



National eHealth

**– the strategy for accessible and
secure information in health and social care**

2010

Production: Ministry of Health and Social Affairs

Design and layout: Svensk Information

Photo: Mattias Ahlm, Nina Hellström, Jennifer Nemie, Hans M Karlsson, Sebastian LaMotte

Print: Edita, Sweden, 2011

Article number: S2011.023

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The strategy 2010

Foreword

Secure and simple access to relevant information about an individual is the key to health-care and social services staff being able to offer high-quality services. Information is the key to empowerment and quality. By releasing the potential of the information collected and stored at innumerable places within the healthcare and social services, we can offer the citizen brand new opportunities to gain a better insight and to participate in services he or she receives. It also provides the staff with user-friendly decision support, presenting the necessary information in a comprehensible manner and making it easily accessible when vital decisions are to be taken. Decision-makers with the task of controlling and monitoring activities will have a more comprehensive and up-to-date basis for implementing continuous improvements, as well as for research into and development of new treatment methods and work routines.

To be practicable, however, the information needs to be structured, well defined and presented in different ways for different target groups. The main problem today is not a lack of collected data but the fact that the information is not accessible or usable when it is most needed.

Never before has technology given us such scope to structure, manage and use information for different purposes as it does today. It also gives us the opportunity to offer high-quality health and social care putting the needs of the individual first. Organisational boundaries no longer constitute a barrier to cohesive action when relevant information can be exchanged between different health authorities and health professionals in a secure and efficient manner. It is important however that this development occurs with the utmost respect for personal integrity.

National eHealth is about how all societal actors can come together to improve information management within the healthcare and social services for the benefit of the patient, the staff and decision-makers throughout the sector. To this end, the watchwords of National eHealth are: *deployment, use and benefit*

Stockholm, June 2010

Göran Hägglund
Minister for Health and Social Affairs

Maria Larsson
Minister for Elderly Care and Public Health

Introduction

The national projects that have been running for several years as part of Sweden’s National Strategy for eHealth (Government Communication 2005/06:139) have now delivered concrete results. These projects include developing registry and security solutions to guarantee integrity and data protection, drafting new legislation, and developing measures to ensure high-quality information and uniform terms and concepts. Both central government and regional and local health authorities have invested considerably in creating the right conditions for more expedient information supply in the health and social care sector. Swedish county councils alone put about SEK 6.7 billion (ca EUR 700 million) a year into various eHealth services and an increasingly large amount is being set aside in a joint development budget.

It is therefore time to take a new step forward to further improve information management in the health and social care sector. To emphasise the fact that ICT is now a natural part of the organisational development of Swedish healthcare and social services, we are increasing the focus on the deployment, use and benefit of the technology rather than its development. This is why we are also changing the name of *the National Strategy for eHealth* to *National eHealth – the strategy for accessible and secure information in health and social care*.

The shift in values from ICT to National eHealth basically means that we:

- increase the focus on process and organisational development
- use the individual’s need and desire for cohesive information and personal eServices as a starting-point
- include the social services to ensure coordinated development of health and social care
- meet the needs of all health authorities as well as public, private and third-sector practitioners
- ensure continuity between different health authorities and health professionals and remove organisational barriers
- provide decision-makers with a better basis for planning and improving health and social care
- create more scope for both public and private research and development
- strengthen citizen integrity in all decisions and activities.

Work over the forthcoming years will focus on delivering the benefits of various eHealth services, delivering more personal eServices for all citizens, concentrated efforts to coordinate and develop eHealth in municipal healthcare and social services and greater interaction with adjacent national and international reform processes and initiatives.

National High-Level Group for eHealth

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National eHealth – the next step in Sweden’s National Strategy for eHealth

The health and social care sector is one of the most information-intensive sectors in society, and the need for efficient information supply between different levels and actors is absolutely crucial. With the help of integrated, user-friendly ICT support, information can be presented and transferred more securely and more efficiently and ensure coordinated action throughout the entire health and social care sector.

As early as 2005, Swedish central government and health authorities established close cooperation in order to create better conditions for more integrated and expedient information management using modern ICT support. Great progress has been made in the ambition to create the basic legal and technical prerequisites, to enhance the quality of the information and create more uniform documentation.

Based on the National Strategy for eHealth (Government Communication 2005/06:139) adopted by the Swedish Government in 2006, the work is now entering a new phase. The original strategy is being revised and expanded so as to better meet the changed needs and conditions we now see in health and social care, needs that will further intensify over the next few years.

Actors have agreed to call the revised strategy the National eHealth Strategy for accessible and secure

information in health and social care. The concept of eHealth is based on the World Health Organisation’s definition of health as “a state of complete physical, mental and social well-being”. By adding the prefix “e” to the concept of health, we maximise the possibility of achieving these benefits for the individual through widespread use of information and communication technologies (ICT). The definition of eHealth extends the concept of health from something that primarily concerns a single individual to a change process with the potential to work as a catalyst for reform within the entire health and social care sector. Hence, it is stressed that the introduction and use of new technology should no longer be seen merely as “technological development” but as a process that enables and accelerates quality improvement within the healthcare and social services in order to better be able to meet individual needs and expectations.

The definition of eHealth also emphasises the fact that the strategy now fully incorporates the various activities of the social services. The previous National Strategy for eHealth put most emphasis on the development of ICT in the healthcare services, something that reflected the prevailing problems and needs of the time. To bring cohesion and efficiency to all health and social care activities, however, de-

velopment needs to be coordinated across the entire sector. The strategy must also reflect the needs of all health authorities, including municipalities, county councils, private and third-sector practitioners.

The revised strategy stresses more clearly that the various ICT projects do not have an intrinsic value, but are all a part of the efforts to improve quality, efficiency and service throughout the care sector. High-quality health and social care focusing on the needs of the individual presupposes that organisational boundaries are not a hurdle to cohesive action, and that information can be exchanged between different health authorities and practitioners securely and efficiently. Neither must organisational boundaries constitute a barrier to the cohesive monitoring of operational quality and efficiency and of customer satisfaction. When improving information supply, it is particularly important to safeguard personal integrity. The need for and benefit of more information supply must always be carefully weighed against the potential intrusion into personal integrity.

The objective – to create benefit for individuals, staff and decision-makers

The aim of National eHealth is to create visible and concrete improvements for three main target groups:

- **The individual** in his or her role as citizen, patient, end-user and close relative/friend shall have access to easily accessible, quality-assured information on all forms of health and social care as well as access to documentation on previous care interventions and treatments. He or she shall be offered customised service and interactive eServices in order to be able to participate and exercise self-determination based on his or her own prerequisites.
- **Health and social care staff** shall have access to well-functioning, concurrent electronic decision support that both guarantees a high level of quality and security and facilitates their day-to-day work. Necessary and structured information shall be available as a basis for taking decisions on care interventions and treatments.
- **Decision-makers in all care services** shall have the appropriate tools to continuously monitor the quality and security of activities and obtain an up-to-date and comprehensive basis for taking decisions on organisational governance, planning and resource allocation. Public and private research shall have easy access to high-quality data, with total respect for citizen integrity.



» It's good
that we can
be anonymous
at UMO «

Questions about sex, health and relationships can be difficult to tackle when you are young. The UMO website helps young people to find relevant, up-to-date information. One of the users is 19-year-old David Dahlgren from the southern Swedish town of Vänersborg.

UMO, a national online youth clinic, was founded in 2008 with the aim of making it easier for young people to find information about sex, relationships and health.

“I think it is important that there is good, easy-to-find information for young people. And it feels good to know that everything you read on the UMO website is true and reliable,” says 19-year-old David Dahlgren from Vänersborg, who is a member of the UMO youth panel.

All the material published on UMO is reviewed by external experts, UMO editorial staff, the Medical Director at Inera AB and an editorial council. The panel of which David is a member tests some of the site's material before it is published to see that it is appropriate for the intended target group.

“We read texts and watch films before they are made available online. Then we say what we think of them. If many of the panel think something is strange or unclear, it is reworked,” says David.

In addition to texts and moving images, UMO also has an “Ask UMO” service, where young people can anonymously put questions to doctors, psychologists, gynaecologists, etc. All questions are answered within seven days.

“The Internet is just so accessible. Sitting down in front of the computer and sending in a question feels much easier than actually going to a youth clinic and asking the same question. Not everyone has a youth clinic within easy reach of where they live. And then you can be anonymous on UMO, which makes it much easier for many people.”

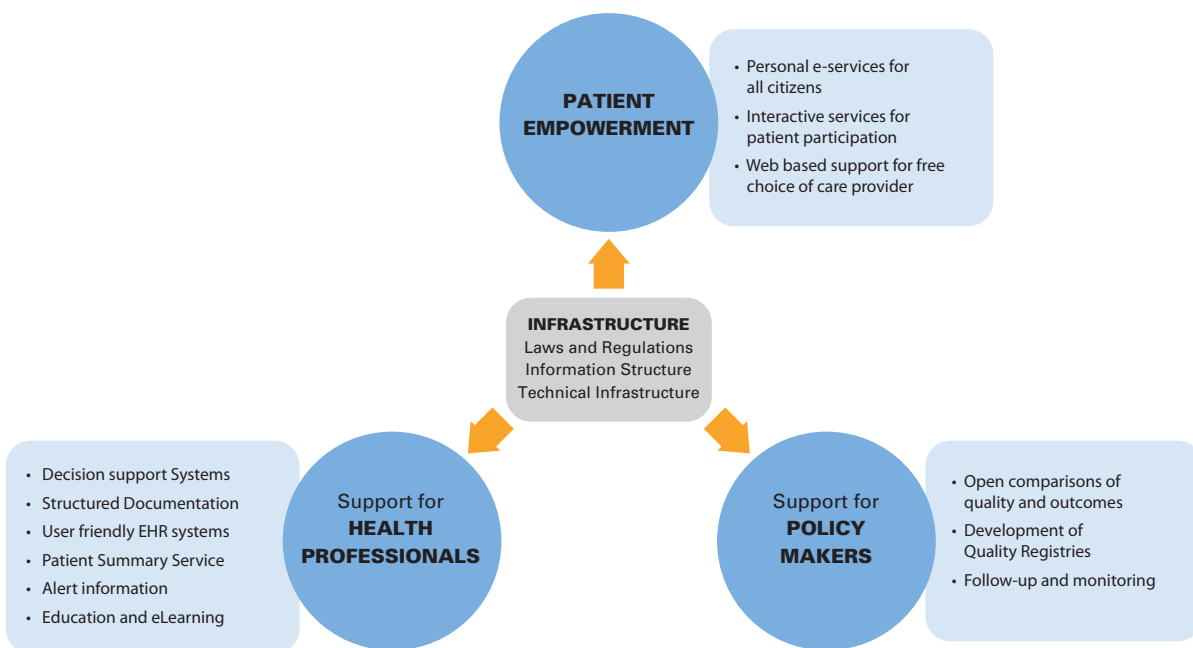
UMO (www.umo.se) is a national online youth clinic aimed at young people between 13 and 25 years old. The site is run by Inera AB (previously the national healthcare helpline Sjukvårdsrådgivning SVR AB) in close collaboration with Sweden's youth clinics, county councils, municipalities and youth-oriented organisations. The aim of the site is to make it easier for young people to find information about sex, relationships and health. UMO currently has around 170 000 visitors a month.

