologies for individuals, additional secure-authentication technologies exist for the workplace, e.g., SITHS cards.

In 2022, 45 percent of municipalities required strong authentication in all operating systems that grant staff access to sensitive personal data, an increase of 10 percentage points compared to 2021. The share of municipalities that do not require secure authentication for any operating system remains unchanged at 3 percent since 2020 (Figure 22).

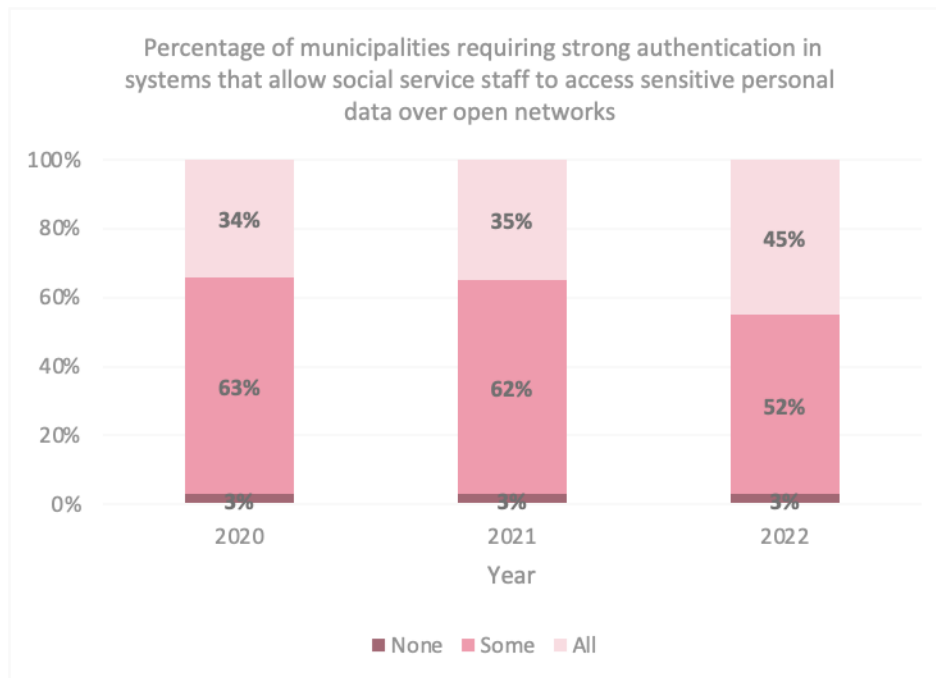


Figure 22. Percentage of municipalities requiring strong authentication in systems that allow social service staff to access sensitive personal data over open networks Source: The National Board of Health and Welfare. *E-hälsa och välfärdsteknik i kommunerna* [e-Health and Welfare Technology in Municipalities], years 2020-2022.

4.3.5 Several reported personal data incidents related to unauthorised accesses

Under the General Data Protection Regulation (GDPR), organisations, i.e., data controllers, have an obligation to report certain types of personal data incidents to the Swedish Authority for Privacy Protection (IMY). A personal data incident is a security incident involving personal data. For example, personal data may have been destroyed or fallen into the wrong hands, such as through unauthorised access.⁶⁹

According to IMY's most recent personal data incident report, a total of 5,767 personal data incidents were reported to the Authority in 2021, an increase of 26 percent compared to 2020, when 4,588 incidents were reported. As in previous years, the majority of reports (66 percent) came from the public sector. According to IMY, this may partly be explained by the large amounts of personal data processed by the public sector and its more-established procedures for reporting incidents, compared to other sectors. The most common reason for such reports was the "human factor", i.e., mistakes made

⁶⁹ Swedish Authority for Privacy Protection (2022). *Anmälda personuppgiftsincidenter 2021* [Reported Personal Data Incidents 2021].

in processing personal data, or an intentional or unintentional failure to follow internal procedures for personal data processing.⁷⁰

Seventeen percent of all incident reports were made by healthcare and eight percent by social services. Of the reported incidents in the healthcare sector, 31 percent were related to unauthorised access to personal data and 14 percent to cyberattacks. In social services, the share of incidents caused by unauthorised access was 20 percent.

4.3.6 Cyberattacks in health care have increased dramatically worldwide

In Check Point's annual security report detailing the development of cyber threats, the latest survey shows a continued increase in cyberattacks across all industries. The global average of weekly attacks in the healthcare sector is 1,463. Cyberattacks in the healthcare sector have increased significantly, by 74 percent compared to 2021, making it the third most vulnerable sector in the global survey.

