

Digitalization in Denmark – an introduction

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**DANISH HEALTH
DATA AUTHORITY**

Established 1. november 2015

Ca. 290 employees organised in 8 departments
It-developers, datascientists, it-architects, healthcare professionals,
project managers, secretaries etc

An annual budget of approx. 350 mio. kr.



The Danish Health Data Authority

- Drives implementation and collaboration on digitalization and data in the health sector with focus on national cross-sectoral strategies and agreements
- Three main areas:
 1. National digital health solutions for sharing health data
 1. Develop and run the National infrastructure and the National health care solutions
 2. Define national architectures and standards that are compulsory for the health care sector with an emphasis on information security and interoperability
 2. National health data for secondary data purposes
 1. Large national health registries
 2. Provides health data and analysis on activity, economy and quality – and research
 3. Monitor political benchmarks and decisions in the health sector
 3. Cyber and Information Security on the health care area
 1. Facilitate and strengthen cyber and information security at the highest possible level for the whole health care sector which is categorized as a critical societal sector

Digitizing Danish Healthcare – background

The Danish healthcare system

Universal coverage

Free &
equal access

Mainly financed by
general taxes
(~84 %)

A high degree of
decentralization

National Level



Ministry of Health

- Legislation
- National health policies
- National targets
- Overall economic framework
- Structural planning
- Planning of medical specialties across regions and hospitals
- Clinical guidelines
- Auditing (patient safety etc.)

Regional Level



5 regions

- Hospitals
- Psychiatric care
- General practitioners (family doctors)
- Adult dental care
- Other private practitioners

