

THE DANISH
GOVERNMENT
LOCAL GOVERNMENT
DENMARK
DANISH REGIONS

MAKING eHEALTH WORK

NATIONAL STRATEGY FOR DIGITALISATION
OF THE DANISH HEALTHCARE SECTOR 2013-2017



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PREFACE

Citizens should be able to receive high-quality and coherent patient care from a modern and efficient Danish healthcare system. An important element in achieving this is to actively involve patients in their own treatment, and to organise treatment in accordance with the needs, possibilities and schedule of the individual.

We want a healthcare system that is coherent, and in which healthcare providers collaborate across sectors and specialist groups to deliver the best service to patients.

Because of an ageing population, there will be more people with chronic diseases in the future who will require cross-sectoral treatment. This increases demand for more – and better – collaboration across hospitals, homecare and general practitioners.

Therefore we have taken steps to fundamentally change the Danish healthcare system by concentrating treatments at fewer but more specialised hospitals; by ensuring that more treatments are performed on an outpatient basis; and by having more patients treated in – or close – to their home. Increased specialisation emphasises the mutual dependence between players in the healthcare sector.

Digitalisation is key to a citizen-centric healthcare system which is coherent and efficient. However, if we are to harness the benefits of digitalisation, everyone must participate, as many of the benefits require cross-sectoral efforts.



Danish eHealth is top of its class internationally, *see figure 1*. We already have a number of ICT systems in support of patient treatment, workflow, and cross-sectoral collaboration. The challenge ahead is to fully exploit the potential of these digital solutions in the treatment of patients, to ensure greater coherence between digitalisation efforts across the healthcare sector, and to ensure greater visibility of outcomes.

With this *National Strategy for Digitalisation of the Danish Healthcare Sector 2013-2017*, the Danish government, Local Government Denmark and Danish Regions continue their collaboration for digitalisation. The strategy was prepared by the National Board of eHealth and it outlines the ambitious and binding common commitment for future work. We have named the strategy *Making eHealth work*.

WE HOPE YOU WILL FIND IT AN INTERESTING READ

Astrid Krag
Minister for Health

Erik Nielsen
Chairman of Local Government Denmark

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Chairman of Danish Regions

THE EXTENT OF eHEALTH USE IN HOSPITALS IN THE EU

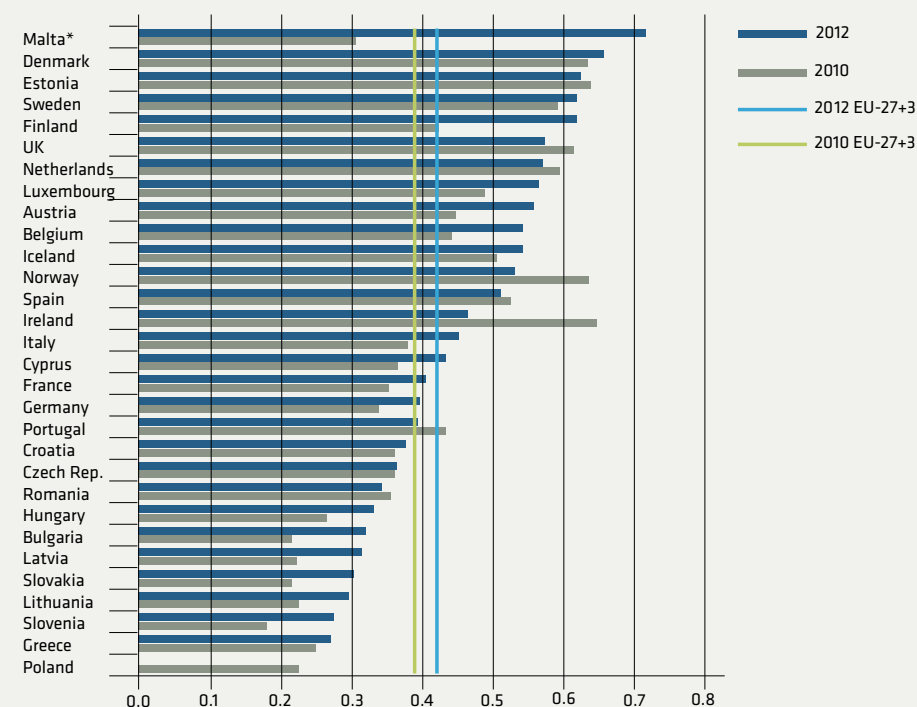


Figure 1. The extent of eHealth use in hospitals in the EU, based on an indicator comprising four parameters: ICT infrastructure; ICT solutions; exchange of health data; and ICT security and privacy. Source: Joint EC - OECD Workshop "Benchmarking Information and Communication Technologies in Health Systems", Brussels, 18-19 April 2013.

*Malta was only represented with data from a single hospital and therefore is not represented with the same validity as the other participants.

A DIGITAL HEALTHCARE SYSTEM

The vision of the Danish government, Local Government Denmark and Danish Regions for a digital healthcare system in Denmark is:

To make coherent, efficient and standardised digital solutions available to health professionals in their delivery of healthcare services to the public.

The aim of this new *National Strategy for Digitalisation of the Danish Healthcare Sector 2013-2017* is to ensure that the many ICT projects launched within the healthcare system benefit patients and staff. We need to ensure better and more efficient care, increased patient safety and easier workflows for staff. During the lifetime of the strategy, we will increase our focus on ensuring full deployment and use of existing ICT solutions, e.g. by phasing out paper-based workflows.

HEALTHCARE SERVICES DELIVERED IN NEW WAYS

We need to use ICT and digitalisation to involve patients. The digital possibilities to involve the individual citizen as an active player must be better utilised, e.g. by using telemedicine or the citizen's own data. We will take the actions outlined in the

National Action Plan for Dissemination of Telemedicine further, in order to deploy and implement the successful solutions and models for collaboration at large scale.

This will give patients better tools to understand their condition and to manage their own treatment.

Access to healthcare is made easier when patients can book an appointment with their general practitioner online. Similarly, healthcare services are made less dependent on opening hours when the public has online access to submitting data about their condition. In some cases, this will mean they avoid having to go through time-consuming routine check-ups. This exemplifies how the use of patient and staff resources can be optimised, so that efforts can be strengthened where the need is greatest.

MORE TIME FOR CORE TASKS

We need ICT and digitalisation to enhance the quality of care and to ease the work of health professionals. This is crucial in ensuring digitalisation is used to deliver more cost-effective health solutions. Moreover,

it requires unified log-on solutions and stable ICT systems.

When raising awareness about the use and effect of ICT, we need to shift our focus away from seeing digitalisation and the use of ICT as only being about documenting data and information as part of daily work procedures. We need to become better at comparing data, avoiding double entries, and assisting relevant work processes. For example, ICT must provide valuable overviews as well as support for decisions and planning in the daily treatment of patients.

MORE COST-EFFECTIVE HEALTH SOLUTIONS

We must ensure greater visibility of the benefits of digitalisation, and we must use digital solutions to create greater awareness about progress and achievements in the healthcare sector. The Danish government, in collaboration with local and regional governments, will therefore establish ambitious indicators for digital workflows and coherent patient pathways in the healthcare sector.

Digitalisation must contribute to raising the quality of services and to releasing resources that may be prioritised to benefit patient care. Patients and citizens should experience the benefits of digitalisation.

THE STRUCTURE OF THE STRATEGY

The strategy comprises five focus areas:

- healthcare services delivered in new ways
- digital workflows and processes
- coherent patient pathways
- better use of data
- governance

Each section provides a brief status on the area, describes challenges, and sets out goals for efforts within the individual area. Each section also contains descriptions of specific initiatives that are to be carried out in the short term in order to realise the strategy.

Additional goals for digitalisation towards 2017 will be set in the budget agreements for 2015 and onwards.



BOX 1

KEY GOALS OF THE STRATEGY IN THE SHORT TERM

- Deployment and use of consolidated clinical ICT workstations in all regions before the end of 2014, based on nine indicators.
- Objectives set for the use of ICT in support of key workflows in municipalities before the end of 2014, based on clear indicators.
- Deployment and use of *the Shared Medication Record* in all regions by 2013, including deployment in all municipalities by 2014 with a view to full use by mid-2015.
- Support of full digital communication between healthcare providers, including full use of text-based clinical MedCom messages by the end of 2014.
- Continued deployment of the use of telemedicine on the basis of an overall national programme.
- Deployment of *Fælles Sprog III* (project to introduce the use of a common terminology) in all municipalities up to 2017.