According to Check Point, ideologically motivated cyberattacks will increase going forward in response to geopolitical conflicts, and known threats such as ransomware will continue to evolve.⁷¹

4.3.7 Sweden's cyber security has increased significantly, according to the National Cyber Security Index

The NCSI is a global live index that measures countries' preparedness to prevent cyber threats and respond to cyber incidents.⁷² The index ranks Greece, Lithuania and Belgium first, second and third globally in terms of information security. Among Nordic countries, Finland is ranked 11th, Sweden 14th, Denmark 15th and Norway 48th.⁷³

After being relatively stable in recent years, Sweden's cybersecurity increased significantly in 2022. In 2021, the index ranked Sweden 43rd globally.⁷⁴

⁷⁰ Swedish Authority for Privacy Protection (2022). *Anmälda personuppgiftsincidenter 2021*. [Reported Personal Data Incidents 2021]

⁷¹ Check Point. *Cyber Security Report 2023*.

⁷² [NCSI :: Methodology \(ega.ee\)](#) [Accessed 04/11/2022].

⁷³ [NCSI :: Ranking \(ega.ee\)](#). Retrieved 4 November 2022. [Accessed 04/11/2022].

⁷⁴ [NCSI :: Compare \(ega.ee\)](#). Retrieved 4 November 2022. [Accessed 04/11/2022].

4.3.8 Under-reporting of adverse events and incidents related to medical devices and national health information systems

Most IT systems in healthcare and social services are medical devices and/or national health information systems (NHIS). The regulatory framework requires manufacturers and users of medical devices and NHISs to report adverse events and incidents to the Swedish Medical Products Agency.⁷⁵

Manufacturers and users include companies, public authorities, regions, municipalities and individual users. The Swedish Medical Products Agency finds that adverse events and incidents are under-reported to the Agency and that the number of registered manufacturers is not realistic. To simplify the reporting procedure, in 2022 the Swedish Medical Products Agency developed new digital forms⁷⁶ to support manufacturers and users.

The Swedish Medical Products Agency also believes that manufacturers and users need better understanding of the regulatory framework for medical devices and NHISs. That is why, the Swedish Medical Products Agency has participated in various conferences in 2022 and informed manufacturers and users about the regulatory requirements.

4.3.9 Conclusions of the Swedish eHealth Agency

The Swedish eHealth Agency believes that information-security work needs to have a strong focus and must be prioritised to a greater extent.

Less than half of regions and municipalities have followed up risks and development needs in information-security work over the past year. Around one fifth of regions and municipalities have classified all information in terms of confidentiality, accuracy and availability. While some results show positive developments, progress is slow and information-security threats are growing.

The current security situation have resulted in an increasing number of cyberattacks and a growing global cyber threat, not least to the healthcare sector. Given these ongoing developments, it is more important than ever that healthcare and social services carry out proactive, rather than reactionary, information-security work. Deficiencies in information security work risk otherwise result in serious negative consequences for citizens and could damage confidence in how actors in the sector handle information.

⁷⁵ Medicinteknik | Läkemedelsverket (lakemedelsverket.se) [Accessed 07/06/2023].

⁷⁶ Reporting of serious incidents | Läkemedelsverket (lakemedelsverket.se) [Accessed 07/06/2023].

The need to prioritise information security is also highlighted by ongoing health data developments, where access to and sharing of health data within and between healthcare and social services is a goal.

One way to strengthen organisational information security work is by creating a culture that considers information security issues an aspect of the activity. This requires clear leadership and governance as well as resources for information security. In addition, ongoing follow-up is important to identify flaws and develop the information-security work.

4.4 Objective - Development and digital transformation hand in hand

Digitalisation is changing the conditions for activities across all sectors. This objective recognises that long-term work is required to support the ability to develop activities as well as to equip individuals and organisations with the necessary abilities and skills. One important aspect of successful digitalisation projects is management's knowledge and ability to steer development in the organisation, both in the boardroom and with policies and strategies.

Competence development in digitalisation must be prioritised in the near future, and coordinated national support must be offered to introduce new technologies and working methods in activities. An important condition for this is the existence of fundamental conditions in the form of regulations and technical and semantic standards. To achieve maximum effect, new forms of collaboration between government agencies, regions, municipalities, private providers and the business community are needed.⁷⁷

This section describes developments based on: governing documents and digitalisation strategies, evaluations of digitalisation's impact, total regional IT costs, national support and competence development initiatives in eHealth, and changes in regulations and the development of standards.

⁷⁷ Ministry of Health and Social Affairs and SALAR (2020). *A Strategy for Implementing Vision for eHealth 2025: The Next Step, 2020–2022*.