Local Level

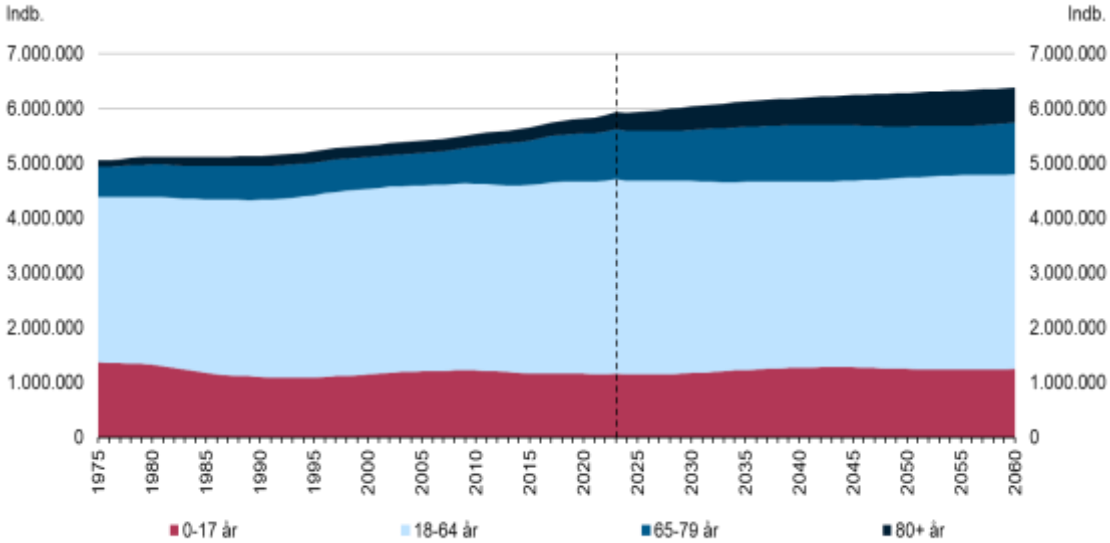


98 municipalities

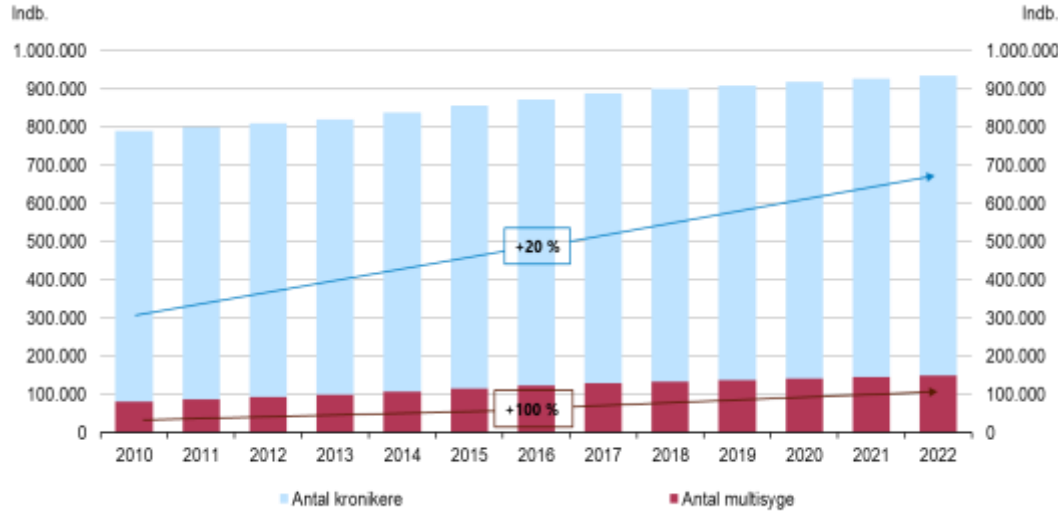
- Preventive care and health promotion
- Care for the elderly
- Non-hospital rehabilitation
- Treatment of alcohol and drug abuse
- Child nursing