BOX 2

RECOMMENDATIONS ON eHEALTH FROM EVALUATION OF THE STRUCTURAL REFORM

There is need for:

- Greater progress and focus on the use of ICT solutions in hospitals and municipalities.
- Strengthened efforts to promote cross-sectoral communication, improved monitoring and harnessing the benefits from ICT systems across all sectors.
- Identification of indicators and goals at regional and municipal levels for the use of relevant ICT systems in the daily delivery of services.
- Strengthened efforts by the the regions to use ICT solutions with a documented beneficial effect, and launch initiatives to promote the use of ICT solutions across the regions.
- Efforts by the regions to accelerate work to establish and put into use clinical ICT workstations, to ensure systematic follow-up on the phase-out of manual workflows, and to phase out the use of incompatible ICT solutions.
- Better efforts by the National eHealth Authority and the regions to establish a common public sector ICT infrastructure for the healthcare sector.
- Greater priority by the regions on joint procurement, development and operation of common regional ICT solutions.
- The National Board of eHealth to enhance its role in binding collaboration on the overall coordination of eHealth in Denmark.

BOX 3

THE LINK TO OTHER STRATEGIES

This strategy takes further the tracks set out in the out in the eGovernment strategy 2011 - 2015. The common regional digitalisation strategy and the municipal strategy for telehealth will be realised within this framework.

The parties will launch a public sector strategy for digital welfare services in 2013, which will ensure the right conditions for more efficient delivery of services by the public sector and for new ways to involve citizens – also in the healthcare area. Some of the initiatives in this strategy for digitalisation of the healthcare system will therefore be included in the strategy for digital welfare services.

This strategy for digitalisation of the healthcare system sets the framework for those public sector and strategic assignments that will characterise future digitalisation efforts; efforts that will benefit citizens, patients and healthcare providers.

FOCUS AREA 1

HEALTHCARE SERVICES DELIVERED IN NEW WAYS

We should exploit the digital opportunities to change the way healthcare services are being delivered. For example, using digitalisation to involve patients and their relatives in prevention and treatment in new ways, and in the patient's own home. The aim is to release time and resources for both citizens and healthcare providers.

TELEMEDICINE AND TELEHEALTH – NEW WAYS OF DELIVERING HEALTHCARE SERVICES

Telemedicine makes it possible to manage the healthcare service in new ways.

An ageing population, greater numbers of citizens with chronic conditions and tight budgets all require new thinking. The challenge is to ensure that telemedicine solutions provide the desired outcomes for patients and do not put unnecessary pressure on healthcare spending. This requires that we design the telemedicine solutions in a way such that patients not only can, but also will use them. It is in this context that we should examine the effect of telemedicine across the healthcare sector.

For our telemedicine solutions to provide the desired outcome, we need to gain experience about what is required of the patient, and of the new services.

One expected outcome is that patients avoid always having to consult with the specialist in person and may receive part of their treatment in their home. Telehealth is expected to help prevent the patient's condition from deteriorating and thereby reduce the number of admissions, just as the patient may be discharged sooner after a hospital admission.

The Danish government, Danish Regions and Local Government Denmark set the course for further work in their 2012 National Action Plan for Dissemination of Telemedicine, *see box 4*.

An important goal in the strategy period is to ensure implementation and full use of the telemedicine solutions launched with the Action Plan; at the same time it is important to verify the anticipated benefits.

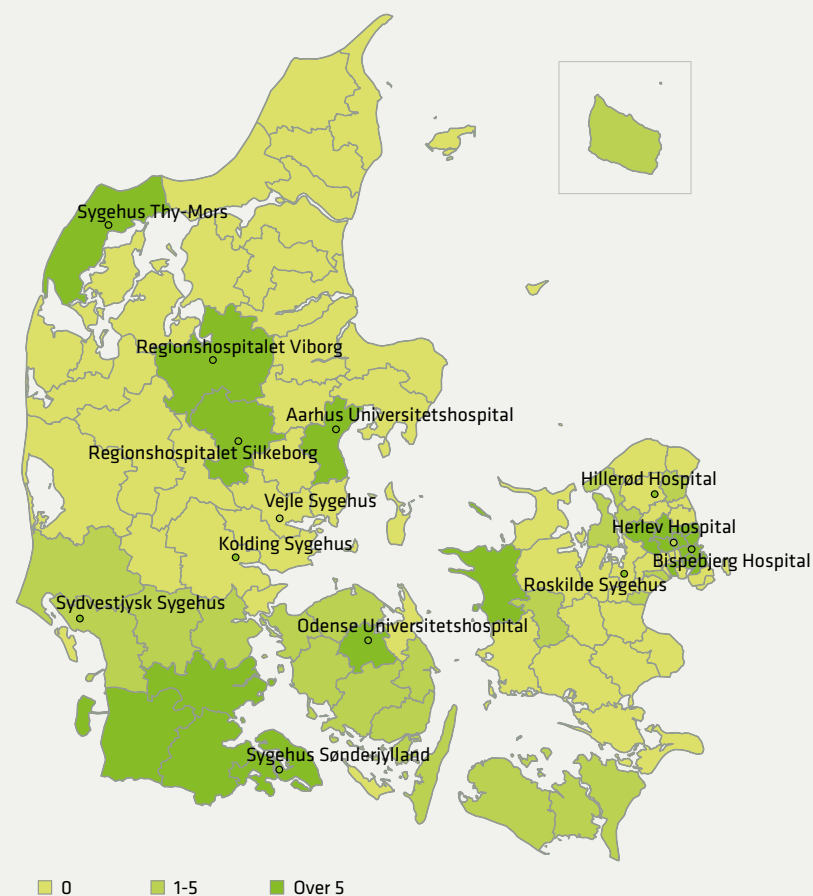


Where experience dictates, local projects must be matured as part of the scaling-up for national deployment.

A framework for a national telemedicine ICT infrastructure will be established as a part of the National Action Plan. The infrastructure will be developed and deployed in the coming years.

There is a need for piloting new telemedicine initiatives at smaller scale during the strategy period, so that new solutions can be developed and made ready for national deployment at a later stage. This applies both to projects that are launched under this strategy, as well as to local projects that the parties want to monitor in order to gain new experience and possibly with a view to deployment. A national programme for telemedicine will form the frame of reference for telemedicine initiatives. This programme will be managed by a programme steering committee.

NUMBER OF ACTIVE PATIENTS IN THE TELEMEDICAL ULCER RECORD – MAY 2013



The map shows the number of patients with a telemedical ulcer record, by each municipality, and for whom activity was recorded in May 2013. The initiative for national deployment of telemedical ulcer assessment commenced in 2013 and will be completed by the end of 2015.

BOX 4

INITIATIVES IN THE TELEMEDICINE ACTION PLAN

- National deployment of telemedical ulcer assessment (nationwide deployment)
- Telepsychiatry (nationwide deployment)
- Clinically integrated home monitoring (large-scale test)
- TelecareNorth (large-scale test and evaluation)
- Online psychiatry (demonstration)

SELF-SERVICE SOLUTIONS AND COMMUNICATING WITH THE INDIVIDUAL CITIZEN

With new digital solutions, citizens with chronic conditions can measure and submit information about their condition for use in organising their treatment. This provides new opportunities but also introduces new challenges. Although the new opportunities do not shift responsibility for treatment away from the health professional, there is a need to clarify who will be responsible if a patient's measurement device fails when the patient self-reports health data.

Citizens already have digital access to the healthcare system, *see box 5*.

The digital healthcare system needs to be expanded, so that citizens have better self-service tools available to them. For example, tools which provide a general picture of home monitoring data and which provide greater possibility for booking or changing appointments over the internet.

Citizens should have better access to their own data in the healthcare system, and better access to find information about health and diseases as well as to navigate between healthcare services. Digitalisation

should also make it easier for relatives to provide assistance and support.

For example, this could be by giving relatives legal authority on behalf of the patient to access the patient's personal health data. Similarly, parents should have access to the health data on their children.

The extent of digital communication with the public should be increased. We know digital communication saves postage and time. Furthermore, important information for the patient reaches the patient faster if sent electronically instead of via the postal service, just as digital reminders mean that more patients remember their appointments.