Summary of results

- Nearly every third municipality lacks governing documents in social services for eHealth and welfare technology
- Regional digitalisation strategies focus on efficiency
- Most municipalities have not evaluated digitalisation's impact
- Regional IT costs as a share of total expenditure remain unchanged
- Several national support and competence-enhancing work are available
- Regulatory framework amendments and development of standards underway

4.4.1 Nearly every third municipality lacks governing documents in social services for eHealth and welfare technology

Clear governance and planning at all levels is central to the development of eHealth. Therefore, it is important that municipalities have strategies and governing documents with objectives, allocated resources, implementation, follow-up and long-term management.⁷⁸

Governing documents for eHealth and welfare technology are slightly more common in social services than in municipal healthcare. Almost 30 percent of municipalities have no governing documents for social services. In municipal healthcare, just over 35 percent of municipalities have no governing documents.⁷⁹

More often, municipalities have long-term strategies instead of action plans with allocated time and resources. About one in five municipalities have action plans with allocated time and resources in social services and municipal healthcare (Figure 23).

Larger municipalities have governing documents to a greater extent than smaller municipalities.⁸⁰

⁷⁸ National Board of Health and Welfare (2022). *E-hälsa och välfärdsteknik i kommunerna 2022*. [e-Health and Welfare Technology in Municipalities 2022].

⁷⁹ National Board of Health and Welfare (2022). *E-hälsa och välfärdsteknik i kommunerna 2022*. [e-Health and Welfare Technology in Municipalities 2022].

⁸⁰ National Board of Health and Welfare (2022). *E-hälsa och välfärdsteknik i kommunerna 2022*. [e-Health and Welfare Technology in Municipalities 2022].

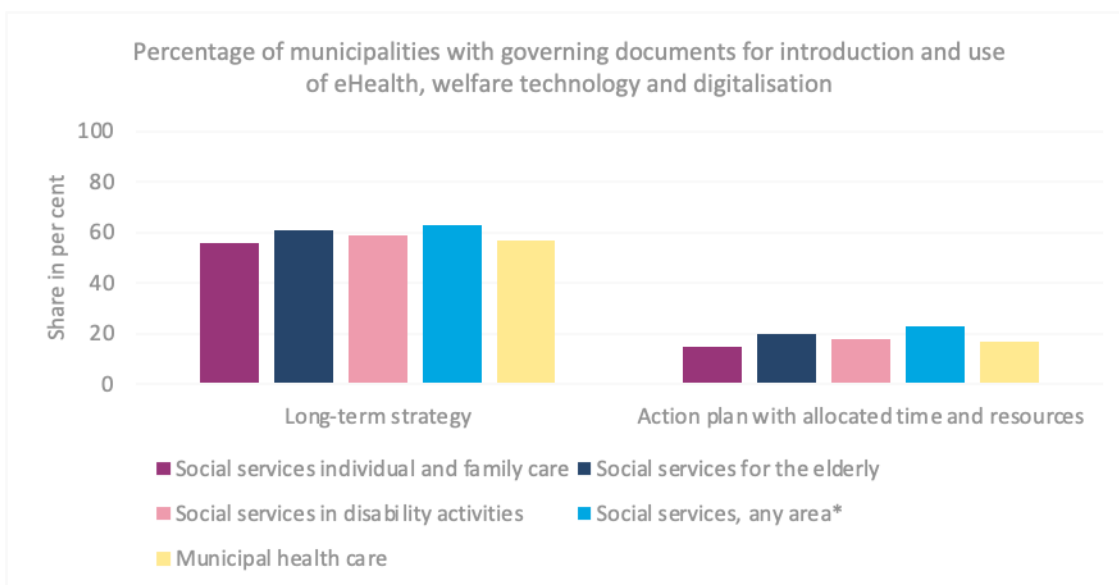


Figure 23. Percentage of municipalities with governing documents for introduction and use of eHealth, welfare technology and digitalisation, reported in percent Source: The National Board of Health and Welfare. *E-hälsa och välfärdsteknik i kommunerna* [e-Health and Welfare Technology in Municipalities], 2022.

4.4.2 Regional digitalisation strategies focus on efficiency

Ninety-four percent of regions have adopted a digitalisation strategy/policy for healthcare. Just over 60 percent of the regions have adopted a time-and-resource action plan for digitalisation in healthcare.⁸¹

In the report *Regional Digitalisation Strategies: Orientation and consequences 2022 (Regionernas digitaliseringsstrategier, Riktning och konsekvenser 2022)*, the Digital Government Research Consortium has analysed all digitisation strategies in the regions. This analysis shows that the regions' digitalisation strategies have a clear focus on efficiency (85 percent of content) rather than on innovation (15 percent). According to the Digital Government Research Consortium, the focus on high efficiency is an indication that the organisation lacks clear input values regarding digital transition, and suggests a governance focus on financial results, rather than business development and transformation of the business through digitalisation.⁸²

⁸¹ National Board of Health and Welfare (2023). *Tillämpning av digital vård i regionerna. En kartläggning*. [Application of digital care in the regions. A mapping].