The site has information on most aspects of young people's lives, everything from friendships and family relations to eating disorders and violence. The idea is to provide knowledge and the opportunity to reflect.

“The best thing is that there really is information on everything you might need to know. The search functions are another good thing so that you can find exactly what you're looking for. There's even a function that reads out some of the texts, and that's good for people who are visually impaired or have reading difficulties,” says David.

He thinks that UMO has improved a lot since it was launched but believes far too few people are aware the site exists.

“I think more young people could benefit from UMO, but unfortunately, not everyone knows about it. I think it should be more talked about in schools.”



eHealth – the key to modern healthcare and social services

Modern healthcare and social services are based on the individual's need for high-quality care interventions and a professional need for collaboration between different staff categories and organisational levels. There is a need for a holistic view of the various interventions an individual has undergone, as the care sector accommodates a broad spectrum of different activities, everything from primary care and dental care to elderly care and disability care. More and more people are nowadays looking for individual solutions to their problems, taking their own initiatives and making active choices. Citizens demand the same from the care sector as they do from other service providers in society, including a greater degree of insight, participation and self-determination. The healthcare and social services shall be able to offer services that are designed in accordance with the requirements and wishes of the individual and that use the Internet and social media as communication tools to a much greater degree than previously in order to increase both accessibility and user-friendliness.

Many now have health and social care needs that demand coordinated interventions from several different health authorities and practitioners. This increases the need of organisations and staff to have a fast, secure and simple way of being able to share

comprehensible, reliable information. It must be possible for care staff to use technical tools as an aid and concrete support in their day-to-day work, support that clearly meets the needs of the organisation as well. For ICT to facilitate day-to-day work, the development of new organisational support must be adapted to work processes. Technology must never be perceived as a barrier to activities.

Good governance and quality monitoring in healthcare and social services are essential. The concept of quality includes the results of public health-promoting interventions, the ensuing costs to society and the perception of the individual as regards their quality. An important monitoring instrument is accessible, structured and cohesive information that enables open and reliable comparisons. This is not just a driver of continuous quality improvement in the sector but also creates an innovative climate for the development of products and services as well as for innovative research. It also forms the basis for the individual to make well-informed choices as regards which health centre to visit or which home-help provider to hire. Using eHealth, much of the data currently collected in e.g. quality and health data registers can be structured and presented for more target groups than is currently the case.

The need for continuous monitoring is also reinforced by the fact that care interventions are decentralised and financed by the taxpayer. In order

to make well-underpinned investment decisions and to offer better and safer care for the individual, decision-makers on the political or civil servant level must have access to information that clearly demonstrates the beneficial effects of eHealth. It is also important to create comparability with the alternative costs involved if the necessary investments in modern and integrated ICT support are not made. The costs of preserving old working methods and maintaining obsolete technical systems can be many times higher than a new investment whilst at the same time risking a deterioration in quality, efficiency and safety.

Distribution of responsibility and national cooperation

One condition that must be fulfilled for eHealth services to be an effective tool in the development and rationalisation of care services is that there is consensus and coordination between the various actors. National eHealth is an expression of this consensus between central actors on the national level. National agreement on focus and structure is a prerequisite for faster and more efficient implementation on the local and regional level.

The main funding responsibility lies with the municipalities, county councils and regions as the authorities responsible for supplying healthcare and social services. This responsibility also includes developing and funding activities and assuring their quality. Private companies and third-sector organisations nowadays play an increasingly important role as care practitioners. The responsibility for investment decisions in new eHealth services rests with the health authorities and health and social care practitioners. Central government is responsible for creating the right conditions for uniform and well-structured information, such as legal and regulatory frameworks that simultaneously promote the opportunities created by technological development and meet organisational needs.

National eHealth presupposes broad cooperation between all the actors in the sector, in which everyone has a separate responsibility for the imple-

mentation of their various remits. In addition to central government and the regional and local health authorities, it is also crucial that all stakeholders involved in individualised care services help to develop efficient, cooperative support for secure and efficient information management, and in particular staff representatives.

The National High-Level Group for eHealth

In order to successfully coordinate the implementation of the strategy, a National High-Level Group for eHealth has been in place since 2005, in which central government, health authorities and care practitioners are represented via the Ministry of Health and Social Affairs, the National Board of Health and Welfare, the Swedish Associations of Local Authorities and Regions, the Association of Private Care Providers and Famna. The High-Level Group focuses on strategic questions and choices associated with National eHealth and functions as a body for joint decision-making regarding the focus of future work. The Group is also responsible for taking a holistic view of strategy implementation and for monitoring how well the various national projects deliver in relation to the action plans drawn up by each actor respectively.

The Advisory Group for eHealth

A new consultative body in the form of a national advisory group was created during 2009 with the aim of preparing and formalising the dialogue with most of the key actors in the health and social care sector. The advisory group includes the relevant government agencies, representatives of different professional groups, national pharmaceutical and ICT industrial associations as well as representatives of the health authorities and care practitioners. The group discusses strategic questions, identifies new focus areas, initiates special working groups and reports to the High-Level Group. It shall constitute a forum for dialogue and advocacy, and the aim is therefore to gather as many of the relevant actors together as possible.

» Now I only need to remember one password «

One card, one password – staff can then access all systems. Nurse Märith Niemi's work at the health and social care office in the central Swedish town of Karlstad is now much easier.

In the spring of 2009, the office developed and implemented the "smart workplace". Nurse Märith Niemi is one of the 200 users.

"The smart workplace is very straightforward. I just put my card in the card-reader and enter my PIN code. Then, all the health records and documents just come up on the screen exactly how I left them last time," says Märith, who works at a short-term care home in Karlstad.

At a smart workplace, the hard disk has been replaced by a small terminal connected to a central server. And users simply go to the nearest work station, insert their ID card and log in using a six-digit PIN code.

"Previously, I had to have different passwords to all our systems. Now I just have to remember one password which gives me immediate access to all other systems," says Märith.

When leaving the work station, the user simply removes the card from the card-reader.

"I can stop working in the middle of a sentence if I want, because next time I log in, the same screen image pops up, even if I'm using a different smart work station. I don't need to keep saving everything and closing it all down all the time. So if a patient needs help, I can just drop what I'm doing and go over to them."

The short-term care home where Märith works is manned 24 hours a day and caters for older people who need health and social care for a short period of time. Märith tells us how she used to save up everything that needed documenting during her shift and then sit down just before it was time to go home and fill out all the health records.

"It often took a long time and sometimes I even had to stay after the end of my shift just to get everything done. And then it wasn't always easy to remember exactly what had happened during my shift. Now we fill out the records as things happen, which increases our flexibility and reduces stress."



Märith believes that the new system and continuously updating health records in this way makes them more reliable, which in turn increases patient safety.

"Ultimately, it is the patients who benefit from the smart workplace. Updating records continuously makes the documentation reliable and comprehensive."

What is a smart workplace?

A smart workplace is connected to a central server. Using a personal eIdentity card, the user can log in from any work station and obtain direct access to all health records and material. The user only needs to remember the password for his/her eID card to gain access to all systems..



2.

New prerequisites for National eHealth

The prerequisites as regards the development of healthcare and social services have changed since the original strategy was adopted in 2006. People's behaviour has changed as have their expectations, in their role not only as citizens or family members but also as patients or end-users. Furthermore, the rapid development of technology and the ever-wider use of various eServices play a significant role, in particular the advent of different social media. The following section describes the development and the changed prerequisites that we have to adapt to in order to ensure successful deployment of National eHealth.

Putting the needs of the individual first

Focus on empowerment of the individual and freedom of choice has gradually increased in recent years as a result of legislative amendments and local and regional initiatives. The emphasis has previously been on improving and rationalising activities based on an organisational and system perspective. To a large extent, National eHealth will be based on the needs of the citizen and stress the value of the individual taking an active part in their own care, based on their own prerequisites. This presupposes that different eHealth services are designed so that they are accessible and user-friendly for people with different prerequisites and technical know-how, in-

cluding persons with disabilities.

One prerequisite of high-quality, accessible and secure healthcare and social services is efficient information exchange and cooperation between all purchasers and practitioners. All actors in the sector have a responsibility to create these prerequisites in order to ensure resources are used more efficiently. Authorised actors having access to the relevant information across organisational boundaries is the key to being able to create a coherent basis for making decisions about health and social care interventions. As far as the citizen is concerned, this is a question of the information following the individual through the care process and of satisfying the demands for safety, efficiency and integrity.