Challenges

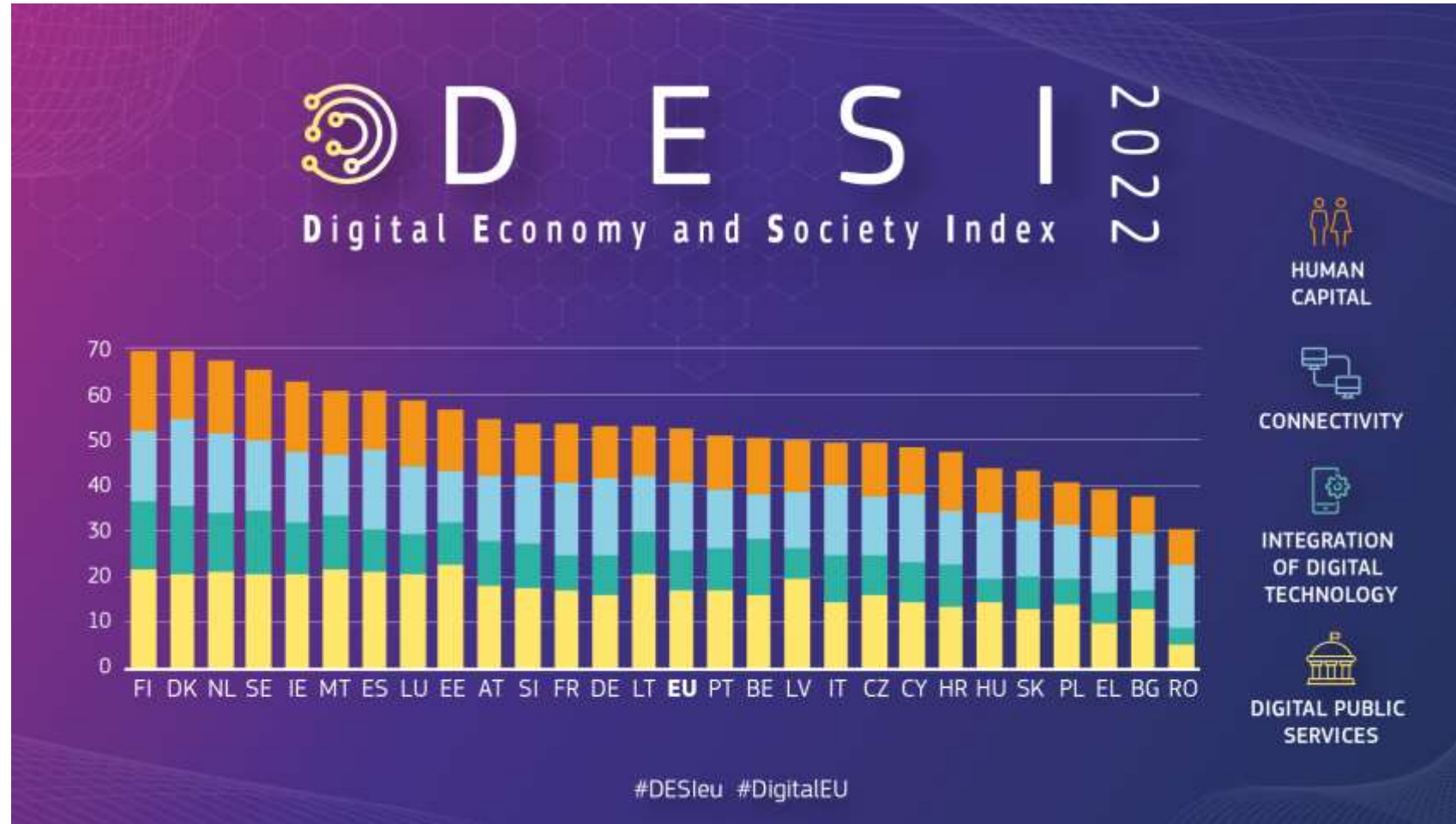
The population is getting older



The number of people living with a chronic condition is rising



A digital frontrunner

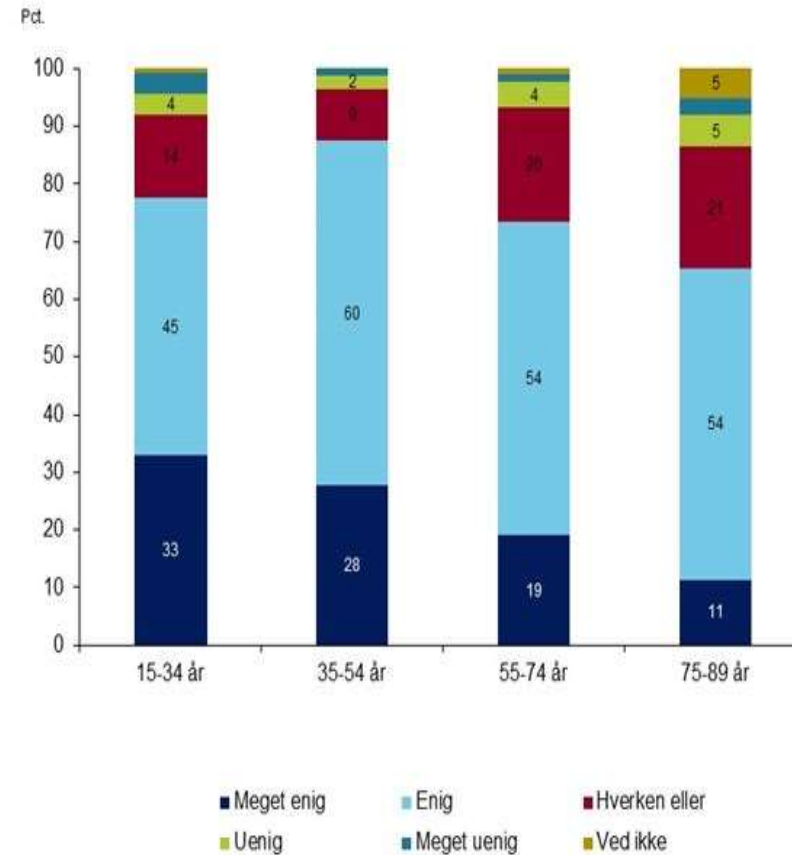


Trust and transparency

In general, Danes have a high trust in the **Danish authorities** and the **Danish digital solutions** which enables the collection of an extensive amount of information about Danish citizens

Why?

- Digital solutions creating transparency
- High data security
- Rules to regulate the use of data



Statement: "In general I trust digital solutions from the public sector, distributed according to age."