⁸² Digital Government Research Consortium (2022). *Regionernas digitaliseringsstrategier, Riktning och konsekvenser*. [Regional Digitalisation Strategies: Orientation and consequences 2022].

4.4.3 Most municipalities have not evaluated digitalisation's impact

To create incentives and ensure that the right initiatives and measures are implemented, it is important to continuously evaluate the impact of digitalisation.

Most municipalities have not evaluated digitalisation's impact over the past two years, neither in social services (69 percent) or in municipal healthcare (76 percent).

Staff and organisational impact-evaluations are most common. The proportion of municipalities that have commissioned such an evaluation is 27 percent in social services and 21 percent in municipal healthcare.

Least common are cost-effectiveness analyses. The proportion of municipalities carrying out such an evaluation in the last two years is 18 percent in social services and 13 percent in municipal healthcare (Figure 24).

Larger municipalities have conducted evaluations of the impact of digitalisation to a greater extent than smaller municipalities.⁸³

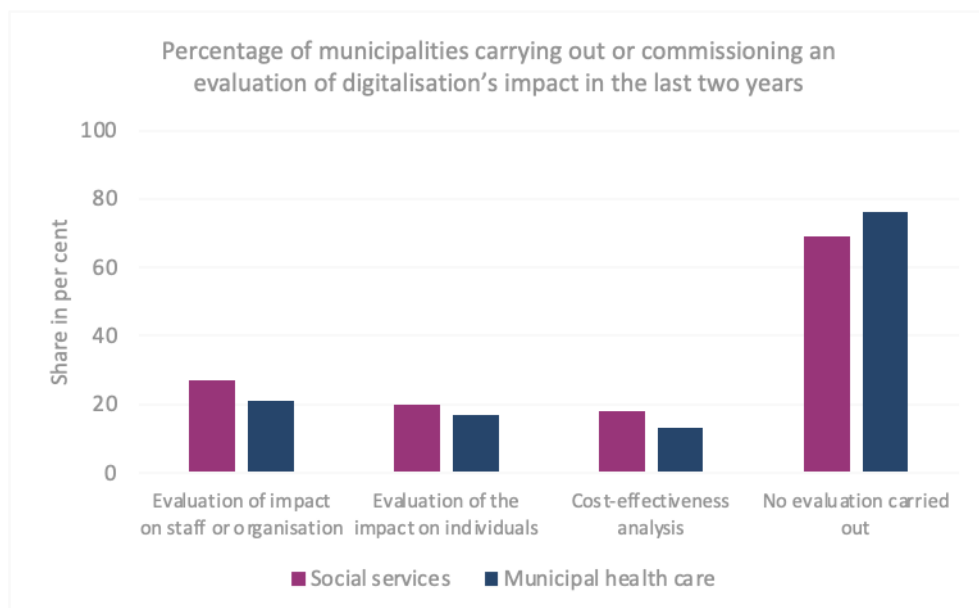


Figure 24. Percentage of municipalities carrying out or commissioning an evaluation of digitalisation's impact in the last two years, reported in percent Source: The National Board of Health and Welfare. *E-hälsa och välfärdsteknik i kommunerna* [e-Health and Welfare Technology in Municipalities], 2022.

⁸³ National Board of Health and Welfare (2022). *E-hälsa och välfärdsteknik i kommunerna 2022*. [e-Health and Welfare Technology in Municipalities 2022].

4.4.4 Regional IT costs as a share of total expenditure remain unchanged

The level of funding determines the ability for organisations to take advantage of the development opportunities of digitalisation and to address its challenges.

Based on 19 regions reporting data, total regional IT costs in 2021 were estimated at SEK 14.9 billion. Since the beginning of 2000s, regional IT costs as a proportion of balance sheet total⁸⁴ have remained stable at around 2.8 - 3 percent.

In recent years, there has been a shift in costs, with regions spending relatively more on services, staff and software and less on infrastructure.⁸⁵

4.4.5 Several national support and competence-enhancing work are available

For digitalisation to move forward, continuing competence development is necessary at all levels of healthcare and social services. One way to contribute to continuing competence development is with national knowledge support that creates conditions for introducing and integrating new approaches and technologies in the activities.