National coordination for social services

The social services need to coordinate and drive forward the development of various eServices to a greater extent. Support shown for the strategy by representatives of central government, municipalities, county councils and practitioners alike means that there is consensus on the opportunities and challenges of eHealth as regards the development and quality assurance of our social services. Sweden's municipalities have different prerequisites when it comes to implementing the intentions of National eHealth, and this also applies to private

and third-sector practitioners. There is therefore a need for regional cooperation among municipalities regarding implementation of the strategy. Work to establish regional cooperation of this nature began in 2008 with financial support from the government, but this needs to be further developed and intensified to involve all municipalities and be able to offer concrete support particularly to the smaller ones.

Apart from the secure and efficient exchange of information between various governing bodies and practitioners, citizens must also be able to access information that concerns them. This throws up major challenges, especially when the necessary information is not just to be exchanged between different social service units but also concerns individuals who are in need of interventions from both the healthcare services and the social services.

Improved information supply within the social services and not least better regional cooperation create better prerequisites for efficient communication between county councils and municipalities. Better information supply also makes it easier to monitor the quality and efficiency of services rendered, both on the local and national level. An example of this is open comparisons that are of benefit for not only staff and decision-makers but also the individual in their role as end-user, patient or family member.

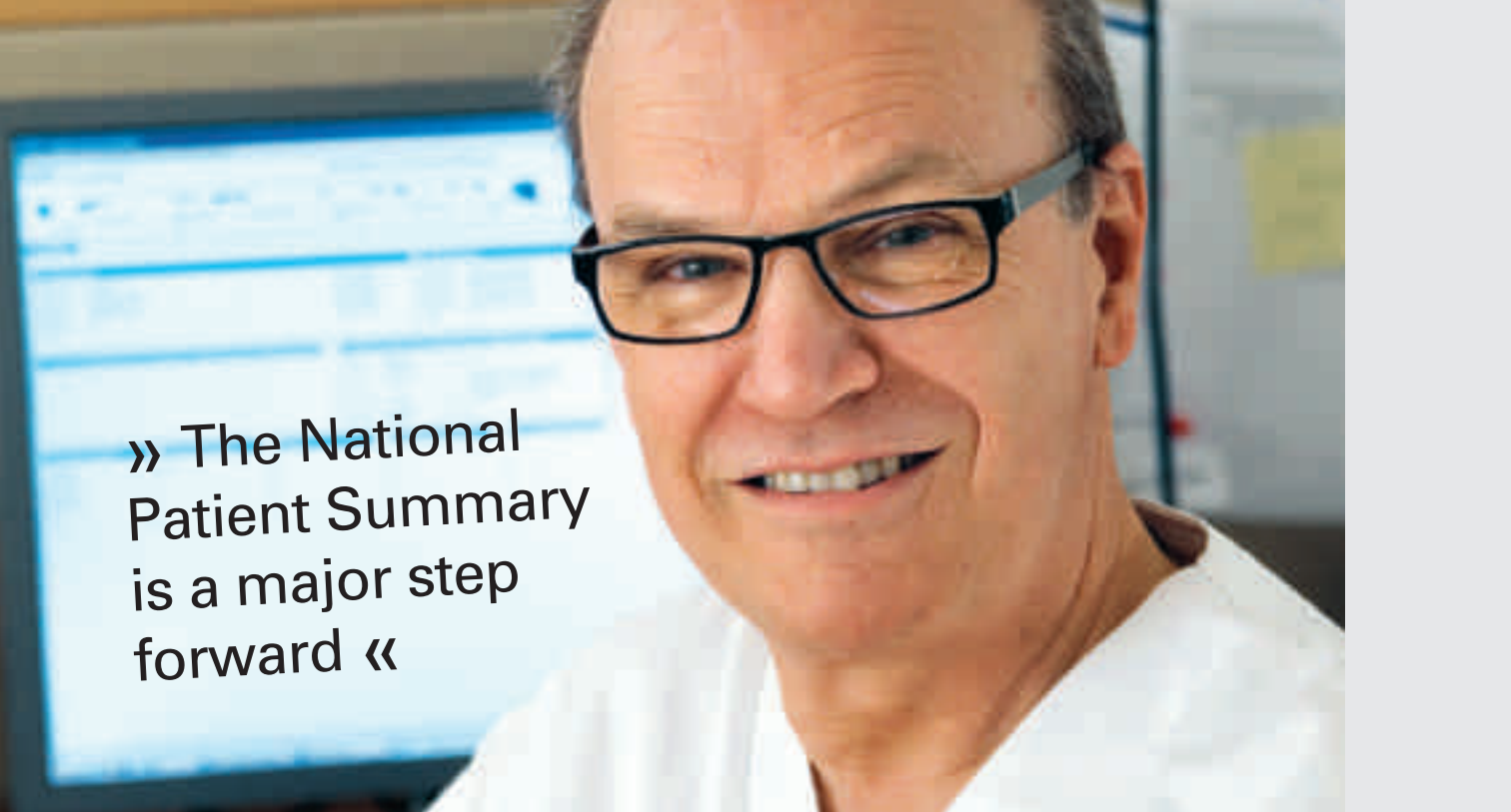
Greater focus on e-issues nationally and internationally

National eHealth is affected by an ever-increasing

number of national initiatives. The work being done in the area of eGovernment by the Swedish eGovernment Delegation is a case in point. The Government appointed the eGovernment Delegation in the spring of 2009 in order to improve the prerequisites for inter-agency coordination of public eServices. To achieve synergy effects, it is important that the work done as part of the National eHealth initiative follows and influences the work done by the eGovernment Delegation.

Better decision support for drug prescriptions and better documentation for follow-up will improve patient safety and reduce pharmaceutical costs. A feasibility study is therefore underway to examine the need for a National Pharmaceuticals Strategy, of which appropriate ICT support is a key component. With the end of Sweden's state-run pharmacy monopoly, new private players have entered the market, along with a new state actor in the form of Apotekens Service AB, which takes care of the national infrastructure for all pharmacies on the market.

Sweden is influenced to a considerable extent by the work done within many international organisations. This includes technical standardisation, work on a global medical terminology as well as quality indicators and the development of cross-border services. The need for more in-depth and structured international exchange of experiences is becoming clearer for all eHealth projects as national and international efforts increasingly coincide.



» The National Patient Summary is a major step forward «

Diagnoses, care contacts and test results. As a result of the implementation of the National Patient Summary (NPÖ), Bengt Curman from Örebro University Hospital has access to all the necessary information about his patients.

Nowadays, many patients have contact with several different caregivers. Despite this, health records are often only kept locally. As a result of NPÖ, patients' health records are now available to all authorised care staff nation-wide. A health record may only be opened with the consent of the patient, however. Örebro County Council and all the county's municipalities have been using NPÖ since 2008.

"NPÖ is a major step forward. If a patient is admitted in an emergency, for example, and I don't have any information regarding what medication the person is on, uncertainty may arise concerning the medical assessment of the patient," says Bengt Curman, a consultant physician at Örebro University Hospital.

Using NPÖ, Bengt Curman now has an overview of what medication has been prescribed by the primary care services and what medicines the patient has collected from the pharmacy.

"Many patients think that as doctors we have access to all their health records. When we ask them what medicines they are taking, they often reply 'You should already know that'. So it has never been difficult to obtain the patient's consent."

In addition to lists of medications, authorised personnel can also access the patient's earlier diagnoses, care contacts, documentation and test results.

"This reduces the risk of administering the wrong medication and hence increases patient safety."

And despite the fact that more actors now have access to patient information via NPÖ, Bengt Curman does

The National Patient Summary (NPÖ)

The National Patient Summary (NPÖ) is a central part of the National eHealth Strategy. Using the system, all authorised care staff have access to an individual's health records, provided the individual has given consent. Örebro County Council and the county's municipalities were the first to implement NPÖ. The aim is for all county councils to have rolled out the system by 2011.

not believe people's personal integrity is threatened.

"The patient can now see who has looked at their records as everything is logged."

Bengt Curman does feel, however, that NPÖ and computerised health records in general demand more of healthcare staff since all information must be transferred according to the same standard. He therefore believes that overarching rules governing how information is registered are essential.

"Often the doctor is used to documenting patient information in his or her own way. But with NPÖ, everyone has to follow the same template for the information to flow correctly and efficiently. I think it might be difficult for some staff to readjust."

He also points out that even if the information in the system seems to be up-to-date, staff must always double-check with the patient.

3.

The strategy's action areas

Further development of National eHealth requires parallel, coordinated efforts from all responsible actors. Regular evaluation and revision of the work being done is also required, as is stronger participation from representatives of practitioners and decision-makers in ongoing development work, including both technical and process development. The participation and commitment of practitioners is the key to ensuring that newly launched eHealth services also satisfy staff demands for efficient, appropriate working tools to ensure they

can offer top-quality service. Now, as implementation of National eHealth enters a new phase, the content of the action areas is being revised to create a structure for how the joint work is to be pursued. Below follows an account of these areas together with some of the highest priority issues. Each organisation is then responsible for drafting an action plan for how to implement the strategy and for setting concrete, time-framed targets for when the aims are to be achieved.

eServices for accessibility and empowerment

– Support, involve, motivate and empower individuals

Greater accessibility to healthcare and social services presupposes easy, customised access to user-friendly information. This provides the prerequisites for empowerment and self-determination, and strengthens individuals' perceived benefit, participation and insight into the interventions that concern them. Personal eServices give individuals the possibility to document information about their own health situation themselves and obtain advice about care and health. They also provide new opportunities for prevention and health-promoting initiatives. It shall be easy for everyone to access information about themselves, be able to communicate and interact with the healthcare and social services in different ways, make free and informed choices and where necessary have continuous contact with their practitioner.

Areas and services of particular importance for future work:

- all citizens shall be able to use secure, personal eServices to access information about their own health and social care interventions
- services where individuals themselves can document and share information about their own health shall be developed as a resource for both staff and the individual
- information about quality, accessibility and staff friendliness shall be presented in a customised and user-friendly way to enable people to make free and informed choices.

