

Managing the health care complexity through e-health development

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About me

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Norway

- Population: 5 323 933 inhabitants
- Area: 385 203 km²
- Density: 15.8 inhabitants/km²
- Life expectancy: 82,10 years



Tromsø

Some might suggest there are other reasons why e-health is appropriate north of the Artic circle ...



• Tromsø

... a typical day in March...













... first day of snow in November...







• Tromsø

Where do I find the nearest hospital?





E-health in Northern Norway

E-health in Northern Norway

- 1988: Telenor project
- 1992: Department of Telemedicine at UNN
- 1995: Norwegian Centre for Telemedicine
- 1996: Reimbursement for telemedicine
- 1997, 2001, 2004: National action plans for ICT in health
- 2004: Norwegian Health Network
- 2008: Coordination / Integrated Care Reform
- 2009: Integrated as a clinic at UNN
- 2012: Health reform "One citizen One record"
- 2016: Norwegian Directorate of eHealth
- 2016: Norwegian Centre for E-health Research
- 2017: National e-health strategy



E-health in Northern Norway

- Teleradiology
- Tele-otorhinolaryngology
- Telepathology
- Tele-ophthalmology
- Teledermatology
- Telecardiology
- Telenephrology/-dialysis
- Tele-obstetrics/Prenatal
- Tele-emergency medicine
- Tele-oncology

- Telecare
- Telegeriatric
- Teledentistry
- Tele-endocrinology/Telediabetes
- Telesurgery
- Telepsychiatry/Telepsychology
- (Solutions for) Patient empowerment
- Maritime telemedicine
- Distant education

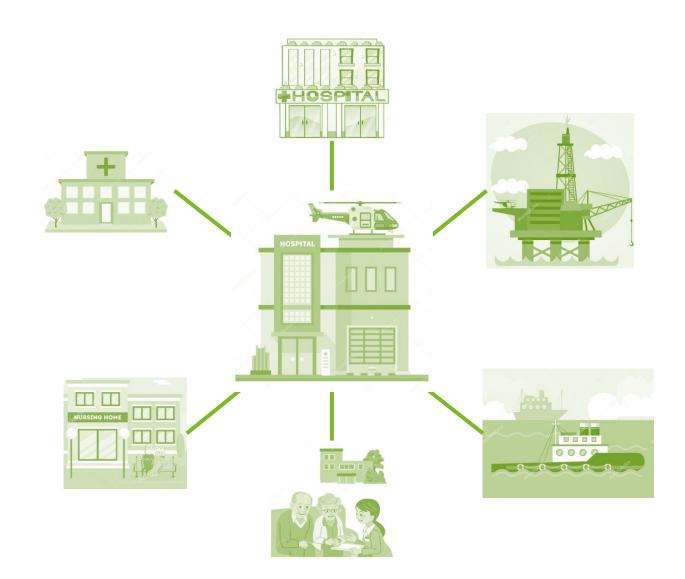
- Videoconference in telemedicine
- Messages and electronic communication
- Electronic Health Records
- Intelligent tools
- Norwegian Healthnet



E-healthservices

Provided from the large hospitals to:

- district hospitals
- primary care
 - GPs
 - district centres
 - nursing homes
 - homecare
- oil platforms and ships





Governance



Policy documents for e-health in Norway

One citizen – One record (2012–2013)

- Digital services in the health and care sector
- Overall aim:

One shared, national EHR-solution for the health and care service

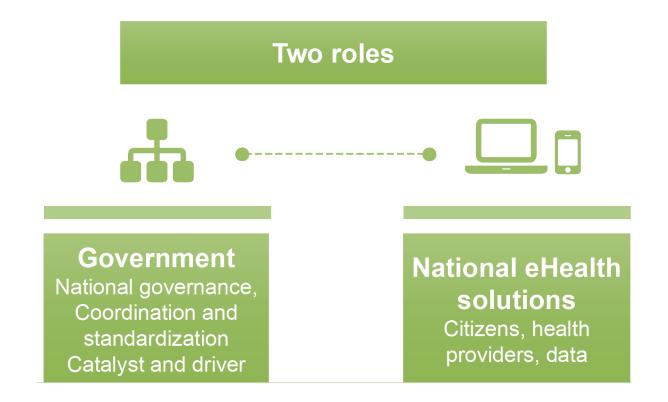
- Objectives:
 - Healthcare personnel shall have user friendly and secure access to patient information
 - Citizens shall have access to user friendly and secure digital services
 - Data shall be accessible for quality improvement, health monitoring, management and research





Norwegian Directorate of e-Health

Government agency established in January 1st 2016





Policy documents for e-health in Norway

National e-health strategy (2017-2022)

- people are increasingly expecting to use different types of digital services for contact with the health and care services
- digital services should be easy to understand and easy to use for everyone, and information and solutions should be able to reuse
- research-based knowledge is a key tool in planning, implementing and evaluating national e-health measures



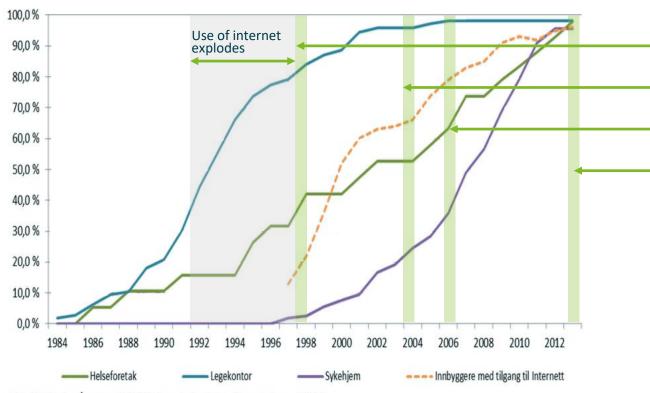


Technology



Adoption of Electronic Health Records (EHR)