Annual reports tracking developments in eHealth

Since 2014, the National Board of Health and Welfare has been tasked with following up the use of eHealth and welfare technology in Sweden's municipalities and identifying success factors and impediments to development.⁸⁶

SALAR coordinates work on the National Healthcare Barometer, which aims to capture the population's attitudes, confidence in and perception of Swedish healthcare. This report includes several questions regarding attitudes towards e-services and digital healthcare.⁸⁷

Since 2019, the Swedish eHealth Agency has produced the General Population Survey, which aims to increase knowledge about citizens' use of

⁸⁴ Balance sheet total is a term used to describe the sum of assets (or equity less liabilities) in a company's balance sheet.

⁸⁵ The SLIT network for Swedish IT directors (2022). *IT och digitalise, ring i hälso- och sjukvården 2022*. [IT and digitalisation in healthcare 2022].

⁸⁶The National Board of Health and Welfare (2022). *E-hälsa och välfärdsteknik i kommunerna 2022*. [e-Health and Welfare Technology in Municipalities 2022].

⁸⁷Swedish Association of Local Authorities and Regions. *k 2022*. [National Healthcare Barometer 2022].

and attitudes towards digital services in healthcare and social services. This report is produced every two years.⁸⁸

A selection of national support

Pursuant to an agreement with the government, SALAR has established a national support function, the Welfare Technology Centre of Excellence, to support the municipalities in implementing digital technology in elderly care. The national support function, which is a multi-year project, works to provide advice, support and guidance to concretely support municipalities on issues including change management, information security, infrastructure, law, benefit realisation, follow-up and procurement of digital technologies. The Welfare Technology Centre of Excellence has developed support materials and has a helpdesk, and can provide municipalities with on-site support. It also provides advice, support and guidance for systematic cooperation between municipalities. All material produced by the Welfare Technology Centre of Excellence is available on the SALAR website.⁸⁹

SALAR also coordinates a competence forum related to the introduction of digital services for self-monitoring. The purpose of the competence forum is to share experiences and identify areas for collaboration between regions. It also creates the conditions for more equitable digital services across the country.⁹⁰

The MSB has developed the tool *Infosäkkollen*, which supports the follow-up and improvement of systematic information-security work in municipalities, regions and government agencies. This tool allows organisations to investigate and follow up such work. The results provide a basis for planning and prioritisation, and developments can be monitored over time.⁹¹

For several years, the Swedish eHealth Agency has conducted surveys of knowledge support that promotes business development with the help of digitalisation in social services and municipal healthcare. The Agency has recently launched an online search service that provides a common entry point for knowledge support from different actors. The search service currently contains 140 knowledge supports that are categorised by, e.g., area of activity, target group and type of support.⁹²

⁸⁸ Swedish National eHealth Agency. *Invånarundersökningen 2021*. [General population survey 2021].

⁸⁹ [Välfärdsteknik | SKR](#) [Accessed 36/06/2023]

⁹⁰ [Egenmonitorering, digitala produkter | SKR](#) [Accessed 16/04/2023].

⁹¹ [Infosäkkollen \(msb.se\)](#) [Accessed 06/04/2023].

⁹² [Sök • E-hälsomyndigheten \(ehalsomyndigheten.se\)](#) [Accessed 16/04/2023].

Knowledge Guide (*Kunskapsguiden*) is a website from the National Board of Health and Welfare that collects knowledge-support material from public authorities and other organisations. Knowledge Guide collects publications, online training, podcasts, films, checklists and other knowledge-support products for social services and healthcare professionals.⁹³

4.4.6 Regulatory framework amendments and development of standards underway

The basic conditions for Vision for eHealth 2025 include *Regulations, Standards* and *More consistent use of terms*. These are intended to create the conditions for a consistent semantic interpretation of information and information exchange, facilitate information transfer and enable interaction between different digital solutions in a standardized ecosystem.

New law enables sharing personal data among health and social care providers

On 1 January 2023, the Act on Coherent Documentation in Health and Care Services (2022:913) (*Lagen om sammanhållen vård- och omsorgsdokumentation*) entered into force. The Act replaces the provisions on coherent record-keeping in the Patient Data Act (2008:355) and also includes provisions on those social services activities relating to elderly and disabled care.

Coherent health and social care documentation aims to improve and simplify communication between health and social care providers, thus improving care and interventions for individuals.