Usable and accessible information

– Decision support for the staff

User-friendly and appropriate documentation and decision support are required to allow the staff to cooperate and meet the needs of the individual for coordinated measures and to, where necessary, be able to share relevant information with other professional groups in a treatment process. ICT tools must be easy to use and support the dialogue with the individual with tough demands for data protection and information security in order to maintain citizen integrity. The tools must also provide decision and knowledge support for the day-to-day running of the organisation and be able to communicate with the plethora of other ICT systems in use at county councils, municipalities and private/third sector practitioners. From a longer-term perspective, it is worth considering whether health record systems and quality registers should be integrated into a single smart decision support system, which will enable guidelines and new evidence to be disseminated more quickly.

The intensive efforts now being made to develop improved analytical tools and decision support for drug prescription and dispensing are an important part of National eHealth. The feasibility study that is examining the need for a National Pharmaceutical Strategy and the ongoing efforts within the “Pascal Project” are therefore crucial to the success of future work.

Areas and services of particular importance for future work:

- all drug prescribers shall have access to the patient’s entire drug history and the appropriate prescriber support
- the National Patient Summary shall be fully deployed throughout the healthcare services and in the relevant parts of the social services
- the development of appropriate, interactive ICT support shall be stimulated to facilitate the administration of municipal care services
- cooperation between purchasers, staff and ICT suppliers shall be strengthened to improve the user-friendliness and functionality of electronic documentation and decision support
- guidelines and new evidence shall be disseminated more rapidly as an integrated component of the staff’s decision support system to stimulate continuous method development.

Knowledge management, innovation and learning

– Better basis for research, monitoring and decision-making

A continuously learning organisation that is constantly evaluating and developing new working and treatment methods is a prerequisite for being able to offer knowledge-based interventions and improved health. Different eHealth services both facilitate the collection of information for health data and quality registers and provide faster feedback to the staff, health authorities, agencies and citizens. Furthermore, they also create entirely new prerequisites for research into the outcomes and effects of different interventions.

The information in health records and quality and health data registers constitutes a vastly under-exploited resource for research. The Inquiry on Clinical Research (U2007:04) and the Delegation for Cooperation in Clinical Research (N2007:04) have both pointed to Sweden's potential for world-class research, provided that the existing data is used intelligently. For Sweden to be able to maintain and strengthen its standing as a leading country for medical research, and be able to develop a strong position in other fields of social research, all eHealth systems should as far as possible be designed so that they can be used for research purposes with respect for citizen integrity.

Presenting quality data openly and transparently creates an innovative climate for entrepreneurship which stimulates both staff and innovators to develop new methods and services that improve services. When being publicly procured by central govern-

ment, municipalities and county councils, innovations and innovation systems should be tested much more stringently based on clearly established goals for patient benefit, safety and efficiency.

Different eHealth services are today used as a natural part of the everyday work of all health and social care professionals. It is therefore important to integrate eHealth as a natural component of vocational education and in-service training programmes, so that health and social care professionals can fully utilise the technology.

Areas and services of particular importance for future work:

- more in-depth knowledge about eHealth services shall be a natural part of the education and training of all care professional groups
- documentation systems in the healthcare and social services shall as far as possible be designed so that relevant information can be automatically and securely transferred to health data and quality registers in order to improve the prerequisites for research
- decision-makers shall stimulate and welcome innovativeness among public-sector care providers and private entrepreneurs alike in order to accelerate the development of new eServices.

Technical infrastructure

– The basic prerequisite for the secure and efficient sharing of information

A coherent and organisation-wide technical infrastructure enables the secure and efficient exchange of sensitive information between relevant and authorised actors. This includes common, national specifications and services for authorisation control and logging in order to ensure complete protection for sensitive individual data. This will facilitate contacts between citizens and health and social care practitioners and provide staff and decision-makers better access to national registers and databases to facilitate reporting and monitoring. The development of the technical infrastructure in the social services can derive considerable benefit from the development that has already taken place within the healthcare services.

Areas and services of particular importance for future work:

- widespread introduction and full use of national eHealth services that have already been developed
- rapid introduction of the services required under the Patient Data Act for integrated health records management in order to guarantee data protection and integrity
- global standards shall be applied all across the technical infrastructure
- deeper forms of cooperation with ICT suppliers shall be established to accelerate the further development of existing eHealth services or the creation of new ones.

Information structure, terminology and standards

– The basic prerequisite for structured and uniform information

Information structure, uniform terminology and standards are required to ensure that all information registered and managed in the health and social care services can be utilised as a long-term resource. A coherent regulatory framework is required to describe how information shall be structured in order to be able to develop effective decision support for care, treatment and needs assessment as well as for governance, activity monitoring, open comparisons and research. Relevant information needs to be made accessible to authorised staff in different parts of the healthcare and social services, across geographical, technical and organisational boundaries, as well as to individuals themselves. The added value of being able to transfer information does not materialise unless the information itself is of a high quality and can be interpreted by the staff who need to use it.

This initiative is aimed at safeguarding a coherent regulatory framework for information management in health and social care. Some of the main tasks include: developing methods for how to use the common information structure, supporting health authorities in their application of the framework on the local and regional level and developing long-

term forms of management.

Appropriate care documentation is not just a question of traditional health records management, where interventions are documented, but also planned measures and patient participation in order to support the care and rehabilitation process. This includes information on the joint planning of measures and activities from different health authorities and practitioners

Areas and services of particular importance for future work:

- the results of the Swedish National Information Structure and National Interdisciplinary Terminology projects shall be validated and road-tested by both care staff and administrators
- a national standardisation for the introduction and use of the information structure and interdisciplinary terminology shall be developed in consultation with health authorities and industry
- the information structure and interdisciplinary terminology shall be further developed based on the needs of the social services.

Laws and regulatory frameworks

– Regulatory frameworks that combine integrity with safety and efficiency

The laws, ordinances, regulations and guidelines that govern health and social care activities must reflect technological development and where necessary be reviewed and revised to balance the needs for safety and efficiency with those for integrity and data protection. The legislation must be able to meet organisational needs, allow scope for technological development as well as guarantee personal integrity.

The introduction of new eHealth services provides immense scope for higher quality, better safety and new research. Understandably, however, there is also a worry that sensitive personal information can end up in the wrong hands. A thorough consideration of the integrity aspect must always therefore be an integral part of both the development and application of eHealth services. The Patient Data Act (2008:355) lays down strict requirements for the logging and monitoring of all access to integrated patient health records, where both the caregiver and the patient can check that only authorised staff are allowed access to the information.

The legal possibility for health and social care staff of being able to exchange patient information across health authority boundaries and between organisations within the same municipality has been examined as part of several government inquiries. Improved scope for both joint and coordinated ini-

tiatives and better prerequisites for monitoring and open comparisons are urgently needed.

One of the tasks of the Social Services Personal Data Inquiry was to review how the treatment of personal information in the social services should be regulated. The aim of the regulation would be to improve the scope for compiling statistics and monitoring activities. The Inquiry's proposals were submitted to the Government in March 2009 and the results of the subsequent period of consultation are currently being discussed within the Government Offices.

Areas and services of particular importance for future work:

- the need for well-developed and improved information exchange both within and between health and social care providers needs to be thoroughly analysed, taking the proposals of the Social Services Personal Data Inquiry as an important basis for future work
- greater patient mobility and international eHealth services require more in-depth analysis of national regulatory frameworks to enable continuity of care across both organisational and national borders.

» Family members have access to their loved ones' health records «

What are known as “Care Diaries” allow older people in care and their families to monitor how day-by-day care is administered. Marianne Carlén, who works for the Stockholm home help services, updates her patient notes at the customer’s home.

Equipped with a palmtop computer, home help staff leave the main Stockholm office in the morning. They then spend the rest of the day out visiting customers.

“Before each customer visit, I register my time of arrival on my palmtop. And after the visit, I enter what I’ve done and what time I leave,” says Marianne, who is a home help group coordinator.

She’s been using the technology since November 2009 and says that the new mobile working method has led to more up-to-date and detailed health record management.

“For example, I register whether I have administered personal care, helped the customer with day-to-day chores, etc. I can also register if anything out of the ordinary happens, such as if the customer has fallen or if I’ve asked the district nurse to come and visit.”

All her colleagues can then read her updates and comments on their palmtops or on their desktop computers at work. The customer’s family and friends can also follow how the care is being administered via the “Care Diary” service.

“Family members can read my notes online and find out if anything untoward has happened,” says Marianne.

The aim of the Care Diary is to make it easier for older people and their close relatives and friends to keep up-to-date with what has happened and what decisions have been taken.

Marianne Carlén also thinks the service is good for people who don’t live close to their elderly relatives.

“Many of our customers have children and grandchildren who live a long way away. It can be nice for them to see that everything is working as it should.”



In addition to the benefits to family and friends, Marianne believes that the palmtop computer is a big help in her day-to-day work.

“The palmtop is connected up to the home help service main system, making all the information available to all authorised staff. I can see each customer’s implementation plan, basic information and any problems there may be. I can also access the contact details of the customer’s immediate family,” she explains.

Marianne is very satisfied with this new way of working.

“A few years ago, many people thought the home help service was a bit moth-eaten. It’s fun to be able to show everyone how innovative we are.”

What is the Care Diary?

Using the Care Diary, older people and their families can monitor how care is being administered. Through the system, the user can see what decisions are being taken, what care measures are planned and what has happened.

Only home help service customers and authorised family members/friends can access the Care Diary.



4.

Deployment, monitoring and evaluation

Basic financial principles

The National Strategy for eHealth, adopted in 2006, established the basic principles for the financing and implementation of various initiatives within the strategy. These basic principles will continue to hold true in the future.