HEALTHCARE SERVICES DELIVERED IN NEW WAYS: GOALS UP TO 2017

- Telemedical ulcer assessment, tele-psychiatry, and two to three other tele-medicine solutions will be fully deployed.
- A national infrastructure for telemedicine has been established.
- Pilot projects on booking of appointments at hospitals will be carried out by the Danish regions. The projects will ultimately lead to self-booking for the most common patient appointments at hospitals.

BOX 5

EXAMPLES OF SELF-SERVICE SOLUTIONS, DIGITAL COMMUNICATION, ETC.

- Via the official eHealth Portal (sundhed.dk), citizens can gain access to their own health data, including their health records from hospitals, vaccination records, and medication data.
- There is already some experience from using the citizens' own data to assess their individual needs for routine medical appointments and aftercare visits.
- The use of text message appointment reminders has reduced non-attendance.
- At some hospitals, citizens can book appointments via the internet.

BOX 6

NEW TECHNOLOGY ENSURES GREATER EQUALITY

New technology can help ensure more equality in patient care. At the Department of Immigrant Medicine at Odense University Hospital, the use of video interpreting for interviews with patients that are non-native speakers of Danish reveals that the situation is experienced as more 'professional' because the interpreter is not physically present but interprets from a distance. This enhances trust between patient and physician and therefore ensures a basis for more openness in interviews, more accurate diagnoses and medication, and improved clinical pathways for patients who may already feel insecure when dealing with the healthcare services. Use of the technology has halved non-attendance at interviews at the department.



INITIATIVES

IMPLEMENTATION OF THE NATIONAL ACTION PLAN FOR THE DISSEMINATION OF TELEMEDICINE 1.1

On the basis of the National Action Plan for Dissemination of Telemedicine from 2012, the objectives of the activities are to maintain momentum in the individual initiatives; concentrate on benefits and infrastructure; and to carry out an evaluation, so that the decision concerning possible national deployment of initiatives under the Action Plan will be on an informed basis.

By the end of 2015, the following projects under the telemedical action plan will have been completed: Clinically Integrated Home Monitoring, Telecare North, National dissemination of telemedical assessment of ulcers, Demonstration and dissemination of telepsychiatry, and Demonstration of internet psychiatry under the National Action Plan for Dissemination of Telemedicine.

NATIONAL MODEL FOR TELEMEDICAL HOME MONITORING 1.2

Before the end of 2015, a model will be outlined for the dissemination of telemedical home monitoring on the basis of previous experience in the area in Denmark and abroad.

MATURING NEW AREAS FOR NATIONAL DEPLOYMENT 1.3

During the second half of the strategy period, maturing the next telemedicine areas will commence, including several large-scale projects aimed at subsequent national dissemination. The parties behind the strategy will identify these areas jointly, and large-scale projects will be described and implemented.

MATURING THE TELEMEDICINE INFRASTRUCTURE 1.4

With a view to assisting the deployment of telemedicine solutions in the healthcare sector, the telemedicine infrastructure will be tested, matured and developed, on the basis of the existing eHealth infrastructure. This initiative will be completed by 2015.

THE NATIONAL HEALTH RECORD – DIGITAL ACCESS TO HEALTH DATA FOR CITIZENS AND CLINICIANS 1.5

Citizens should be able to view their own health data on the internet. From 2014, The National Health Record on the eHealth Portal (sundhed.dk) will provide a general overview of the individual citizen's health information from for instance prescription history, laboratory test results, and data on allergies and adverse reactions. A further objective of the National Health Record is that, from 2014, it will serve as a common point of access to search and share patient data across the clinical workstations at hospitals and general practitioners. The regions will be expanding the National Health Record in the period from 2014 to 2016.

COMMUNICATION BETWEEN CITIZENS AND THE HEALTHCARE SECTOR WILL BE MADE DIGITAL 1.6

Before the end of 2015, 80% of all referrals, reporting, formal letters and other written communication between individual citizens and the healthcare services will be digital.

ONLINE BOOKING OF HOSPITAL APPOINTMENTS 1.7

At regional level, citizens will be able to book and change their hospital appointments online in a number of selected areas. Before the end of 2015, a pilot project will be carried out in all five regions on online booking of own appointments in an area with a good volume of appointments, for example pregnancy scans.

GIVING RELATIVES AUTHORITY ON BEHALF OF THE PATIENT 1.8

With a view to allowing a patient to provide relatives access to his or her personal health data and take part in the communication with health professionals, a public sector legal authority solution will be developed before the end of 2013.

FOCUS AREA 2

DIGITAL WORKFLOWS AND PROCESSES

Digitalising the healthcare system will ultimately render patient pathways paperless at hospitals, in municipal healthcare services, and at the general practitioner, including practising medical specialists. Therefore, the use of paper-based health records, forms, notes, etc. should be phased out to the widest possible extent. This requires that the paper-based exchange of patient data internally at hospitals is abandoned, for example when patients are transferred from one department to another for examinations and tests.

Safety for patients will be increased if there is only one, current and up-to-date version of a patient's health record (i.e. the electronic version). Furthermore, the staff will have a better general overview of a patient's data. At the same time, the possibility for staff to record data directly in the system will streamline procedures and make the work processes more effective.

This will not only ensure real-time data; it will also ensure a greater use of data and digitalisation to support workflows, planning and documentation.

The full benefits of digital workflows and processes across the healthcare system can only be harnessed if everyone involved takes part. Therefore, full use and consolidation across the healthcare sector is a challenge that needs to be dealt with during the strategy period. Central, regional and local governments will be launching fewer projects, and we will focus on reaping the benefits of planned and already launched projects.

At regional level digital solutions will have to be found which underpin the hospital structure and the establishment of 'joint acute admissions'. This requires that greater emphasis is placed on fast diagnostic evaluation, standardised workflows and patient pathways, as well as improved resource and capacity utilisation, planning and logistics.

Similarly, the municipalities will advance digitally, because the new hospital structure requires strengthening of the primary healthcare system and requires that communication with hospitals takes place electronically.



DIGITAL WORKFLOWS AND PROCESSES AT REGIONAL LEVEL

The Danish government and the regions made an agreement in 2010 on eHealth; an agreement that for example will ensure coherent ICT tools for hospital staff. During the strategy period, the goals in this eHealth agreement will be met, the systems will be put into use and the benefits will be reaped.

Over the coming years, the regions will be working to optimise the introduction of ICT to underpin clinical planning with regard to for instance joint acute admissions, *see box 7*.

The planned 21 joint acute admissions will be important hubs in the new hospital structure and will therefore be key to ensuring a well-functioning and modern healthcare system. The aim of joint acute admissions is to optimise clinical pathways, starting from acute admission. The result will be reduced waiting times and fewer unnecessary admissions.

DIGITAL WORKFLOWS AND PROCESSES AT REGIONAL LEVEL: GOALS UP TO 2017

- Paper-based workflows at hospitals will be eliminated to the widest possible extent, the clinical workstations will be fully utilised and will have been developed further than today.
- Indicators have been identified for the introduction of ICT to support clinical planning at the joint acute admissions on the basis of the components included in the clinical workstation.
- Further to the 2011 budget agreement, the regions will conduct a number of joint calls for tender and will deliver joint solutions. This applies for example to the acquisition and implementation of shared pre-hospital health records.

BOX 7

ICT UNDERPINNING CLINICAL PLANNING

The use of electronic boards that provide an overview of capacity and resources has boosted the production planning and logistics functions at joint acute admissions throughout Denmark.

At the same time, there has been a clarification of the possibility to introduce ICT in logistics at hospitals. Results from Central Denmark Region show that benefits can be gained in the form of optimised processes, more effective use of resources, and increased reliability. Examples include automated tracking by which objects and persons can be tracked across hospitals. Such tracking can be used to automate work processes as well as to supply staff with information to allow them to make informed decisions and limit resource waste.

DIGITAL WORKFLOWS AND PROCESSES IN MUNICIPALITIES

In the municipal healthcare system, health data is today primarily recorded and registered in electronic care records systems as well as in municipal child-health records systems.

An essential challenge will be to provide better support for patient pathways and for the delivery of municipal healthcare services, including homecare and home nursing services. Better data is needed that can enhance and standardise the quality of services, as well as data that can ensure systematic documentation in municipal efforts.

At the same time, the digital solutions in support of workflows and processes in the municipalities have so far been aimed at recording and documenting activities,

while less focus has been afforded to digital support of coherent workflows and data sharing. More specifically, this means that for example nurses have to enter and retrieve data in long text documents using free-text search. There are only a limited number of registration standards for data about patients' blood pressure, body temperature, well-being, etc.