The Act entails a shift in terminology, and what was previously called coherent record keeping (*sammanhållen journalföring*) will instead be called coherent health and social care documentation (*sammanhållen vård- och omsorgsdokumentation*), regardless of whether the system includes data from both healthcare providers and social care providers, or not. The Act means that healthcare and social care providers may, through direct access or other electronic disclosure, under certain conditions make available and access personal data from other healthcare or social care providers.

⁹³ [Start - Kunskapsguiden](#) [Accessed 16/04/2023].

To support healthcare and social care providers, the National Board of Health and Welfare has produced an informational leaflet describing what the new law entails.⁹⁴

European Health Data Space regulation being negotiated

In spring of 2022, the European Commission submitted a proposal for a regulation on a European Health Data Space (EHDS). The Health Data Space includes primary use (EHDS 1) and secondary use (EHDS 2) of health data. The Swedish eHealth Agency is together with the National Board of Health and Welfare an expert authority in the work on the new legislative proposal. The proposal is subject to negotiation by Member States before a new law can enter into force. The proposal aims to ensure that high-quality health data can be shared effectively and securely within and between EU countries.

The proposal includes making the digital exchange of ePrescriptions and patient summaries across borders mandatory by 2025. Within a couple of years, medical images, laboratory results, discharge care plans and information on rare diseases will also become mandatory cross-border services.⁹⁵

New search service to make classifications available

In its terms of reference, the National Board of Health and Welfare is tasked with creating a suitable information structure and consistent terminology, phrases and classifications in healthcare and social services. In spring of 2022, the National Board of Health and Welfare launched a new search service to make classifications available. In addition to searching all classifications, external users can also download them to their own systems.⁹⁶

Development of a new information specification

In 2022, the National Board of Health and Welfare initiated the development of an *information specification for social services documentation*⁹⁷ as well as development of an *information specification for information on the health of children and young people in placement*⁹⁸, to give social services an overview of such data. During the year, the National Board of Health and Welfare also began work to describe consistent structuring and coding of information in an

⁹⁴ Informational leaflet: *Ny lag om sammanhållen vård- och omsorgsdokumentation - Meddelandeblad (socialstyrelsen.se)* [Accessed 16/04/2023].

⁹⁵ Swedish eHealth Agency (2022). *E-recept över landsgränser 2022* [ePrescriptions across national borders].

⁹⁶ <https://klassifikationer.socialstyrelsen.se/> [Accessed 17/04/2023].

⁹⁷ This specification describes information shared by different areas of the social services and which, according to regulations, needs to be documented and managed in several parts of social services.

⁹⁸ The aim is to improve conditions for children and young people in placement to have access to good healthcare, dental care and uninterrupted schooling.

individual plan. Such a plan is drawn up when a person needs help from both healthcare as well as social services.

The Swedish eHealth Agency approves the first joint national e-health specification

As a result of the Swedish eHealth Agency's mission to continuously compile and make available nationwide specifications, the NGS service was launched in September 2021. This service provides a catalogue of information on eHealth specifications as well as advice on how they can be created.

Since October 2022, Sweden's first joint national e-health specification is available in the NGS service, Information specification for attention information Version 5.0, published by the National Board of Health and Welfare.

FHIR may become the health-data exchange standard

In autumn 2022, the EU eHealth Network discussed the choice of standards for the three new information sets for cross-border health data sharing (laboratory results, medical images and end notes). Comparisons have been made between HL7 CDA⁹⁹, currently used for cross-border health data sharing, and HL7 FHIR¹⁰⁰. How such technologies relate to national implementations such as openEHR¹⁰¹ has also been described. Preliminary results from a survey of Member States show strong support for using HL7 FHIR for the new value sets. The work on translating the FHIR base profiles¹⁰² into Swedish has unfortunately come to a standstill due to the lack of a secretariat for the work.

The Swedish Association for Medical Informatics administers work with openEHR in Sweden¹⁰³. This includes the translation and development of implementation guides. In 2022, among other things, work on an implementation guide for safety signals has been carried out.

The collaboration group for standards within Vision for eHealth 2025 had planned to produce a proposal for a national strategy for the consistent application of standards in eHealth. With the presentation of the proposed EHDS Regulation, the group has decided to take a retake at the issue.

⁹⁹ HL7 International. CDA® Release 2. http://www.hl7.org/implement/standards/product_brief.cfm?product_id=7 [Accessed 16/04/2023].

¹⁰⁰ HL7 International. HL7 FHIR Release 5. <http://hl7.org/fhir/> [Accessed 16/04/2023].

¹⁰¹ openEHR International. openEHR website. <https://openehr.org/> [Accessed 16/04/2023].