In the decentralised Swedish health and social care sector, the health authorities – the municipalities and county councils – have full responsibility for the development and financing of their activities. But they are also dependent on taxes and government grants for funding. This presupposes constant discussion between central government and the health authorities. Central government shall also compensate health authorities for the economic effects if it decides to take measures that involve greater commitment or an increased level of ambition by municipalities and county councils within their compulsory activities.

The main points that form the basis of National eHealth involve the use of ICT to develop, improve and adapt activities to new circumstances and needs in society. As a result, the drawbacks that sometimes are the consequence of care services having to function without being hindered by organisational boundaries and geographical distance must be

eliminated. Despite many as yet unresolved questions on the national level, the health authorities on the regional and local level have the primary responsibility for the implementation, development and funding of their activities. This means that they must basically join forces to finance the work that needs to be done on the national level.

Central government can, by deciding on financial incentives, promote and support important areas within the activities of the health authorities. This has occurred since the launch of the strategy, in the form of e.g. the annual “Dagmar Agreement” between central government and the Swedish Association of Local Authorities and Regions (SALAR), through which funding has been made available to accelerate the roll-out of important eHealth services

Monitoring and evaluating implementation

The organisations behind National eHealth agree on the need to strengthen national monitoring of the deployment and use of existing technology and services. The full potential of coherent eHealth services will only be realised once they are extensively implemented and used, which underlines the

importance of transforming these national projects into widely implemented management tools more rapidly than is happening at the moment.

During 2010 and 2011, the High-Level Group for National eHealth intends to initiate a project

to jointly review the national management of the work to implement the strategy and look at models for how to monitor implementation and evaluate its effects. The results of this project will be presented by the end of 2011.

eHealth for a Healthier Europe

During the Swedish 2009 EU Presidency, Gartner performed a study² at the request of the Swedish Government in order to examine the outstanding potential if eHealth services were to be deployed and used to the full. The report shows that there is still enormous potential to use the financial and personnel resources within the sector in a much better way.

The absence of widespread implementation of modern, integrated eHealth services causes avoidable injury, incorrect medication and unnecessary waiting-time and administration at a very high cost every year. The report shows, for example, that an estimated 370 000 GP vis-

its would be unnecessary if electronic health records connected to advanced appointment booking systems were used to their full potential. Furthermore, 5 500 cases of incorrect drug use could be avoided with the help of clinical decision support, which would free up over SEK 300 million (EUR 31.7 million) in secondary care costs.

It is obvious that the costs of failing to use the existing technology to the full are often many times higher than the one-off cost of investing in new eHealth services. Other international reports and studies also confirm this picture.

¹ eHealth for a Healthier Europe – opportunities for a better use of healthcare resources

Status report 2010

History

Background (from 2006 onwards)

The National Strategy for eHealth was developed at the request of the Swedish Government during 2005 and 2006 after national consensus was reached on the need to develop and introduce nationally coordinated ICT support and more integrated information management. The objective was to improve and renew health and social care putting the needs of the individual first. The Strategy was adopted during the spring of 2006 as a result of decisions by the Swedish Riksdag (Parliamentary Communication 2005/06:139) and by the boards of the then Federation of Swedish County Councils and Swedish Association of Local Authorities. A National High-Level Group for eHealth was established with representatives from the Ministry of Health and Social Affairs, the Swedish Association of Local Authorities and Regions (SALAR), the National Board of Health and Welfare, The Medical Products Agency, Apoteket AB and Carelink. Within six months, all of Sweden's county councils and regions had decided to adopt and implement the national strategy into their own activities, which had a huge impact on its development.

In parallel with development of the National Strategy for eHealth, work was ongoing at county council executive level to coordinate existing ICT projects more effectively and to increase the scope of joint efforts. As a result of the strategy, all county councils decided in the autumn of 2006 to set aside over SEK 200 million (EUR 21 million) per year for the period 2007–2009 for joint development initiatives, primarily focusing on a common infrastructure.

For the 2010–2012 period, funding has been raised to about SEK 300 million (EUR 31.5 million) per year and the focus has shifted to citizen and organisational benefit. In order to drive forward joint development, a special eHealth ICT purchasing organisation was created, which now goes under the name of the Centre for eHealth in Sweden (CeHis).

A coordination initiative within the municipal sector has been running concurrently under the auspices of SALAR. The aim has been to continue to develop ICT use and simultaneously strengthen coordination both within the municipal sector and in relation to the county councils. This has helped to establish a stable foundation for coordinated development on the regional and national level.

By developing the Swedish National Information Structure and the National Interdisciplinary Terminology, the National Board of Health and Welfare has laid the foundation for more structured, unambiguous and user-friendly documentation in both healthcare and social services.

The Ministry of Health and Social Affairs has created the necessary prerequisites by enacting the new Patient Data Act. The Act provides for secure electronic information transfer between different caregivers combined with strong protection of citizen integrity and greater scope for transparency and influence.

The overall aim of the development work and the cooperation that have been pursued since the advent of the National Strategy for eHealth in 2006 has been increasingly focused on the use of eHealth to both streamline and renew Sweden's health and social care services. In the majority of cases, it is a question of further developing and supplementing existing eHealth services so that they work better for the user and in the interaction with other health and social care units. In some cases, however, national coordination is a matter of developing and deploying entirely new eHealth services that are needed to enable health and social care to be provided and operated in new forms. For example, it is a matter of providing all citizens with better scope to participate in and control their own health and social care, by, among other things, being able to choose provider themselves.

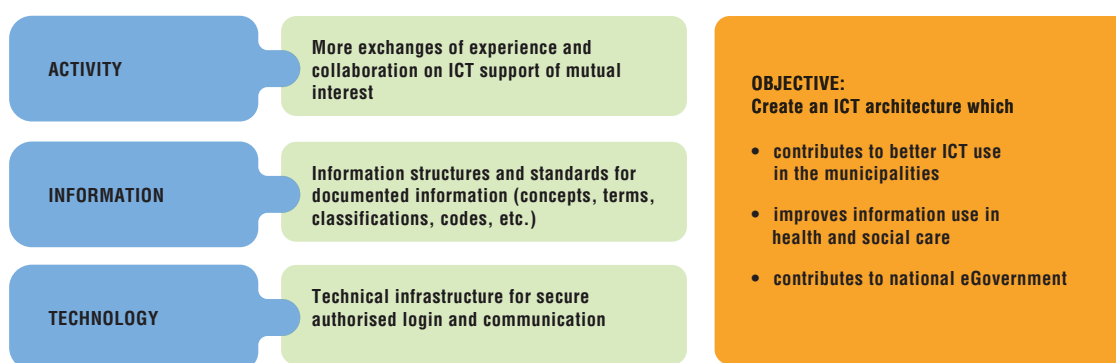
Implementation of the strategy by municipalities

During 2009, SALAR, in cooperation with the various regional cooperative bodies, has intensified its work on the three action areas of Activity, Information and Technology, referred to in the 2008 action plan. The commitment of municipalities to adopt and implement the strategy has increased considerably due to the fact that it has now been extended to include the entire social services sector and consequently changed its name to National eHealth. Regional cooperation on the strategy and modernisation of the ICT infrastruc-

ture for the social services are important driving forces in the municipalities' collective eDevelopment. The activities in the action plan have both strengthened and improved cooperation in health and social care across health authority boundaries. At the same time, it has also provided better conditions for an improved eService for citizens.

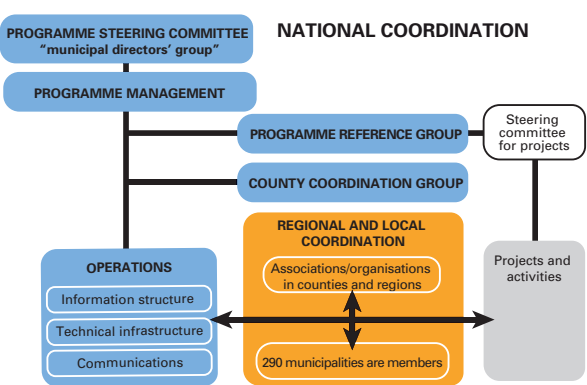
An organisation for the exchange of experiences and cooperation on the local, regional and national level has been built up during the year with the counties as

Focus and objectives of municipal ICT collaboration



a base. In general, we can ascertain that ICT development in municipal health and social care varies considerably. It is primarily the very large municipalities that have been working systematically with the development of eHealth services in accordance with the strategy. Small and medium-sized municipalities have not come as far in their development.

A large number of municipalities are represented in the activities and working groups concerning the three action areas.



	Steering group	Programme Reference Group	County-wise coordinator	Technical infrastructure	National IT architecture
Blekinge					
Dalarna					
Gotland					
Gävleborg					
Halland					
Jämtland					
Jönköping					
Kalmar					
Kronoberg					
Norrbotten					
Skåne					
Stockholm					
Södermanland					
Uppsala					
Värmland					
Västerbotten					
Västernorrland					
Västmanland					
Västra Götaland					
Örebro					
Östergötland					

Implementation of the strategy by county councils

During 2009, Sweden's county councils and regions continued to carry out the activities planned in the joint action plan for 2007–2009. The focus of the work has been to build an infrastructure, including security measures, authorisation solutions and communication standards. This is a necessary base for the future development of secure and effective ICT solutions. Most of this work has been completed during 2009. Secure services for verification, logging and consent management in accordance with the new Patient Data Act have been set up or are in the final stages of widespread deployment. The national architecture, in the form of regulatory frameworks and guidelines, both conceptually and technically, has been improved and will form the basis of future development.

Citizen services have continued to be strengthened with the expansion of the 1177.se website.