The political agenda - 27 years with national strategies for digital health care forms a cornerstone in Danish healthcare and is a strategic priority



Governance – how to change and how to run the business

Political level

- National strategies agreed between government, regions and municipalities
- Annual budget negotiations between government and local/regional level

Strategic level

- National board of eHealth

Tactical level

- National steering group for cyber security
- Advisory committee for standards and architectures (RUSA)
- Cross sectoral systems' management group monitoring shared eHealth solutions

> The national board of e-health

- Ministry of Health (chairman)
- Danish Health Data Authority
- Danish Regions
- Local Government Denmark
- Agency for Digitalization

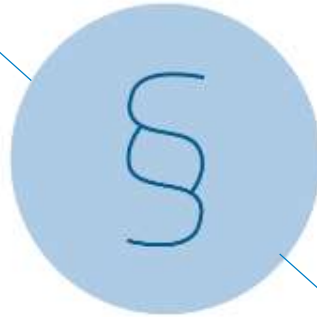
> Monitoring initiatives agreed upon in the strategies and political agreements

Legal framework in Denmark

Primary use of data

Data used for patient treatment

- The patients consent is implied
- Electronic records can only be accessed by healthcare professionals participating in the treatment of the patient
- Patients have the right to deny access to their health records healthcare professionals
- Patients have access Log information, where they can see which healthcare professionals have accessed their health record



Secondary use of data

Data used for planning, management and research

- Data processing does not require consent of the individual for administrative purposes
- For research or statistical purposes data may be processed without consent of the data subject presupposing that the processing of data is:
 - of significant public importance, and
 - the processing is necessary for carrying out these studies
- Approval from a data authority is necessary

IT-landscape

2 EHR systems at hospitals



The top-left quadrant features a blue circle containing the text "2 EHR systems at hospitals". Below the text are four logos: "Epic" in red, "Sundhedsplatformen" in a blue circle, "SYSTEMATIC" in white, and "COLUMNA" in white.

2 EHR systems at municipalities



The top-right quadrant features a blue circle containing the text "2 EHR systems at municipalities". Below the text are two logos: "KMD NEXUS" in a white box and "SYSTEMATIC" in a white box.

4 EHR systems at GP's



The bottom-left quadrant features a blue circle containing the text "4 EHR systems at GP's". Below the text are two logos: "NOVAX" in a white box and "EG" in a white box.

A number of EHR systems at other healthcare professionals – dentists, physiotherapists etc.

Digital solutions for data sharing

Different kinds of data sharing

- **Sending Data – digital messages**

- Data transmission at a given time in the patient's care where the responsibility must be clearly transferred to the recipient – eg. Discharge letter or references.

- **Viewing access to data**

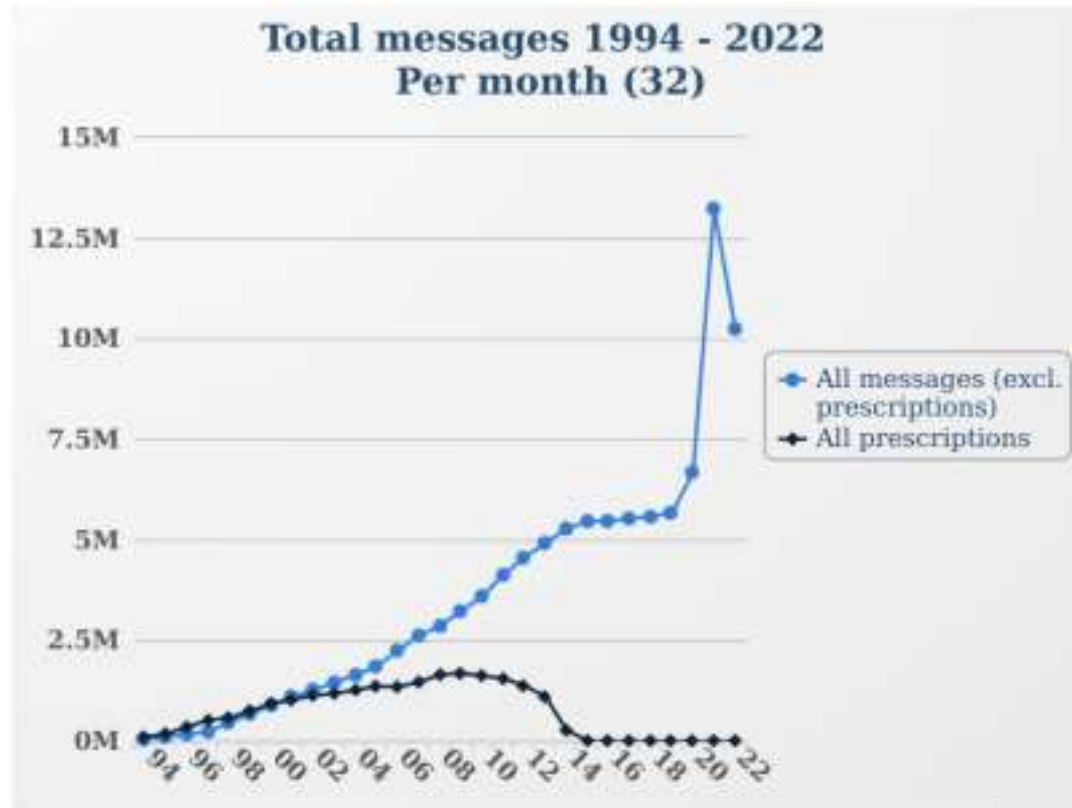
- When it is required to have access to read additional information from one or more data sources at the same time – eg. sundhed.dk for healthcare professionals.