Another challenge arises from the need for more coherence in the delivery of services to citizens. In elderly care, the needs of the individual are becoming ever more complex. Staff of varying backgrounds are therefore needed, including nursing staff, social and health staff, physiotherapists and occupational therapists. The interplay between the relevant authority and those actually delivering the service is therefore an issue that cuts across the whole of the social and healthcare area.

DIGITAL WORKFLOWS AND PROCESSES AT MUNICIPAL LEVEL: GOALS UP TO 2017

- During the strategy period, the municipalities will target digital solutions to better support standardised registration and coherent workflows.
- The municipalities will ensure full digitalisation of selected workflows central to achieving an effective, efficient, and unified delivery of healthcare services in the municipalities.
- It will be decided how the data central to municipal healthcare services is to be made available – through the individual municipality's own electronic care record system, through communication with the regional electronic health record systems and through the it-systems used by general practitioners. The National Health Record via the eHealth Portal (sundhed.dk) is one option. Electronic patient record data and data from general practitioner data is already being shared here.

BOX 8

INDICATORS FOR THE USE OF ICT SYSTEMS IN HEALTHCARE

In connection with the budget agreements for 2014, the Danish government, Local Government Denmark and Danish Regions agreed to apply a series of indicators to report and follow up efforts. These indicators include:

Regions

- Use of the Shared Medication Record: Percentage of medication-reconciled Shared Medication Records per discharge.
- Use of note systems: Percentage of patients for whom recording has been completed at discharge.

Central government

- Reliability of national health registries and infrastructure solutions, such as the Shared Medication Record, the National Service Platform, and the National Patient Registry.
- Traffic figures for the National Service Platform.

Municipalities

- Use of MedCom messages.
- Percentage of relevant citizens covered by telemedical ulcer assessment.

INITIATIVES

FULL USE OF THE CLINICAL WORKSTATION AND ENHANCED PLANNING

2.1

The regions have established a set of indicators for how hospitals are using eHealth in a number of core functions (patient management systems, notes, medications, order/result, appointment booking, discharge summaries, referrals from general practitioners, rehabilitation plans, and discharge reports). Before the end of 2013, the regions will perform a baseline measurement with a view to ensuring full use by the end of 2014. Up to the 2015 budget agreement, the regions will prepare indicators and targets for digitalisation efforts in clinical planning.

JOINT PRE-HOSPITAL HEALTH RECORDS IN REGIONS

2.2

Before the end of 2015, the regions will acquire and implement joint health records in the pre-hospital settings. The purpose of introducing the pre-hospital health record will be to improve the treatment for the individual patient, from when the emergency operations centre receives an assignment until the patient has been signed over to the joint acute admission at a hospital, for instance through sharing patient data between the unit transporting the patient and the hospital receiving the patient.

EFFICIENT DIGITAL WORKFLOWS IN MUNICIPALITIES

2.3

During the strategy period, the municipalities will identify five to seven workflows which are to be made fully digital by the end of 2017. The digitalisation effort will start with the largest workflows, workflows that are vital in ensuring unified and high quality in the municipal services, and workflows which can be digitalised. Against this backdrop, possible objectives will be developed in the area at municipal level, as well as a plan up to 2017.

DEPLOYMENT OF THE 'FÆLLES SPROG III' IN THE MUNICIPALITIES

2.4

In order to ensure structured recording of health data at municipal level, the Fælles Sprog III (A common language III) project will be deployed in all municipalities before the end of 2017.

ANALYSIS OF MUNICIPAL LINKAGE TO THE NATIONAL HEALTH RECORD

2.5

In 2014, a benefit analysis will be launched as well as technical and financial requirements for municipal linkage to the National Health Record in the eHealth Portal (sundhed.dk). In the beginning of 2015 a progress report will be presented with a view to ensuring possible agreement on this under the 2016 budget agreement.

IMPROVED COLLABORATION WITH GENERAL PRACTITIONERS THROUGH A NEW PUBLIC HEALTH INSURANCE IT-SYSTEM

2.6

In collaboration with the municipalities, before the end of 2016, the regions will acquire and implement a joint public health insurance system. This system will perform a number of administrative tasks in relation to general practice activities, including payment. The objective is to ensure more efficient operation through better planning, follow-up and quality assurance of general practice activities, including connections to other parts of the healthcare system.



FOCUS AREA 3

COHERENT PATIENT PATHWAYS

Patient pathways will often involve contact with many different actors across the healthcare system.

Good digital solutions in support of communication, collaboration and delivery of services are vital for coherent patient pathways and patient planning.

Increased coherence between data and processes means well planned, faster and safer transitions between different parts of the healthcare system. For example, it means the general practitioner knows which treatment the patient received at the hospital and the municipal home nurse has up-to-date information about the patient's medication record care plan. The result is reduced risk of re-admission, medication error, uncalled-for home visits, etc.

Fast and secure access to relevant information during the entire process is essential for a good patient pathway. Moreover, the data that is recorded can form the basis for follow-up and lead to improvements in overall efforts.

The challenge is to establish more uniform solutions and more standardised and coherent exchange of patient data.

SHARING PATIENT DATA ACROSS THE HEALTHCARE SYSTEM

During the strategy period, communication between hospitals, municipal healthcare and general practitioners will be fully digitised. Today, much communication in the healthcare sector is already taking place electronically (electronic prescriptions, referrals, discharge letters, etc.) and this is of considerable benefit. However, we have not yet crossed the finish line in terms of full digitalisation, *see box 9*.

In certain cases, health data is still being sent via post and fax between regions, municipalities and general practitioners. The mental health sector is still only rarely using digital communication, for example.

As a consequence, errors may occur because the right information is not available to the relevant health professional at the right time along the treatment pathway.

Healthcare system resources are clearly not being used efficiently when health professionals collect and pass on information manually.

Therefore, the parties behind the strategy will take steps to ensure that a number of solutions that have already been launched are deployed fully. These primarily include the Shared Medication Record and MedCom standards.



SHARING PATIENT DATA ACROSS THE HEALTHCARE SECTOR: GOALS UP TO 2017

- Full deployment of MedCom standards.
- Full deployment of the Shared Medication Record.
- Sharing data through the National Health Record at clinical workstations in all hospital settings.
- Determining possible targets for future demands for digitalisation of workflows, processes and procedures, and data sharing in the healthcare sector, flexibly and standardised across the entire sector.

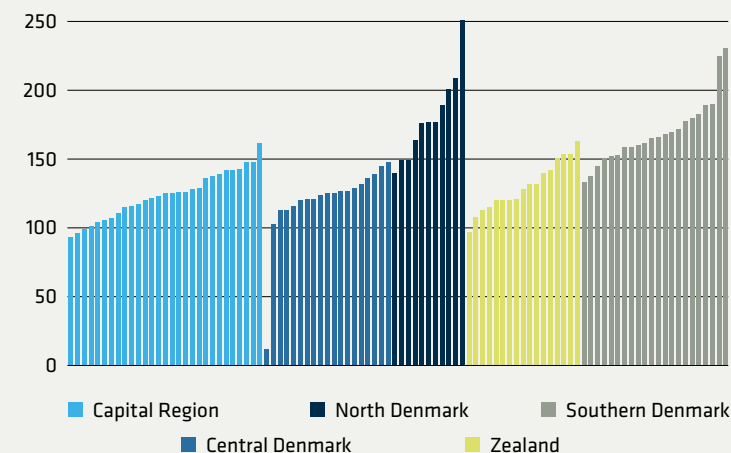
BOX 9

STATUS FOR THE INTRODUCTION OF DIGITAL, MESSAGE-BASED COMMUNICATION IN SUPPORT OF WORKFLOWS

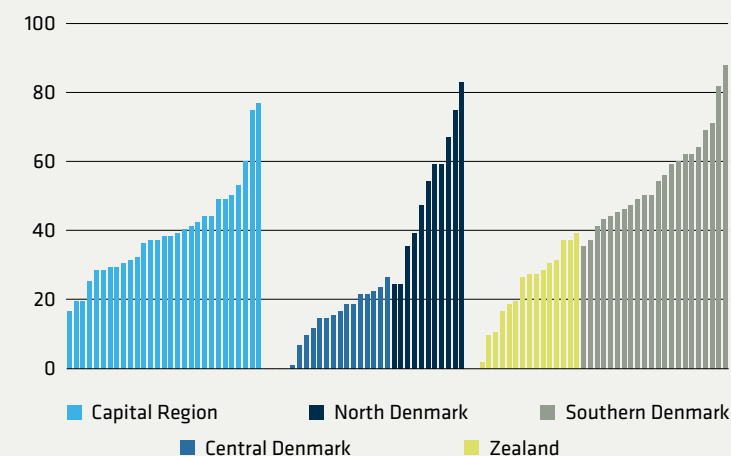
Figures on the number of messages sent between regions and municipalities show large differences in use. Municipalities differ by up to a factor of 12 within the individual region with regard to the volume of messages received. In four municipalities, no messages were sent electronically to the hospitals during the period studied.