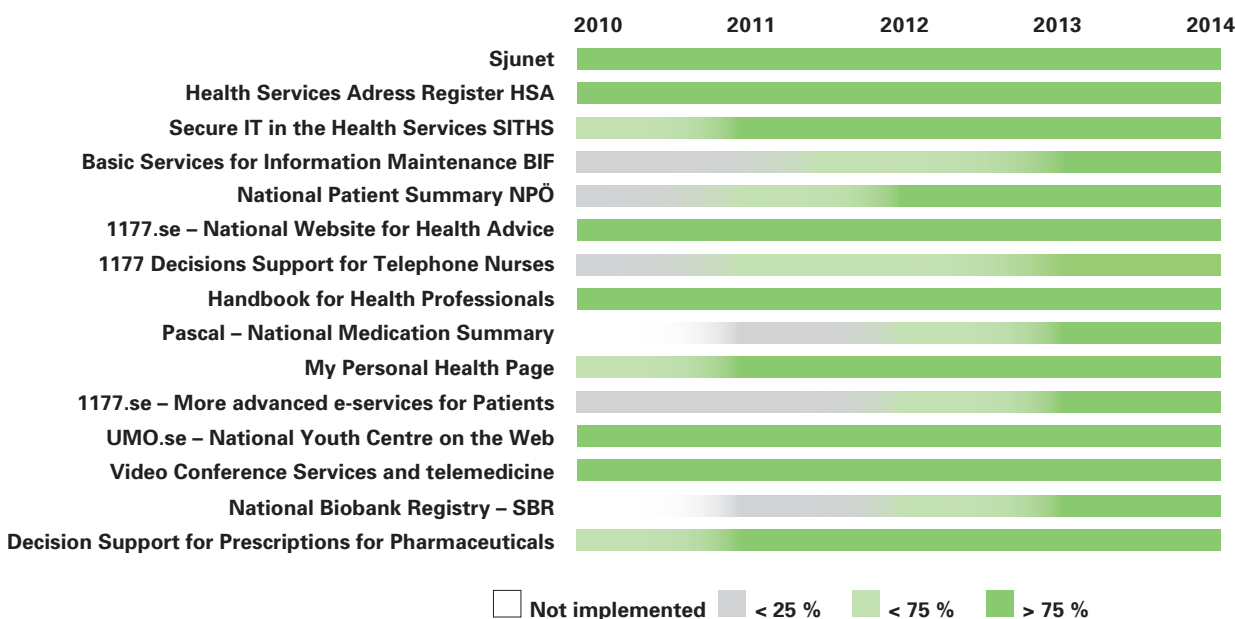
Deployment of the National Patient Summary (NPÖ) has begun in Örebro and Östergötland. A further six county councils (Blekinge, Jönköping, Kronoberg, Stockholm, Sörmland and Västra Götaland) are planning to begin deployment during 2010. NPÖ will then be introduced in the rest of the country's county councils and regions during 2011–2012.

Pharmaceutical issues have been more in the spotlight during 2009. The introduction of the Swedish Pharmaceutical Information Database has led to better access to and use of producer-independent facts on pharmaceuticals. After a thorough feasibility study, the Pascal project got underway, a project that will lead to authorised prescribers having access to a patient's complete drug history at the touch of a button, which represents a clear improvement in patient safety as regards drug treatment.

When benefits arise

National services will not be able to be introduced at the same time by all principals.

The table below shows when visible benefits arising from the national services are expected to arise in county councils.



During the first half of 2009, an external evaluation of the development cooperation of the county councils and regions was performed ahead of the next three-year period. The evaluation stressed the importance of further strengthening national cooperation. It led to the county councils and regions deciding to reinforce their efforts within the framework of the new Swedish Centre for eHealth (CeHis). The 2010–2012 plan also involves a shift in development perspective: from the necessary infrastructure to development of eHealth services that provide clear and visible benefit to citizens and health and social care staff.

When will beneficial effects be visible?

It will not be possible to deploy the national services simultaneously in all county councils, municipalities and private care enterprises. The table below provides an overview of when the beneficial effects of national eHealth services are expected to become visible for citizens and health and social care staff.

The county councils have reached different stages of implementation as regards the various National eHealth projects. There are a number of projects presented in the table below in terms of where they are in the decision process and plans for a number of national services.

	MANAGEMENT PROJECT								VOLUNTARILY ASSOCIATED		
	Sjunet	Video	HSA	SITHS	1177.se	NEF	SIL	NPÖ	1177	RGS web	
Blekinge	Implemented	Implemented	Implemented	Implemented	Implemented	Implemented	Agreement/introduction	Initiated/Nothing planned	Implemented	Initiated/Nothing planned	Sjunet: The care sector's own digital communication channel. Video: Video/distance meeting service via SJUNET HSA: the Health Services Address Registry SITHS: Secure IT in Health Services 1177.se: Councils and counties are jointly responsible for 1177.se, a website with information about health care. NEF: National Format for ePrescriptions SIL: the Swedish Drug Information Database NPÖ: National Patient Summary 1177: Nationally coordinated health and advice by telephone RGS Web: Decision-making support for health advice over SJUNET
Dalarna	Implemented	Implemented	Implemented	Implemented	Implemented	Implemented	Agreement/introduction	Initiated/Nothing planned	Implemented	Implemented	
Gotland	Implemented	Implemented	Implemented	Implemented	Implemented	Implemented	Agreement/introduction	Initiated/Nothing planned	Implemented	Initiated/Nothing planned	
Gävleborg	Implemented	Implemented	Implemented	Implemented	Implemented	Implemented	Agreement/introduction	Initiated/Nothing planned	Implemented	Initiated/Nothing planned	
Halland	Implemented	Implemented	Implemented	Implemented	Implemented	Implemented	Agreement/introduction	Initiated/Nothing planned	Implemented	Agreement/introduction	
Jämtland	Implemented	Implemented	Implemented	Implemented	Implemented	Implemented	Agreement/introduction	Initiated/Nothing planned	Implemented	Initiated/Nothing planned	
Jönköping	Implemented	Implemented	Implemented	Implemented	Implemented	Implemented	Agreement/introduction	Initiated/Nothing planned	Implemented	Initiated/Nothing planned	
Kalmar	Implemented	Implemented	Implemented	Implemented	Implemented	Implemented	Agreement/introduction	Initiated/Nothing planned	Implemented	Initiated/Nothing planned	
Kronoberg	Implemented	Implemented	Implemented	Implemented	Implemented	Implemented	Agreement/introduction	Initiated/Nothing planned	Implemented	Initiated/Nothing planned	
Norrbottn	Implemented	Implemented	Agreement/introduction	Implemented	Implemented	Implemented	Agreement/introduction	Initiated/Nothing planned	Implemented	Initiated/Nothing planned	
Skåne	Implemented	Implemented	Implemented	Implemented	Implemented	Implemented	Agreement/introduction	Initiated/Nothing planned	Implemented	Initiated/Nothing planned	
Stockholm	Implemented	Implemented	Implemented	Implemented	Implemented	Implemented	Agreement/introduction	Initiated/Nothing planned	Implemented	Agreement/introduction	
Sörmland	Implemented	Implemented	Implemented	Implemented	Implemented	Implemented	Agreement/introduction	Initiated/Nothing planned	Implemented	Initiated/Nothing planned	
Uppsala	Implemented	Implemented	Implemented	Implemented	Implemented	Implemented	Agreement/introduction	Initiated/Nothing planned	Implemented	Initiated/Nothing planned	
Värmland	Implemented	Implemented	Implemented	Implemented	Implemented	Implemented	Agreement/introduction	Initiated/Nothing planned	Implemented	Implemented	
Västerbotten	Implemented	Implemented	Implemented	Implemented	Implemented	Implemented	Agreement/introduction	Initiated/Nothing planned	Implemented	Initiated/Nothing planned	
Västernorrland	Implemented	Implemented	Implemented	Implemented	Implemented	Implemented	Agreement/introduction	Initiated/Nothing planned	Implemented	Initiated/Nothing planned	
Västmanland	Implemented	Implemented	Implemented	Implemented	Implemented	Implemented	Agreement/introduction	Initiated/Nothing planned	Implemented	Agreement/introduction	
Västra Götaland	Implemented	Implemented	Implemented	Implemented	Implemented	Implemented	Agreement/introduction	Initiated/Nothing planned	Implemented	Implemented	
Örebro	Implemented	Implemented	Implemented	Implemented	Implemented	Implemented	Agreement/introduction	Initiated/Nothing planned	Implemented	Implemented	
Östergötland	Implemented	Implemented	Implemented	Implemented	Implemented	Implemented	Agreement/introduction	Initiated/Nothing planned	Implemented	Initiated/Nothing planned	

■ Implemented ■ Agreement/introduction ■ Initiated/Nothing planned

Development within each action area respectively

An integrated infrastructure of advanced eServices is gradually being constructed as part of the National eHealth initiative. Work to implement the measures needed to achieve beneficial effects in care organisations and for the citizen is ongoing within all three action areas. This work must be done in parallel and in a coordinated fashion across all the areas in order to

ensure the intentions of the strategy can be realised. A number of the development projects within the various action areas have been completed and are already being implemented across the care sector. Health authorities are now responsible for gradually rolling out fully-fledged services as soon as possible based on the local conditions.

eServices for accessibility and codetermination

UMO.se

UMO.se is a national online youth clinic for 13 to 25 year-olds. This online service makes it easier for the target group to find relevant, customised, up-to-date and quality-assured information. UMO's ethos is to take a holistic view of young people. The aim is to ensure young people can find the information they need to allow them to make their own decisions on important issues in their daily lives. The website was launched in the autumn of 2008 and had over one million visitors during its first 12 months. It was designated "Best website for young people" by RFSL Ungdom (The Swedish Federation for Lesbian, Gay, Bisexual and Transgender Rights Youth Organisation).

1177.se

The 1177.se website has up-to-date, easy-to-read, peer-reviewed texts on most health topics. The service promotes health and advances knowledge about healthcare among patients and the general public, thereby empowering them and increasing their participation. 1177.se provides information that helps patients and their families before, during and after their contact with the healthcare services. The "Ask 1177.

se" service answers 10 000 anonymous questions per year. During the autumn, the website's editors rapidly produced texts on swine flu, which were factually concordant with the information published by the National Board of Health and Welfare, the Swedish Institute for Communicable Disease Control and Krisinformation.se, the Swedish Civil Contingencies Agency's website for emergency information. During 2009, 1177.se had almost two million visitors per month.