- **Sharing data in national databases**

- Health professionals can, on their own initiative, retrieve data from national databases from collaboration partners to ensure better and more efficient coordination of a patient's care pathways – eg. Shared Medication Record, The Health Appointment Overview.

Sending data

- Standard messages such as referrals, discharge letters, laboratory results etc has all been fully digitized



medcom

“MedCom was established in 1994 as a publicly funded, non-profit organisation with the mission of facilitating the digital cooperation between authorities, public organisations, private entities, and companies who are all linked to the Danish healthcare sector. MedCom is financed and owned by the Ministry of Health, Danish Regions and Local Government Denmark (municipalities).”

Viewing access to data: Sundhed.dk – The national eHealth Portal

- Sundhedsjournalen på Sundhed.dk - the official Danish eHealth Portal for public healthcare services
- Health care professionals have access to personal health data such as:
 - Information from Electronic Health Records from hospitals in other regions and private hospitals
 - Lab results
 - Organ Donor Registration
 - Clinical guidelines (“lægehåndbogen”)



Sharing data in national databases – Shared Medication record



A DEMAND FOR CONTINUED AND COHERENT HEALTH CARE

“I don’t have an overview of my course of illness – and I feel like nobody else does either”

“I want to worry as little as possible about my illness”

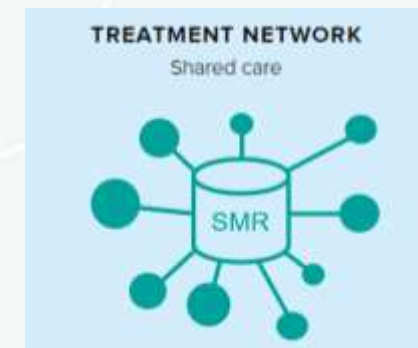
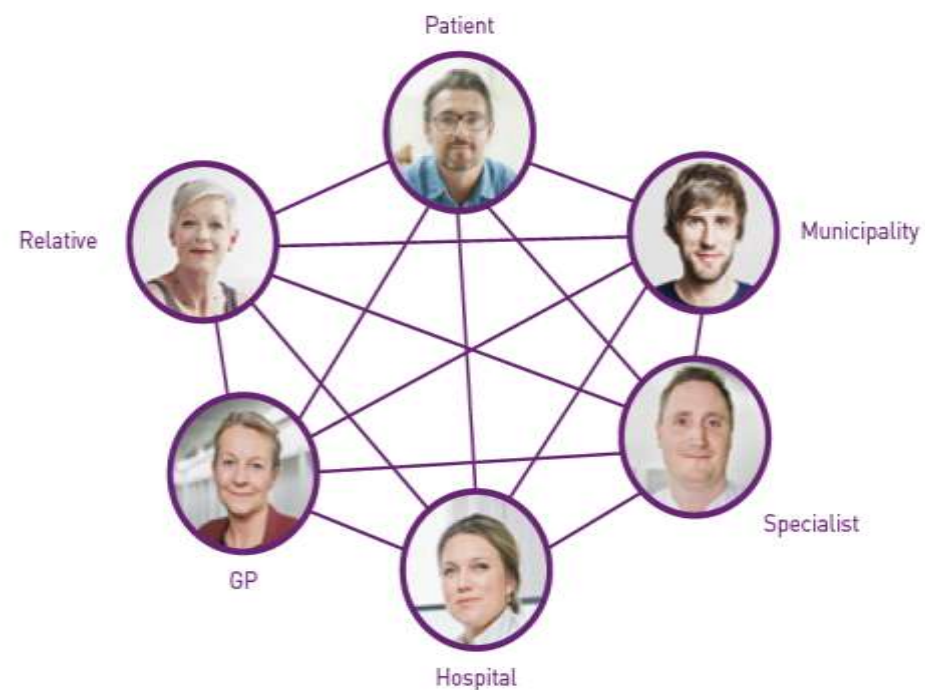
“I have to give the same information over and over again”