With the local government digitalisation strategy, the municipalities are in the process of implementing the use of MedCom messages.

Messages received in municipalities - individual municipalities



Messages sent from municipalities - individual municipalities



ELECTRONIC MESSAGES FROM AND TO MUNICIPALITIES, PER 1,000 INHABITANTS

Note: The data indicates the sum of the number of messages per 1,000 inhabitants in November and December 2012, and January 2013. Source: MedCom.

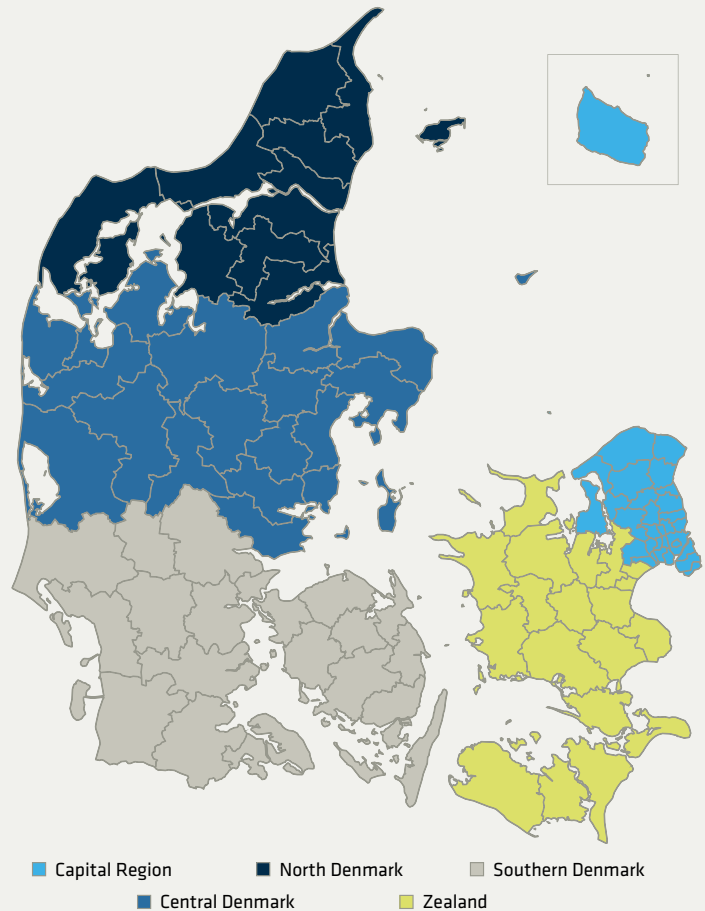
MONITORING DEPLOYMENT AND USE OF eHEALTH IN DENMARK – AN EXAMPLE

USE OF THE SHARED MEDICATION RECORD MAY 2013

NORTH DENMARK		STATUS (%)	MILESTONES 2013 (%)		
			Q2	Q3	Q4
Hospitals	Technical implementation	100			
	Use	46 (46)**	50	75	100
General practitioners	Technical implementation	53 (46)**			
	Use	51 (43)**	50	75	100
Medical specialists	Technical implementation	44 (42)**			
	Use	39 (39)**	50	75	100
Municipalities*	Technical implementation				
	Use				

CENTRAL DENMARK		STATUS (%)	MILESTONES 2013 (%)		
			Q2	Q3	Q4
Hospitals	Technical implementation	85			
	Use	-	70	85	100
General practitioners	Technical implementation	28 (26)**			
	Use	25 (23)**	35	65	100
Medical specialists	Technical implementation	38 (37)**			
	Use	36 (36)**	45	75	100
Municipalities*	Technical implementation				
	Use				

SOUTHERN DENMARK		STATUS (%)	MILESTONES 2013 (%)		
			Q2	Q3	Q4
Hospitals	Technical implementation	20			
	Use	-	50	75	100
General practitioners	Technical implementation	33 (31)**			
	Use	29 (27)**	35	60	100
Medical specialists	Technical implementation	46 (46)**			
	Use	40 (40)**	50	75	100
Municipalities*	Technical implementation				
	Use				



The ongoing development can be followed at www.ssi.dk/nsi

CAPITAL REGION		STATUS (%)	MILESTONES 2013 (%)		
			Q2	Q3	Q4
Hospitals	Technical implementation	0			
	Use	0	0	20	100
General practitioners	Technical implementation	49 (47)**			
	Use	43 (41)**	50	70	100
Medical specialists	Technical implementation	32 (30)**			
	Use	28 (26)**	40	60	100
Municipalities*	Technical implementation				
	Use				

ZEALAND		STATUS (%)	MILESTONES 2013 (%)		
			Q2	Q3	Q4
Hospitals	Technical implementation	100			
	Use	56 (56)**	70	90	100
General practitioners	Technical implementation	56 (52)**			
	Use	53 (49)**	60	80	100
Medical specialists	Technical implementation	33 (33)**			
	Use	30 (28)**	40	70	100
Municipalities*	Technical implementation				
	Use				

* According to its implementation plan, Local Government Denmark will carry out mobilisation in 2013 and implementation in 2014.

** Figures shown in brackets indicate status as of April 2013.

INFRASTRUCTURE AND STANDARDS

The various ICT systems used in the healthcare sector must be able to function together and communicate with each other.

Infrastructure, standards and interfaces make it easier and less costly to link ICT systems in the healthcare sector across the many parties involved. Standards and a common infrastructure also contribute to reducing maintenance and replacement costs, as clients and suppliers have clarity of requirements and costs. Consequently, there is a market for standard solutions.

The challenge is to build and maintain an infrastructure that is demand-driven and which accommodates the differing operational needs of the healthcare sector.

There is a need for standards for telemedicine solutions, for example, to make it easy, cost-effective and manageable to share data from one system to another, and to acquire equipment and integrate it into the standard ICT solutions already in use.

Across central, regional and local governments, work will be carried out in the strategy period to ensure a more coherent data and ICT architecture, which meets the healthcare system's different requirements for data sharing, *see box 10*.

The further development of the data and ICT architecture will have to be balanced with the needs arising from strategically important projects such as the Healthcare Platform project in the Capital Region of Denmark and Region Zealand, as well as the large telemedicine projects.

The ICT infrastructure of the healthcare system comprises a number of common solutions in the form of components and services, *see box 12*.

The common ICT infrastructure will be extended during the strategy period. An important element in achieving this will be to further develop the Danish Health Data Network, the video hub, the National Service Platform and the public sector ICT security solutions. In this connection, a mobile security component will be established and there will be an analysis of security standards and security solutions in the healthcare sector. Plans concerning this must be cost-effective and based on business needs. A road map will be prepared for the public sector infrastructure.

BOX 10

VARIOUS WAYS OF SHARING HEALTH DATA IN THE HEALTH SECTOR

Access to other players' data

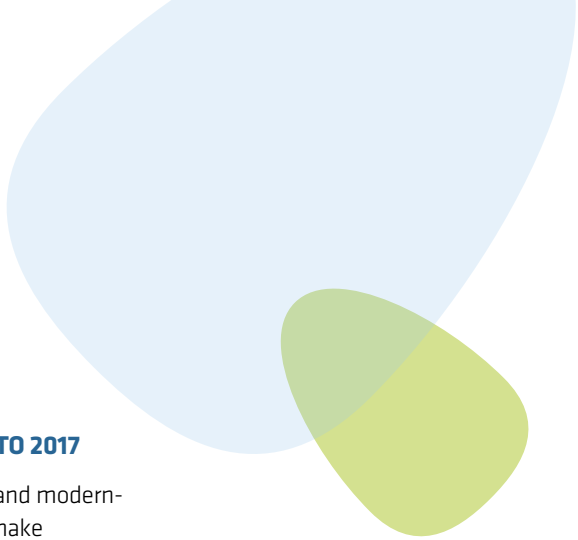
At this tier, there is access to reading data stored by other contributors, for example, the electronic health records used by hospitals.