Healthcare online

The idea of the Healthcare online project is to build and deploy a new platform for 1177.se, which will become a joint website for Swedish healthcare and a new platform for the continued development of personal eServices. The website will increase the accessibility of care and improve service to patients and the general public, improve public health, enable comparisons of healthcare services in different parts of the country and contribute to more effective utilisation of the collective healthcare resources. The new 1177.se, which is now into its fourth stage, will be ready by the end of 2010.

The 1177 Healthcare Telephone Helpline

1177 is the national healthcare telephone helpline. It is open to everyone, 24 hours a day, 365 days a year, from anywhere in Sweden. The idea of the service is to increase the availability of quality-assured healthcare information and guide the general public to the right healthcare establishment. At the end of 2009, about 8.1 million citizens could get healthcare advice by calling the 1177 national helpline. By the end of 2010, the service will be available to the entire Swedish population.

My Healthcare Contacts – personal services

My Healthcare Contacts gives citizens the possibility to, for example, change their doctor's appointment online, renew a prescription, ask questions and obtain advice. An increasing number of more advanced services are gradually being developed and made available in step with the modernisation of the technical platform. My Healthcare Contacts is now available at 2 250 clinics in 15 county councils.

Other initiatives facilitated by the strategy

Below follows a selection of government initiatives that are now underway under the management of Inera AB (previously Sjukvårdsrådgivningen SVR AB – The national healthcare helpline).

Comparisons and healthcare choices

This project is developing a website for the general public with information on primary care units, enabling people to compare them and make informed healthcare choices. An editorial information service with links to further information at county councils has been developed during 2009. An extended service providing citizens with the opportunity to compare primary care units and make active healthcare choices directly online was launched in the spring of 2010.

The Dental Care project

1177.se was expanded during 2009 to include information on dental care regulations. Animations and trans-

lations were also provided on the subject of preventive dental care as part of the project. The 1177 telephone helpline was also strengthened by adding more information about teeth problems. The aim is to empower the patient on the dental care market. The project, which ran between June and November 2009, was implemented in cooperation with representatives from organisations such as the Public Dental Service, the Swedish Association of Private Dental Practitioners and the Swedish Association of Public Dental Officers.

The Cancer project

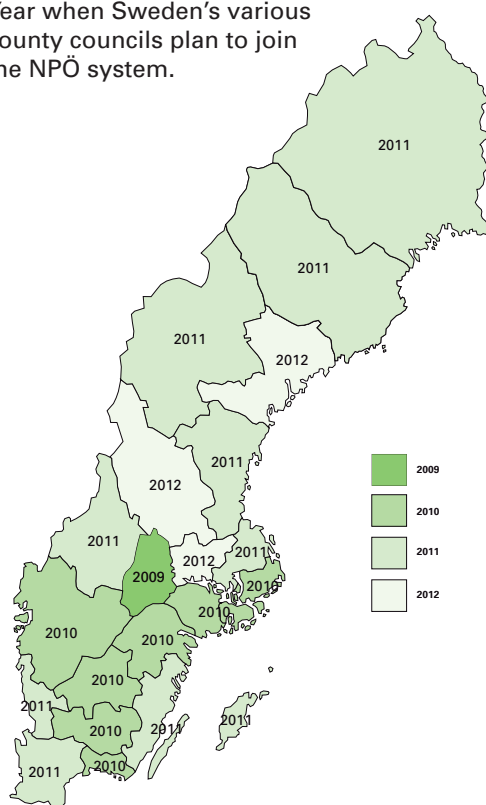
During 2009, Inera AB was given the task of developing a cancer information service. The information will be presented on the 1177.se site. The task comes from the Ministry of Health and Social Affairs and is part of the National Cancer Strategy. One of the overarching objectives of the strategy is to prevent the risk of contracting cancer. The task was started in January 2010 and will be run in project form for 12 months before becoming part of Inera AB's administration.

User-friendly and accessible information

The National Patient Summary (NPÖ)

Using NPÖ, authorised caregivers can access the most essential information about a patient regardless of where it was created or is stored, provided the patient gives his or her consent. The aim is to improve patient safety and the continuity between different levels of healthcare. During 2009 and 2010, NPÖ has been introduced in parts of Örebro County Council, Örebro Municipality as well as the county councils of Östergötland and Sörmland. The Swedish Prescribed Drug Register, which contains all prescription drugs dispensed from all Swedish pharmacies, was made accessible via NPÖ during 2009. NPÖ is expected to be integrated with Basic services for information

Year when Sweden's various county councils plan to join the NPÖ system.



management (BIF) during 2010 to ensure secure information management in accordance with the Patient Data Act. Furthermore, support for the deployment of NPÖ is expected to be increased so that a further six county councils, together with municipalities and private caregivers, can join the system during 2010 and the remaining county councils during 2011–2012.

Pascal (Comprehensive information on patients' drug prescriptions)

The aim of this project is to give every drug prescriber access to a patient's total medical drug history at every consultation, regardless of where and by whom the drugs were prescribed. An integrated prescription list of this nature gives the prescriber a comprehensive picture of the patient's entire medical drug history. This aim is achieved by using existing information in the Swedish Prescribed Drug Register, the National Prescription Database and the National Dose Register and, based on this information, creating an integrated prescription list. The aim for 2010 is to deliver an initial pilot system for access to dose services and to continue to support the integration of the Prescribed Drug Register into NPÖ.

Swedish Drug Information Database (SIL)

SIL is a joint county council database containing quality-assured drug information which will become available for all prescribers regardless of where they are and what kind of health records system they use.

Jönköping County Council started introducing the database in 2006. The Västra Götaland Region, Stockholm County Council and Region Skåne were next to start using SIL to gather information when prescribing drugs. There has been an agreement in place between the state and SALAR since 2009 incorporating guidelines for the integration of SIL into county council health record systems. All remaining county councils will integrate SIL into their health record systems during 2011–2012.

Electronic expert support (EES)

EES is an electronic expert support system which, based on a person's entire drug history in the Prescription Database, gives signals to the prescriber in event of possible dosing errors, double dosage, drug interactions, etc. EES is now available to every pharmacy in the country. Since October 2009, it has been introduced in 19 pharmacies and is being made available to at least another 300 pharmacies during 2010. EES is owned and run by Apotekens Service AB.

The Care Handbook

The Care Handbook is used by all health and social care staff, regardless of which health authority they come under and where the care is being administered. Some sections of the handbook can also be used by patients' families when administering care. The Care Handbook, which has been available online since 2002, is a quality-assured national service, the content of which is developed in cooperation with authors

and reviewers who are specialists in their respective areas. The Care Handbook ensures good-quality, safe care on equal terms and contributes to better resource efficiency by reducing the need for developing local guidelines, routines and working methods.

EiRA

EiRA is a county council cooperation project aimed at providing healthcare staff with scientific information in the form of eJournals and other eResources. The content of EiRA is aimed at all healthcare staff who meet patients, healthcare planners and evaluators as well as technical and administrative staff. The responsibility for the EiRA service was transferred from SALAR to Inera AB during 2009. Agreements have been concluded with eleven publishers from the beginning of 2010 onwards. This gives the staff access to over 850 journals online as well as the Best Practice clinical decision support system.

Other initiatives facilitated by the strategy

Public performance reports

In 2009, the Government adopted a national strategy for quality improvement through public performance reports on healthcare and social services. The strategy includes the vision of increasing the availability of comparable data and developing forms and methods for presenting and implementing accurate performance reports and comparative analyses. This will lead to improvements in both quality and efficiency. Intensive efforts are ongoing to make performance reports more accessible in order to increase the availability of data in the healthcare services. To facilitate free choice in care, citizens should be able to compare patient perceptions and service providers online.

The Quality Register Inquiry

The National Quality Registers contain personal information on diagnoses, treatments and results and have been cofinanced for several years by the state. During 2010, the Ministry of Health and Social Affairs and SALAR have appointed a working group to analyse current use and review the organisation, financing and responsibility for the registers. A fundamental prerequisite is the availability of relevant, uniform, monitorable information in electronic form. In the long term, it should be possible to provide the quality registers with data directly from the healthcare services' health records system. In accordance with this year's Dagmar Agreement, the results of the National Board of Health and Welfare's National Interdisciplinary Terminology and National Information Structure projects shall start to be applied in a number of quality registers during 2010.

Infrastructure

Regional cooperation among municipalities

A national working group has been established, containing 40 or so representatives from various municipalities. During 2009, the group has analysed the current ICT infrastructure of Sweden's municipalities by, among other things, conducting a large-scale questionnaire survey. A total of 238 municipalities have actively participated in the study in some way or other. The ICT infrastructures of the municipalities have been analysed in detail, pinpointing the need for action and priority measures.

Basic services for information management (BIF)

BIF is responsible for supplying the role and authorisation management services for secure information handling across organisational boundaries required under Sweden's Patient Data Act. BIF requires the use of the national intranet for the care sector Sjunet, the Health Service Address Registry (HSA) and Secure IT in the Healthcare Sector (SITHS) and contains supplementary functions for validation, consent, access control, traceability, logging and log analysis. The BIF procurement process was concluded in the spring of 2008 with the participation of all Sweden's county councils. Deployment of BIF has begun during 2010. The introduction of BIF is focusing primarily on the National Patient Summary (NPÖ), prepar-

ing the way to make BIF services available for other healthcare applications in the next phase.

Health Service Address Registry (HSA)

HSA supplies information on the working tasks and roles of healthcare staff. It forms the basis for authorising individuals to register and read confidential information. HSA contains about 320 000 items, i.e. individual staff members and care units. HSA also constitutes the basis for several different healthcare search services. HSA has now been introduced in almost all county councils and a large number of municipalities. Continued deployment in the municipalities is ongoing in parallel with introduction at private caregivers.