¹⁰² HL7 Sweden. FHIR Basic Profiles Working Group. [https://hl7.se/valkommen-till-arbetsgrupp-fhir-basprofiler/](https://hl7.se/valkommen-till-arbetsgrupp-fhir-basprofil/) [Accessed 16 April 2023].

¹⁰³ openEHR Sweden. The Swedish archetype administration. <https://openehr.atlassian.net/wiki/spaces/healthmod/pages/90796248/Swedish+Archetypes+and+Templates> [Accessed 16/04/2023].

The collaboration group also contributes, for example, in responding to EU surveys on standards issues. The group has also been represented at meetings with the Nordic Standardization Group.

4.4.7 Conclusions of the Swedish eHealth Agency

This year's follow-up shows that the conditions for digital transformation in healthcare and social services need to be strengthened so that the organisations can better take advantage of the opportunities offered by digitalisation.

In several municipalities, social services and municipal healthcare lack governing documents on the introduction of eHealth and welfare technology. Most regions have digitisation strategies/policies. These have a clear focus on efficiency rather than on innovation, and the Digital Government Research Consortium argues that this suggests that governance is focused on financial performance, rather than on transforming activities through digitalisation.

Although governing documents and digitalisation strategies are an important basis, this does not necessarily mean that welfare technology and e-services are implemented in a way that benefits the activities and citizens. Organisational development, including changes in working methods, is also necessary to ensure that municipalities, regions and citizens do not miss out on the opportunities offered by digitalisation.

In order to be able to introduce new technologies and approaches in activities, continuing competence development of staff and management is needed to increase understanding of the various aspects of digitalisation. Several national organisations have developed knowledge support for healthcare and social services. The Swedish eHealth Agency's recently launched search service brings together current national knowledge support in the field of eHealth to promote organisational development and contribute to increased use of digital solutions.

It is important to keep the numerous types of national support in place updated and to follow up on whether their use among activities and effectiveness is meeting needs. Actors must also constantly inventory needs for new knowledge support. This requires long-term and clear conditions in terms of funding and governance.

It is also necessary that the basic conditions regarding regulations, standards and more consistent use of terms are in place, and that activities can adopt

these, in order to be able to introduce new technologies and approaches in healthcare and social services.

The new law on coherent healthcare and social care documentation has created opportunities to contribute to better information transfer between healthcare and social care providers. In addition, the proposal for a European Health Data Space (EHDS) raises hopes for the development of the regulatory framework.

In the area of standards, some developments have also occurred, with, e.g., the National Board of Health and Welfare launching a search service to make classifications available, and the Swedish eHealth Agency approving the first joint national e-health specification.

The standardisation issues are complex, and an effort with widespread support is needed to pursue development. To accelerate efforts to develop and encourage the use of shared and reusable specifications, a nationwide governance and collaboration structure regarding interoperability and standardisation issues is needed. The need for a national governance and collaboration structure has also been highlighted in other reports. For example in the Feasibility Study of National Digital Infrastructure for a National Quality Register (*Förstudien om digital nationell infrastruktur för nationella kvalitetsregister*).¹⁰⁴

5 The Swedish eHealth Agency's contribution to realising Vision for eHealth 2025

Pursuant to its terms of reference, the Swedish eHealth Agency shall coordinate the Government's eHealth initiatives and follow up on developments in the eHealth area. The Agency is also responsible for registers and IT features used by individuals, healthcare providers and pharmacies.

All of the Agency's activities are moving in the direction indicated by the Vision for eHealth 2025. We describe below the Agency's contributions to realising the Vision for eHealth 2025. The text identifies the objectives to which the Agency's work primarily contributes.

¹⁰⁴ S2021/06170.

The matrix that follows presents the assignments on which the Agency reported during the period January 2022 to March 2023¹⁰⁵ as well as the objectives to which these assignments contribute in implementation of the Vision for eHealth 2025.

Digital services

The Swedish eHealth Agency manages and develops several digital services for the benefit of citizens, including Läkemedelskollen and Covidbevis. Läkemedelskollen is a digital service that allows citizens to access information on their own, their children's and their pets' current prescriptions.

The digital service Covidbevis allows citizens to collect COVID-19 certificates after vaccination against COVID-19. Since the launch of the service, the digital infrastructure has been complemented by services enabling the issuance of proof of recovery from COVID-19 (recovery certificate) and proof of negative COVID-19 test results (test certificate). By providing, managing and developing the digital services, the Agency contributes to the objective *The individual as co-creator*.