Electronic messages between providers

At the second tier, there is access to sending electronic messages, point to point. Denmark is using MedCom messages with great success, to send health data electronically across the entire healthcare sector.

Data retrieved as needed

At the third tier, physicians or nurses can retrieve data from across the healthcare system into their own ICT systems on a need-to-have basis. This is possible for example via services such as the Shared Medication Record. The long-term goal is to share more data in this way.



ICT INFRASTRUCTURE AND STANDARDS: GOALS UP TO 2017

- Demand-driven identification and modernisation of standards that will make for stronger cross-sectoral coherence, including follow-up on compliance.
- Data from local ICT systems will be shared across sector borders. New local record systems must therefore be able to deliver data to the national registries.
- The need for sharing patient data will be identified on the basis of a thorough analysis and a roadmap for determining new targets.
- In order to underpin an efficient, effective and coherent healthcare service, the common ICT infrastructure and standards will be incorporated into all relevant ICT projects.

BOX 11

DETERMINING STANDARDS FOR THE USE OF ICT IN HEALTHCARE

Pursuant to section 193a of the Danish Health Act, the Minister for Health may establish requirements for ICT systems in healthcare, including requirements for electronic health records.

This provision is outlined in Executive Order no. 160 of 12 February 2013 (ref. BK001364), which establishes that the National eHealth Authority under the Ministry of Health is responsible for approving standards (including data standards, classifications and interface standards) for the use of ICT in the healthcare sector after consulting the National Board of eHealth.

BOX 12

THE COMMON ICT INFRASTRUCTURE COMPRISES E.G.

- The Danish Health Data Network.
- The video hub (video interpreting services).
- The National Service Platform and security components.
- NemID (digital signature solution) and NemLogin (common log-in solution).
- NemSMS (appointment reminder solution using text messaging).
- eHealth Portal (sundhed.dk) – providing access to health data.
- Digital Post (free, personal digital mailbox service for secure correspondence with for instance public authorities).

INITIATIVES

FULL DEPLOYMENT AND USE OF THE SHARED MEDICATION RECORD

3.1

By 2013, the Shared Medication Record is to be rolled out completely and to be fully in use by regions and by general practitioners. The Shared Medication Record is to be technically implemented by 2014 and fully in use in the municipalities by 2015. A deployment plan for the Shared Medication Record will be agreed in the municipalities at all residential homes for adult patients under the care of the mental services, except where electronic care records are used instead.

FULL DEPLOYMENT AND USE OF ELECTRONICAL MESSAGE-BASED COMMUNICATION

3.2

By the end of 2013, all relevant MedCom messages will be fully technically implemented for patients, at regional as well as municipal levels. Linked to the health services agreements between the regions and the municipalities, models for structural support of cross-sectoral collaboration will be in full use by the end of 2014. Up to the 2015 budget agreement, a decision basis will be established for deploying the use of electronic messages relating to patient pathways in the regions' mental health services and for social care services in the municipalities.

DIGITAL SOLUTIONS IN SUPPORT OF RELEVANT WORKFLOWS ACROSS THE HEALTHCARE SECTOR

3.3

By 2017 we will have full digital solutions in support of relevant cross-sectoral workflows by sharing relevant data across the healthcare sector. By mid 2014, an analysis of health data and communication patterns in the healthcare sector will be prepared along with a joint plan by phases for achieving the 2017 targets. As a first step, the analysis will clarify investment needs to ensure sustainable technology behind MedCom communications.

ANALYSIS CONCERNING SECURITY STANDARDS AND SOLUTIONS IN THE HEALTHCARE SECTOR

3.4

During the first quarter of 2014, the parties behind the strategy will perform a cost-benefit analysis of aligning security standards and security solutions in the healthcare sector with other relevant public sector collaboration.

ESTABLISHING A DIGITAL SIGNATURE (NEMID) FOR MOBILE SERVICES

3.5

With a view to providing a basis for access for citizens to the digital healthcare system via smartphones and tablets, a mobile NemID (digital signature solution) will be established by no later than 2014.



FOCUS AREA 4

BETTER USE OF DATA

We must use data to improve the quality of care for citizens and patients and to assist employees in their daily work routines. For example through efficient access to national clinical guidelines and support for decisions in daily planning and treatment. Similarly, in the future, data will be used to improve quality, in administration and for research activities.

Danish health data and registries are world class. The high quality and relevance of Danish registries are closely linked to the fact that much of the data is acquired as a part of daily routines in the healthcare sector. If Denmark is to maintain its position in this field, we have to develop the way we submit, store, share and use data, to the benefit of patients, health professionals, researchers and businesses.

EXISTING KEY CHALLENGES:

- In some situations, delivery of data to national registers is still done manually, which leads to double registration.
- Registered data is difficult to access and updates of national registers are relatively slow.
- Data to improve quality and to guide decisions must be real-time and easy to access, and there must be legal clarity about terms of use.

- Better data provides the basis for more individualised and real-time treatment and care, however there has been no decision as to how we should manage and share the new types of data and information obtained from telemedicine solutions etc.

The possibilities are increasing for collecting and working with data for planning and research purposes. Strategically, there is a need for an overall framework for how we will work with data in the coming years.

DATA MUST BE AVAILABLE TO GUIDE DECISIONS, RESEARCH, DEVELOPMENT AND PLANNING

The Ministry of Health has formed a new organisation where governance of the health data on the Danish population and data concerning all healthcare activities, economy and quality is organised under the same administration. Key data is collected at the Statens Serum Institut, as well as analysed and communicated to all relevant parties. This means that a good framework is already in place for the secure storage and sharing of data.

However, there is still a need to improve the collection and onward communication of data. Health professionals must have a better data-informed basis for decisions on efficient prevention, treatment and planning.

The national clinical guidelines are a good example of how data can be used in support of daily routines. These guidelines have been established from evidence-based research and therefore contribute to ensuring promotion of the correct and most efficient and effective choices in daily patient treatment and care.





At the same time, we can make these guidelines available through digitalisation and thus make them readily usable for health professionals in their daily work. This could also contribute to a framework for practitioners to include patients in decisions where, for example, a given choice of treatment depends on the patient's own requirements and options.

The guidelines should be readily accessible via healthcare providers' ICT workstations at hospitals and in municipalities, for example through apps. This will make it easier for municipal nurses on home visits to make use of the guidelines and help ensure uniform quality in cross-sectoral patient pathways.

HEALTH DATA IS IMPORTANT IN TREATMENT AND FOR LEARNING

Relevant health data must be available in order to increase patient safety and the quality of care and treatment. It is important that we have access to real-time patient data. Moreover, information from the patient's health record can provide valuable

learning for the physician, who can follow up on a possible diagnosis or treatment he or she has been involved in. This enables better treatment for future patients.

The existing legislation will have to be reviewed to ensure that it does not unnecessarily prevent access to the use of data for education purposes and thus the possibility for improving patient treatment in the future. Work on an EU regulation on data protection will be monitored throughout the strategy period.

Data can be used to screen patients under treatment and ensure that the latest evidence comes into use for the individual patient.

Information reported by the patient can, for example, be used systematically to clarify whether the patient's condition is stable or whether the patient needs to be called in for further treatment. In this way, unnecessary treatment can be avoided or possibly replaced by an interview over the phone. Moreover, patients and nurses can prioritise resources and efforts accordingly.

BOX 13

SUPPORT OF CLINICAL DECISIONS IN INTENSIVE CARE

Digital solutions are today used to guide decisions at a great number of intensive care departments throughout Denmark, including at Rigshospitalet (i.e. Copenhagen University Hospital) and Aalborg University Hospital. Real-time and easy-to-access data is collected from digital monitoring of e.g. vital body functions and the patient's general condition. This ensures overview, and the data is used to systematically develop best practices for treatments, resource planning, etc.

BOX 14

DATA CAPTURE IN THE GENERAL PRACTICE SECTOR

With a data-capture module, general practitioners can report on a set of indicators developed for diabetes, chronic obstructive pulmonary disease, cardiac insufficiency, ischaemic heart disease, stress, anxiety and depression. The indicator data is submitted to the Danish General Practice Database and the general practitioner receives feedback on the data submitted on an ongoing basis. In other words, general practitioners can use this feedback to continuously improve the quality of patient treatment.