Secure IT in the Healthcare Sector (SITHS)

SITHS is a national security solution for electronic identification and the secure communication of information. Using the SITHS card, caregivers can identify themselves and verify their authorisation, independent of organisational and geographical boundaries. All county councils have introduced SITHS during the spring of 2010. During 2010, SITHS will also be packaged together with HSA and Sjunet to facilitate deployment in municipalities and at private caregivers.

Sjunet

Sjunet is a national quality-assured network for all electronic communication in the healthcare services. Sjunet's wide availability forms a basis for the national services for secure communication across organisational boundaries and geographical distances. All county councils, 4 government agencies, 55 municipalities, 35 private caregivers and 68 service suppliers are connected to Sjunet and the number of subscribers is increasing rapidly. During 2010, Sjunet will also be packaged together with HSA, SITHS and possibly BIF to facilitate deployment in municipalities and at private caregivers.

Channel Insurance-Healthcare (IFV)

The aim of the IFV project is to develop specifications and technical solutions which county council health record system suppliers can use to improve the medical documentation in connection with sick-leave registrations and to transfer it electronically to the social insurance office. During 2009, the project has developed specifications and communication interfaces, a basis for accounting requirements and improved communication testing software. By October 2011, it should be possible to supply 90 per cent of all medical documentation to the social insurance office electronically.

Information structure and terminology

National Information Structure (NI)

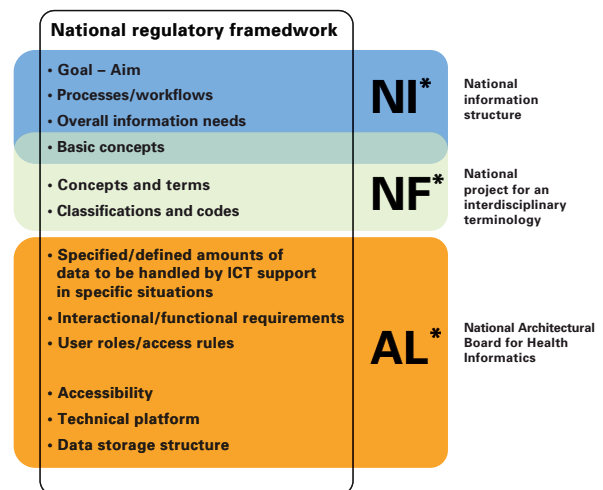
The National Information Structure (NI) describes what kind of information is needed in health and social care documentation on the general level. It also describes how the information should be structured so that it can be used in different contexts, for different purposes, in the health and social care process and for monitoring and managing activities.

The National Board of Health and Welfare has developed an initial NI version which will allow communication of uniformly structured data across organisational boundaries and systems. An important part of the work has been to identify concepts that can describe comparable phenomena in health and social service processes. The social services should also be able to use most of the models in this initial NI version. NI has been tested by a number of health authorities during 2009. The results show that the models can be used to improve health record systems, analysis of information requirements for the monitoring of quality indicators and to analyse and describe organisational processes.

In 2011, an NI guidance document will be developed and work on future regulations will begin. This work also includes gaining advocacy for the results and creating consensus on the generic descriptions of processes and concepts. Furthermore, development will continue based partly on the needs of the social services.

National Interdisciplinary Terminology for health and social care

The National Interdisciplinary Terminology for health and social care (NF) includes nationally agreed concepts and terms as well as national and international classifications. It also includes the international



reference terminology SNOMED Clinical Terms. By the summer of 2010 SNOMED CT had been fully translated into Swedish. The National Board of Health and Welfare is responsible for the Swedish version of SNOMED CT. An important task will be to tie in NF with the other components of the information structure, terminology and standards action area. This task will be undertaken in cooperation with the other actors in the sector.

Once completed, the project will above all deliver methods for future work, including a model for a governing organisation and draft routines for collaboration with external parties.

Architecture and regulatory framework

A national architecture is required as a basis for developing coordinated eHealth services. The Swedish Centre for eHealth (CeHis) has developed an objec-

tives scenario for the national architecture based on four perspectives: activities, information, technology and safety. Based on these four perspectives, CeHis has identified the information requirements of the core process, i.e. actual healthcare work, which in turn have been grouped into different information areas as shown in the figure below. The objectives scenario for the organisational architecture is based on the National Information Structure (NI).

During 2009, CeHis has developed a basis for how NI should be applied. Continued and deeper cooperation with the National Board of Health and Welfare's NF project is a prerequisite for future development.

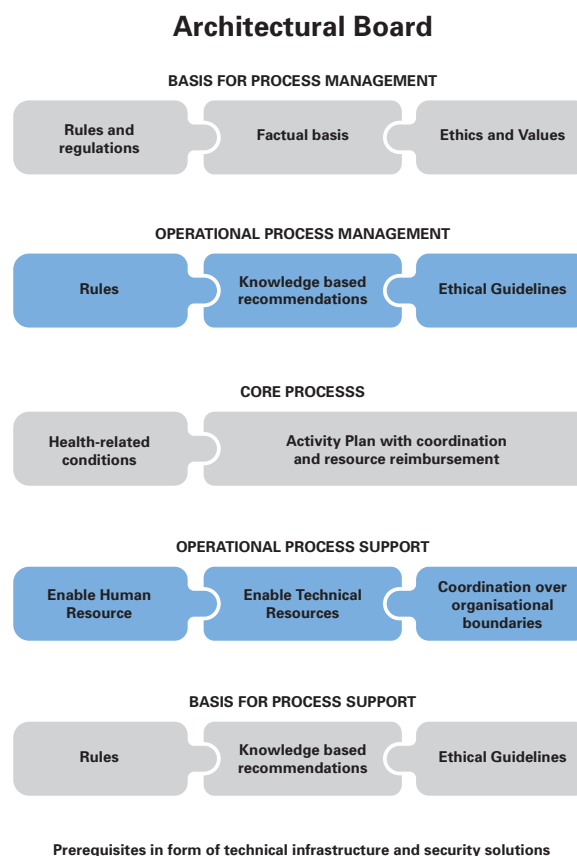
National ePrescription Management System (NEF)

The National ePrescription Management System (NEF) adapts ePrescriptions to applicable statutory, organisational and quality requirements. Initially run as a project, the system went live at the beginning of 2009. On 1 July 2009, management of the system was taken over by Apotekens Service AB, which is now responsible for approval processes and change management in the ePrescription service.

Healthcare service information in civil registries (VIF)

The aim of this project is to improve the quality and service of the information exchange between the healthcare services and civil registries at the Swedish Tax Agency and to the National Board of Health and Welfare. This will provide increased patient safety and better service by improving the quality of basic personal data and bringing it more up-to-date. Furthermore, the project may lead to greater efficiency and less resource consumption for administration. In

September 2009, Danderyd Hospital became the first hospital in Sweden to use electronic birth registration. Unlike before, no "temporary number" is registered pending registration of a civic registration number. Instead, the child is given its civic registration number directly, including the last four digits. The project is now being disseminated on a wide scale to all Swedish county councils. In addition, the electronic transfer of death certificates is being analysed during 2010.



Laws and regulatory frameworks

The Patient Data Act

As from 1 July 2008, all county councils, municipalities and private caregivers can introduce integrated health record management under the new Patient Data Act (2008:355). Integrated health records make all relevant patient information available electronically across health authority boundaries. The National Board of Health and Welfare and the Swedish Data Inspection Board have produced a manual and regulations on how the Act is to be applied in healthcare activities. SALAR has arranged extensive training programmes for municipality and county council legal advisors in how to apply the new rules in healthcare activities.

The Social Services Personal Data Inquiry

In 2007, the Government appointed the Social Services Personal Data Inquiry to examine how information supply within the social services can be improved. One of the primary aims of the Inquiry was to create a regulation that makes it easier to compile statistics and activity reports and to safeguard the quality of healthcare, social care and the social services. The aim is also to increase the scope for exchanging personal data between the social services and the healthcare services. The Inquiry submitted its report “Social Services, Integrity and Effectiveness” (Official Government Report 2009:32) in the spring of 2009 and the ensuing comments from consultation bodies are currently being discussed in the Swedish Government Offices.

The EU and the international arena

During the Swedish EU Presidency in the second half of 2009, the Government was a key driving force in the promotion of eHealth as a natural component of health strategies on both the national and European level. This has led to a comprehensive change of perspective in European cooperation on eHealth, in which the beneficial effects and intelligent use of the technology are now very much in focus.

For the first time since the spring of 2004, the Swedish Presidency managed to put eHealth on the agenda of the European health minister council meeting in December 2009. As a result of the council conclusions on eHealth, there is now a fresh and powerful political mandate for in-depth, concrete cooperation. The Council points out the need for strong political leadership to guarantee implementation and use of various eHealth services. Furthermore, EU Member States have announced the creation of a new cooperative mechanism that will coordinate and consolidate ongoing projects and initiatives on the EU level. Negotiations are currently ongoing between Member States to create a new *European eHealth Governance Initiative* to realise these plans and increase the readiness of Member States to use and apply the results of the various projects currently being run at national or European level.

For several years now, Sweden has also had a leading role in efforts to promote eHealth to create greater scope for healthcare continuity between regions and countries within the EU. As a result of their role as managers of the European epSOS (*Smart Open Services for European Patients*) project, Swedish experts have plenty of opportunity to influence and learn from the work now being done in other Member States, adding substantial value to Sweden's own national projects. The objective of the epSOS project is to create the right conditions for a European patient summary system, which makes the most important information accessible across national borders, and make it possible to send ePrescriptions between caregivers and pharmacies within the entire EU. Discussions are ongoing to extend and expand epSOS from the current 12 Member States that are involved in the project and to expand and deepen its content.

The OECD has started work to develop indicators to measure the effects of investments in eHealth. The aim is both to create comparable measures of the beneficial effects of investments in and to make it possible to compare the progress of different countries as regards the deployment of modern eHealth services.

This work will have considerable influence on how Sweden monitors its National eHealth initiative.