EHR adoption in Norway



RHFs established

Norwegian Health Network

The Coordination Reform

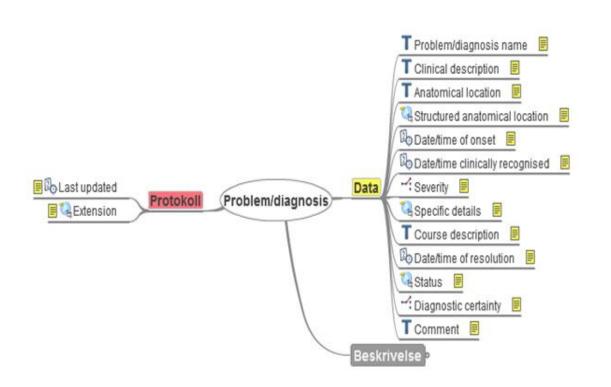
Governmental white paper no. 9

"One citizen – One record"

Kilde: EPJ Monitor, Årsrapport 2008, Norsk senter for elektronisk pasientjournal (NSEP). NB! Utviklingen i årene 2009 - 2013 er estimert



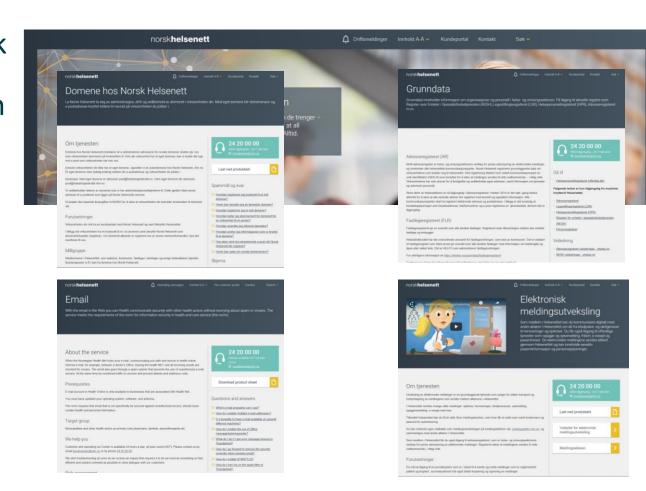
Clinical information standards and terminologies



Data source	
Interviews with contributors	18 open
to the work with archetypes,	ended
and the development of new	interviews
EPR.	
Participatory observation	180 hours
Participation in meetings,	300 hours
workshops, and informal	
discussions.	
Research on SNOMED	200 hours
compared to CIM	
Document studies: Documents	
from the CKM, concerning	
archetypes in general.	



- The NHN is established as a private network for electronic communication and interaction in the health and social sector in Norway.
- The NHN AS was formed in 2004 and is owned by the five regional health enterprises.
- The background for the formation of the NHN was to offer a sound basis for interaction between health care personnel and patients.
- NHN shall safeguard data quality, information security and personal information protection in the exchange of sensitive information.



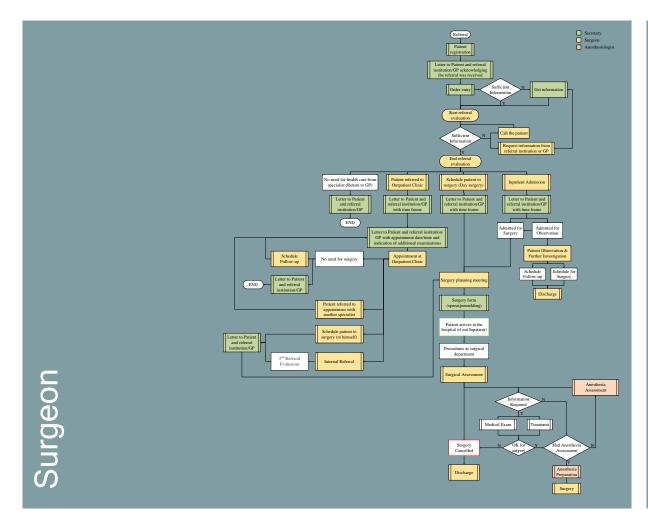
Pathways

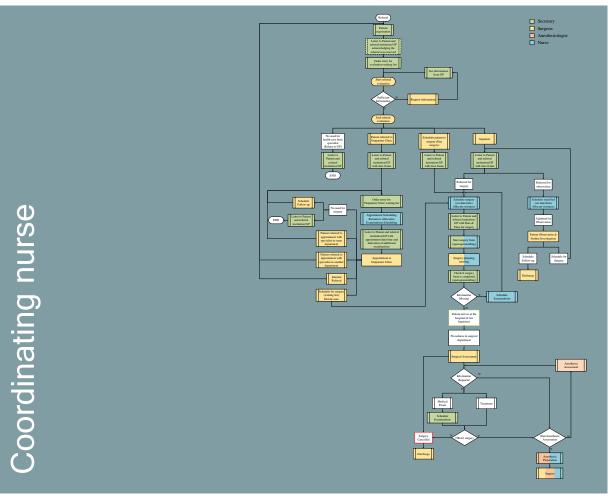
Conclusions from the Lean project is established to improve the pre-surgical planning





Pathways as seen by different professionals







Thank you for your attention



Call for papers open!

Norwegian Centre for E-health Research presents this year's research track on EHiN 12 and 13 November 2019

The Scandinavian Conference on Health Informatics (SHI), Oslo, Norway

Submission deadline 14 August. More information at www.ehealthresearch.no/shi2019