BETTER USE OF DATA: GOALS UP TO 2017

- The national clinical guidelines will be made easily accessible for clinicians at hospitals and in the municipalities. The guidelines will be made available electronically as they are developed and as part of efforts to standardise quality and improve coherence in patient treatment and care.
- It must be easy for health professionals to document their observations and to re-access the data after recording it. Data must be retrievable by practitioners in real-time and it must be easy-to-access. At the same time, double recordings must be reduced to an absolute minimum.
- An overall framework will be prepared for how we can best collect store, share and use data in future years.
- Data will be used to improve the decision support for clinicians and administrators in connection with routine planning and care.
- Data reported by citizens will be included in treatments in several treatment areas in order to reduce the number of admission days and the number of outpatient visits for citizens with chronic disorders.

BOX 15

DATA STRATEGY

Denmark is a frontrunner in digitalising the healthcare service. Today, we have some of the most advanced national registries of data on population health. Data is acquired as a part of daily operations in the healthcare sector. This allows for high-quality research and analyses across the entire Danish population and for selected cohorts or patient groups, without having to carry out time-consuming and costly preliminary data collection.

Access to health data of high quality provides a wide potential for developing the healthcare service and industry. The issue of 'big data' is about how we can work with large amounts of data. It is assessed that Denmark should secure its position through more targeted and coordinated efforts.

Denmark can become a central site for research and development activities in the health area. Consequently, there should be enhanced focus on the commercial potential of using data and systems to manage and underpin the use of data. Amongst other things, this requires easy and secure access to relevant and valid data, as well as competence and consultancy on the use, management and production of data.

During 2013, the agencies under the Ministry of Health will outline a data strategy to help ensure that the potential of the data is harnessed. This strategy will be prepared in consultation with the other parties in the healthcare sector.

INITIATIVES

DIGITAL ACCESS TO CLINICAL GUIDELINES

4.1

The purpose of clinical guidelines is to ensure continuous priority-making in healthcare, focussing on the most cost-effective health solutions. Digitalisation efforts should provide support for rapid deployment and implementation of common guidelines, for example via apps, which can be used by municipal homecare nurses from 2014.

LEGAL FRAMEWORK FOR SHARING AND ACCESSING HEALTH DATA

4.2

Prior to the 2015 budget agreement, it will be clarified whether current regulations for the exchange of patient data in the healthcare sector provide sufficient support for the digital exchange and acquisition of health and patient data by the parties that need such data, while taking full account of aspects of patient safety. Furthermore, this initiative will clarify the liability of health professionals in relation to any data which the patient himself chooses to share with the healthcare service or provide access to.

ANALYSIS OF THE USE OF SELF-REPORTED DATA

4.3

Before the end of 2014, there will be an analysis of the potentials of systematic use of self-reported data in the healthcare sector. Self-reported data enables easy and efficient screening of whether patients that are following treatment really need a planned outpatient consultation. For example, epilepsy patients are typically called in for life-long routine visits. In such cases screenings based on the patient's self-reported data will provide the physician with a stronger basis for deciding whether the individual patient actually needs to be called in for a visit, or whether the patient's status is stable and an outpatient appointment is not required.



FOCUS AREA 5

GOVERNANCE

Large and rapid digital changes need to be implemented in the healthcare system in the coming years. This requires clear goals and a clear division of responsibilities, along with actual capacity to implement the changes and transparency about progress and results.

The parties behind the strategy have agreed to retain the division of responsibilities that was decided between the Danish government and Danish Regions in the 2010 eHealth agreement and which was also recommended in the evaluation of the municipal structural reform. This division of responsibilities means that the regions will be responsible for ensuring efficient and effective eHealth at all Danish hospitals, including responsibility for procurement, development and operation of ICT solutions as well as for optimal ICT solutions in support of workflows and patient treatment. Central government will be responsible for determining the legal framework and standards for use of the ICT, for ensuring that relevant

data is shared across the healthcare sector, as well as for realising cross-sectoral ICT projects and national infrastructure.

In this *National Strategy for Digitalisation of the Danish Healthcare Sector 2013-2017*, the municipalities will be included in the same governance and will follow the same basic principles as the regions and central government.

The course agreed in the regional 2011 budget agreement will be strengthened and expanded, so that the development across local, regional and central governments is coordinated from a shared perspective. The primary challenges include:

- Ensuring that the National Board of eHealth to a greater extent constitutes the framework for binding collaboration on overall coordination of eHealth in Denmark.

- Successful implementation of joint projects requires coordination between regions, municipalities and general practitioners.
- Work to establish a national public sector ICT infrastructure must be strengthened and made clearer. The de-centralised projects lack sufficient coordination with the development of a national ICT infrastructure.
- There is no overview of the most important digitalisation projects in the healthcare area, and this makes it difficult to follow up and adjust projects in time.
- The development of common eHealth solutions is made difficult by the fact that ICT systems in the healthcare sector use different standards. New solutions must be implemented via five regional system environments, three municipal electronic care record systems and about ten general

practice systems, while suppliers have to receive order entries from five regions, 98 municipalities and 3600 general practitioners. This challenges the rate of introduction and cost-effectiveness of eHealth development.

- There is a growing need for a uniform implementation effort because the introduction of more eHealth solutions will bind the healthcare sector closer together, and because the benefits will not be achieved until the solutions have been taken into use by all parties.

A stronger digitalisation effort requires closer and more binding coordination and priority-setting. Projects and initiatives that affect all parts of the healthcare system must be planned and coordinated across the public sector to take account of the challenges linked to having to work closely together across sectors.

On this basis, collaboration and overall governance of public sector digitalisation initiatives will be strengthened in four areas:

- 1 STRONGER PRIORITISATION AND OVERVIEW AT NATIONAL LEVEL**
- 2 STRONGER PROGRESS, COORDINATION AND STABILITY OF DELIVERY**
- 3 PROJECT OVERVIEW AND DOCUMENTATION THAT STRATEGY GOALS ARE BEING MET**
- 4 CLEAR FINANCING AND GOVERNANCE MODEL FOR SOLUTIONS IN USE**



STRONGER PRIORITISATION AND OVERVIEW AT NATIONAL LEVEL

1

The National Board of eHealth serves as the central hub for central-, regional- and local-government efforts to ensure efficient and coherent digitalisation of the healthcare system. The National Board of eHealth is responsible for realising the initiatives set out in the annual budget agreements, for following up on realisation of the initiatives in this strategy and for monitoring other strategically important projects, *see table 1*.

The National Board of eHealth is responsible for overall coordination and prioritisation of efforts, follows up on progress and is responsible for any corrective action with regard to priorities and goals for efforts, and for addressing cross-sectoral challenges.

Before the end of 2013, the National Board of eHealth will establish an overview of progress in the projects and initiatives under this digitalisation strategy, as well as in other initiatives of cross-cutting and strategic interest.

STRONGER PROGRESS, COORDINATION AND STABILITY OF DELIVERY

2

The parties behind the strategy have agreed that the National Board of eHealth is to set up a project portfolio steering committee. The committee is to ensure progress, coordination and stability of delivery in the implementation of selected public-sector projects with critical dependencies.

The project portfolio steering committee will work with clearly defined tasks on the basis of terms of reference determined by the National Board of eHealth.

Initially, the work of the steering committee will include:

- Shared Medication Record
- Deployment of MedCom standards
- National Service Platform
- Clinically integrated home monitoring
- National Health Record.

As a general rule, the committee will solve tasks and challenges at the lowest possible level, which is in the relevant project's own steering committee and/or in the project organisations implementing the project. The project portfolio steering committee will ensure clarity of commissions for project implementers, including ensuring harmonisation of any conflicting requirements and requests for the development and timing of solutions within specific goals and budgets.

Implementation efforts also need to be made more uniform and the health services agreements should be used to boost implementation efforts locally.



The municipalities will effectuate large changes in connection with the deployment of Fælles Sprog III (project to introduce a common terminology), implement the Shared Medication Record (by the end of 2014), and deploy a number of telemedicine solutions. In order to promote coordinated municipal implementation efforts and

visibility of progress and outcomes in the individual municipality, a municipal implementation capacity will be developed under MedCom. First, the Shared Medication Record will be implemented up to 2014 on the basis of agreements with the individual municipality.

TABLE 1

CASES FOR THE NATIONAL BOARD OF eHEALTH

TYPE OF CASE

Cross-sectoral digitalisation, such as the Shared Medication Record, the National Action Plan for Dissemination of Telemedicine and a national public sector infrastructure.