A complete overview of a patient's care and treatment

New digital solutions is being developed for the sharing of information regarding care and treatment in the national IT infrastructure. This will give patients and relatives a better overview of their own patient pathway and it will be easier for employees across the health system to make a more coherent effort and coordinate various activities.

1. Patient's appointments: A new digital solution for sharing information regarding a patient's appointments
2. Master data and contact details
3. Plans and actions for treatment and rehabilitation
4. Diagnoses



The citizen's appointments in the healthcare system



Citizen's portals

Borger Fagperson

sundhed.dk

Log på Søg Menu

Genveje til de mest anvendte sundhedsdata

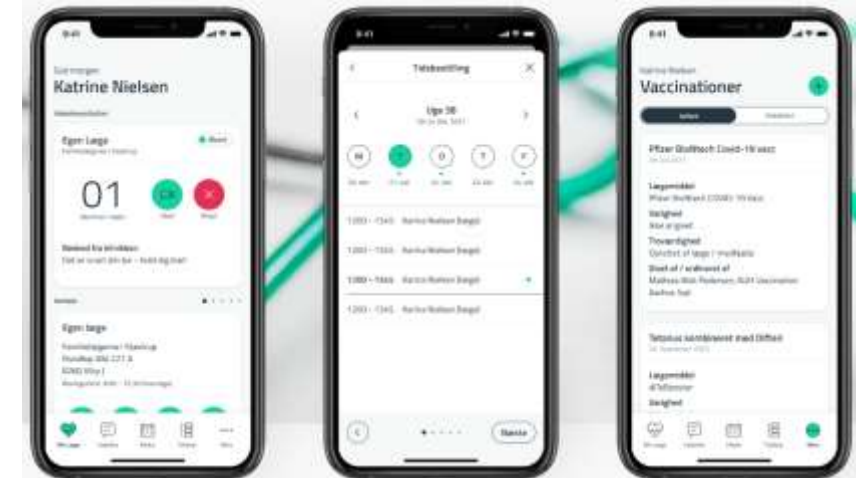
- Medicinkortet
- Laboratoriesvar
- Journal fra sygehus
- Dine sundhedsdata

Din digitale indgang til sundhedsvæsenet

Vi samler dine sundhedsdata og gør det nemt for dig at få overblik over din sundhed og sygdom. Du kan også bruge sundhed.dk til at søge efter en behandler, finde information om sundhed og sygdom, læse om patientrettigheder og meget mere. Log på og se dine egne sundhedsdata.

Se dine sundhedsdata

MinSundhed
Udviklet af sundhed.dk på initiativ af Danske Regioner



Our current challenges

- A complex setup
 - A number of organizations is responsible for different solutions
- Prioritization
 - Local vs. central initiatives
- Financing of digital solutions and infrastructure
 - Difficult to reach agreement on the financing of core national infrastructure
- Implementation takes a long time
 - Local responsibility and priorities has to be taken into account
 - Technological implementation and costs – is deep integration always the answer?
 - Organizational implementation and costs
 - Many organizational units and vendors involved which requires a lot of coordination
- European Health Data Space



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