The Agency also provides and develops the National Medication List, which is a nationwide information resource giving healthcare, pharmacies and patients access to the same information regarding prescribed and dispensed medicines. Structured information in the National Medication List also increases the possibility of reusing information in, for example, decision support and organisational follow-up.¹⁰⁶ By making information about medicines available to employees and patients, in a structured way, in the National Medication List, the Swedish eHealth Agency contributes to the objectives *Right information and knowledge* and *The individual as co-creator*.

The Swedish eHealth Agency provides the service NGS, a quality-assured catalogue of information on eHealth specifications. Some of these have joint national e-health specifications status. The NGS service improves opportunities for healthcare and social services to take advantage of the possibilities of digitalisation. The NGS service is closely linked to the basic conditions, as increased standardisation is a condition for sharing data and information in a secure and efficient way. By administering and developing the NGS service, the Swedish eHealth Agency contributes to the objectives

¹⁰⁵ Although reports were published in 2023, most work was carried out in 2022.

¹⁰⁶ [Nationella läkemedelslistan • E-hälsomyndigheten \(ehalsomyndigheten.se\)](https://www.ehalsomyndigheten.se/nationella-lakemedelslistan) [Accessed 05/06/2023].

Right information and knowledge and Development and digital transformation hand in hand.

Pharmaceutical statistics

The Swedish eHealth Agency is responsible for collecting and providing data on pharmaceutical sales. Pharmaceutical data is used for a number of secondary purposes such as research, innovation, education, drug development and quality monitoring. By collecting and providing data on pharmaceutical sale, the Swedish eHealth Agency contributes to the objective *Right information and knowledge*.

Reporting on assignments

During the year, the Agency has reported on several government assignments that contribute in various ways to the development of a national digital infrastructure for health, healthcare and social care. Examples of this include the assignments for a national government data space for diagnostic imaging and a national digital infrastructure for national quality registers. Through the proposals presented in these reports, the Agency helps healthcare and social service professionals to have better access to suitable information when meeting patients and clients. The government assignments are thus linked to the objective *Right information and knowledge*.

The Agency has also produced a number of reports pursuant to the assignment included in its terms of reference, including the *General population survey (Invånarundersökningen)* and the focus report *Health Apps: Circumstances and usage (Hälsoprogram – förutsättningar och användning)*. The reports provide a basis for creating more suitable digital services for citizens, as well as continuing professional development to introduce new approaches and technologies in the activities. The reports are thus linked to the objectives *The individual as co-creator* and *Development and digital transformation hand in hand*.

Assignment reported on	The individual as co creator	Right knowledge and information	Safe and secure information processing	Development and digital transformation hand in hand
<i>Upprätthållande av funktioner för e-recept över landsgränser, Ref. 2022/00442</i>		X	X	X
<i>Uppdrag att föreslå hur sammanhållen journalföring kan nyttjas i större utsträckning, Ref. 2021/01681</i>		X	X	X
<i>Uppdrag att genomföra en förstudie om ett statligt, nationellt datautrymme för bilddiagnostik, Ref. 2021/03122</i>		X	X	X
<i>Uppdrag att genomföra en förstudie om digital nationell infrastruktur för nationella kvalitetsregister, Ref. 2021/03991</i>		X	X	X
<i>Uppdrag att kartlägga, analysera och ge förslag på hur en nationell listningstjänst ska kunna inrättas i statlig regi, Ref. 2022/01031</i>	X	X	X	X
<i>Uppdrag att genomföra en förstudie om hur ett nationellt vårdssystem kan utvecklas, organiseras och förvaltas, Ref. 2022/01029</i>		X	X	X

Reporting on assignments	The individual as co creator	Right knowledge and information	Safe and secure information processing	Development and digital transformation hand in hand
<i>Uppdrag om förlängd förvaltning av covidbevis, Ref. 2022/01995</i>	X	X	X	X
<i>Uppdrag att göra en förstudie inför framtagandet av en nationell lägesbild över tillgången till läkemedel och medicintekniska produkter, Ref. 2022/00939</i>		X	X	X
<i>Regeringens samverkansprogram 2019 - 2022 och en nationell strategi för life science, Ref. 2020/00552</i>				X
Reporting on assignments	The individual as co creator	Right knowledge and information	Safe and secure information processing	Development and digital transformation hand in hand
<i>Grunddatadomän hälsodata, Ref. 2021/03564</i>		X		X
<i>Redovisning av uppdraget om fortsatt införande av Nationella läkemedelslistan, Ref. 2022/00884</i>	X	X	X	X
<i>Hälsoappar – förutsättningar och användning, Ref. 2021/01963</i>	X			X
<i>Invånarundersökningen 2021, Ref. 2021/00922</i>	X			X
<i>Kunskapsstöd för e-hälsa, Ref. 2021/05153</i>				X