Greater and/or strategically important digitalisation initiatives internally at regional-, local- or central-government levels, for example clinical workstations and telehealth.

GOVERNANCE

Goals, prioritisation and plans will be determined jointly and will be the overall responsibility of the National Board of eHealth.

Mutual reporting and ongoing reporting in accordance with a common project portfolio overview.

BOX 16

MODERNISATION BASED ON EFFICIENT GOVERNANCE

Digitisation of the various welfare areas is part of the current modernisation of the Danish public sector. The *National Strategy for Digitalisation of the Danish Healthcare Sector 2013-2017* should therefore be considered in the context of other modernisation measures aimed at developing and preparing public services for the future. An important goal of modernising the public sector is to ensure that governance of public service delivery is based on outcomes rather than on meeting process requirements.

The aim is to ensure room for manoeuvre to deliver tasks through trust, professionalism, good management and less red tape. This requires constant focus on simplifying rules and efficient governance, for example through conducting governance inspections in the various welfare areas. This, in turn, entails keeping focus on whether the rules, the financial incentives and the recommended methods support the goals stipulated. The aim is to ensure correlation between the desired outcomes, knowledge about what works, and the relevant rules. This means that rules which do not support the goals have to be withdrawn.

CLEAR INDICATORS AND GOALS FOR PROGRESS AND OUTCOMES

3

It is evident from the evaluation of the previous structural reform that transparency about the development within eHealth in Denmark can be improved, including transparency about decision basis and about the progress and status of projects. A focussed effort is therefore needed in relation to:

- Creating awareness about the basis of prioritisation and decisions, including business cases, risk profiles, etc. for the digitalisation projects in the healthcare sector prior to any decision regarding deployment.
- Measuring progress in digitalisation projects in the healthcare sector.
- Measuring the deployment and use of key ICT systems and workflows in the healthcare sector, including measuring the benefits realised.
- Overall roadmap for projects prioritised in the forthcoming period.

CLEAR FINANCING AND GOVERNANCE MODEL FOR SOLUTIONS IN USE

4

This strategy will contribute to releasing a considerable potential, e.g. through effective and efficient workflows, increased involvement of the public and further focus on realising large-scale benefits, including across municipal and regional borders. Expenditure on realising the initiatives agreed in the strategy will be met within existing budgets.

It has been agreed to set additional goals for the healthcare sector's digitalisation efforts up to 2017. Revenues derived from realising the strategy will be incorporated in connection with the 2015 budget agreements.

As a part of the 2013 regional and municipal budget agreement, a governance and financing model for operation and further development of public sector eHealth was established. This financing and governance model will be the framework for closer collaboration in the public sector on operations and development of cross-sectoral ICT.

In 2014, the model will cover the National Service Platform infrastructure component, as well as the Shared Medication Record.



BOX 17

EXAMPLES OF ANALYSIS SHOWING THAT eHEALTH LEADS TO BETTER USE OF RESOURCES

The consultancy firm McKinsey & Co concluded in 2010 that the regions had spent DKK 2.1 billion on eHealth in 2009 and that the savings potential through coordination of ICT efforts and through consolidation could amount to DKK 330-490 million annually.

An analysis from 2012 by the consultancy firm Boston Consulting Group concluded that digitalising communication with patients could release DKK 174 million annually at regional level.

Analyses by the Regional eHealth Organisation indicate that a cross-section of the regional ICT projects could release resources for patient treatment corresponding to DKK 150 million annually. To this should be added the benefits of a number of new projects which have not yet been estimated.

Fully deployed telemedical ulcer assessment is expected to release up to DKK 262 million annually in municipalities and DKK 45 million in regions.

FURTHER WORK ON REALISING THE STRATEGY

- The National Board of eHealth has overall responsibility for following up on this strategy.
- The parties behind the strategy agree that further initiatives will be included in the annual budget agreements in future, and that they will be based on business cases and agreements on operations and financing of public sector eHealth.
- There will be continuous monitoring of the progress of projects in the portfolio as well as of the status of key initiatives.
- The National eHealth Authority will publish indicator status reports regularly on www.ssi.dk/nsi



MAKING eHEALTH WORK

National Strategy for Digitalisation
of the Danish Healthcare Sector 2013-2017
August 2013

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addressed to:

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2300 Copenhagen
Denmark

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Design: BGRAPHIC

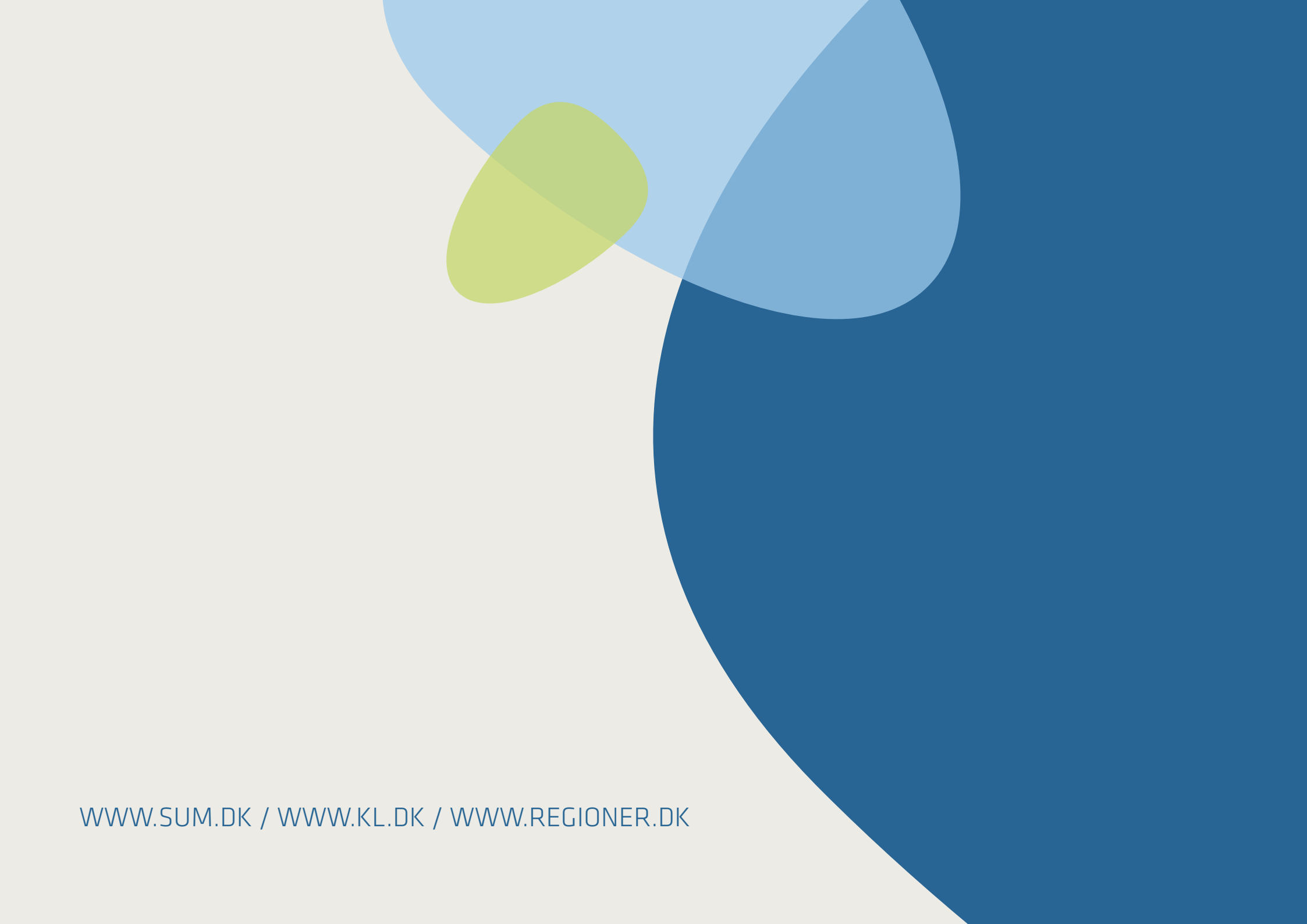
Photos: Shutterstock, Colorbox,
Thomas Søndergaard, Tuala Hjørnøe,
SSI Billeddatabase,
University College Lillebælt, Denmark

Print: pekema danmark as

Printed copies: 1,000

ISBN: 978-87-89148-53-3

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