Interoperability in Norway - 2019

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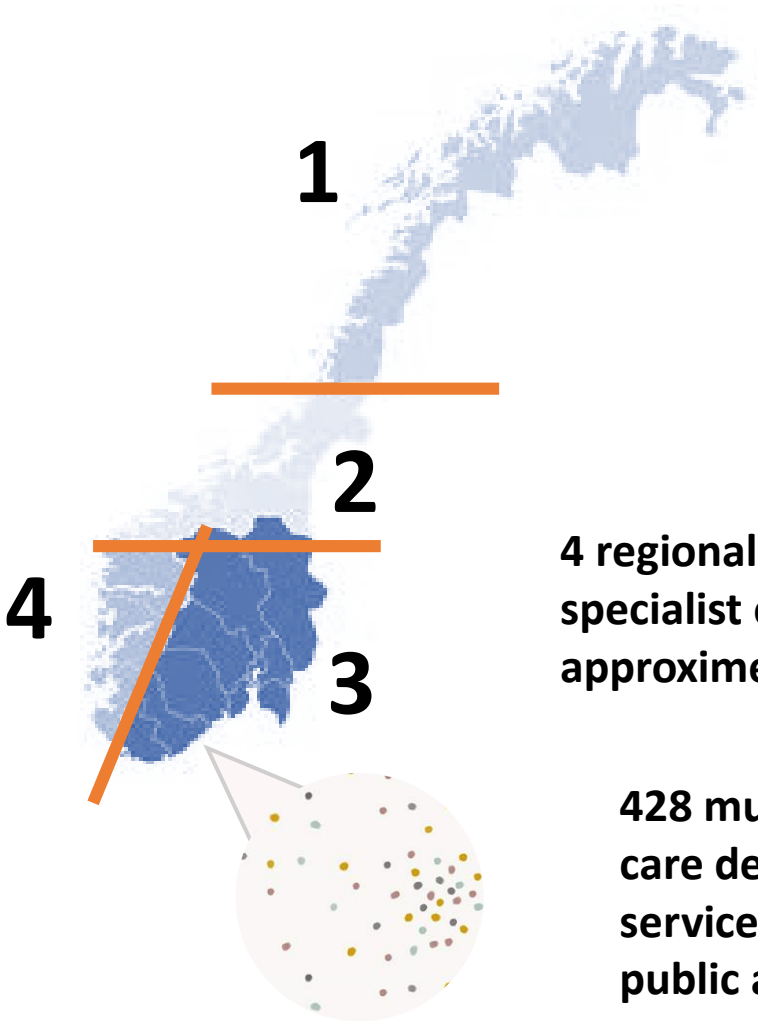
Special Advisor

DEN NORSKE LEGEFORENING

5	Norway	Spirit in the Sky KEiiNO	338	291	47
6	Sweden	Too Late for Love John Lundvik	332	93	239

The Government aims to ensure that everyone, irrespective of their personal finances and where they live, has access to good health and care services of equal standard.



GOVERNANCE:
Ministry issues laws and regulations.
They own the regional health authorities.

Directorates (health, and e-health) executes political decisions, advise political leadership and oversees laws.

4 regional health authorities responsible for specialist care. They govern 22 trusts with approximetly 70 hospitals.

428 municipalities responsible for primary care defined as GPs, home care and services, long term care, rehabilitation and public and preventive health.
Most GP's are self -employed

Population
5 MILLION

Life Expectancy
81,5 years

pr 1000 :
3,2 DOCTORS
12,9 NURSES

GP is a gatekeeper to specialized care

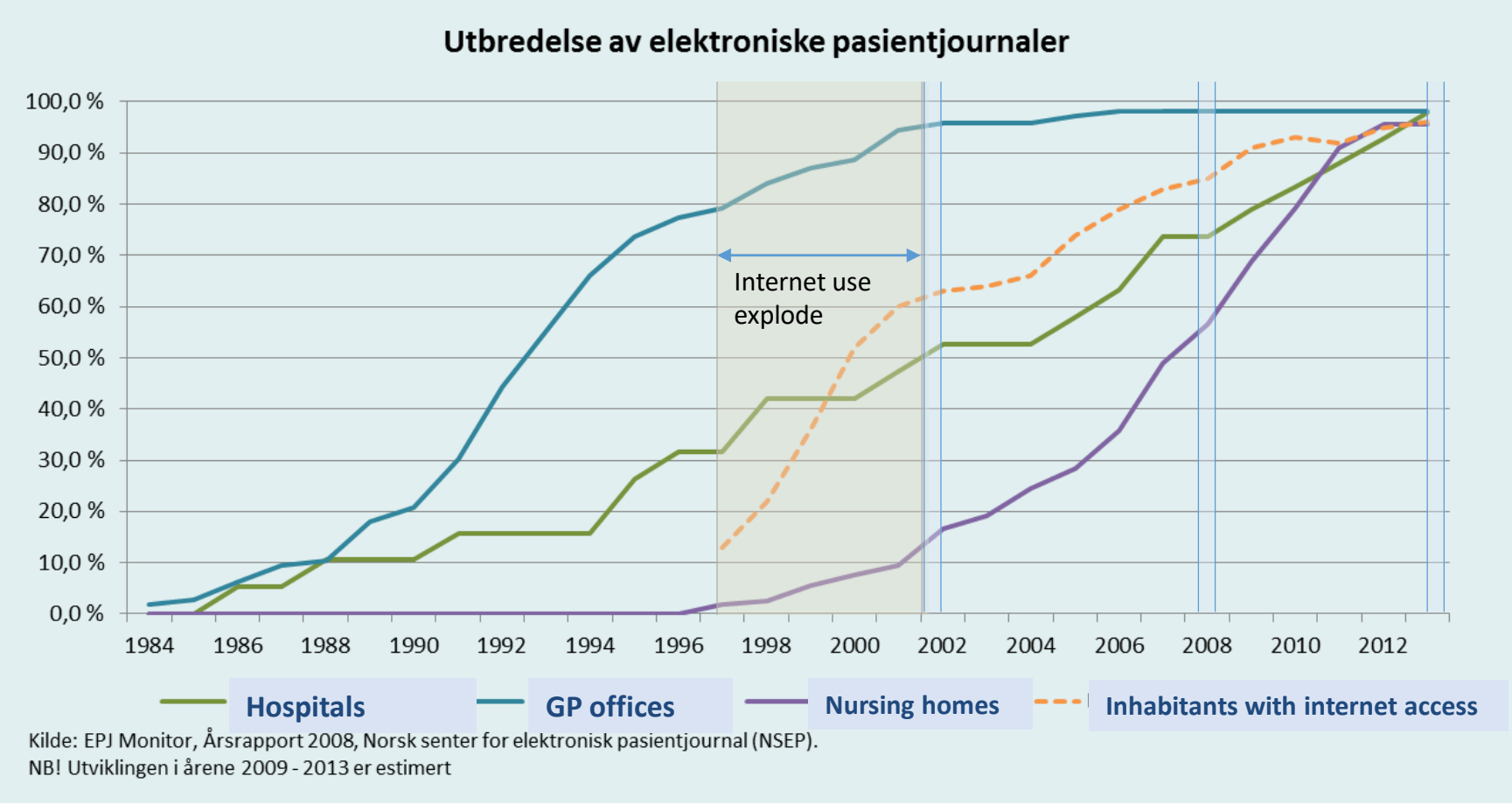
Expenditure on health
9.4 % OF GDP

Public funding
85 %

Source: OECD 2010

Norwegians were early adopters of e-health

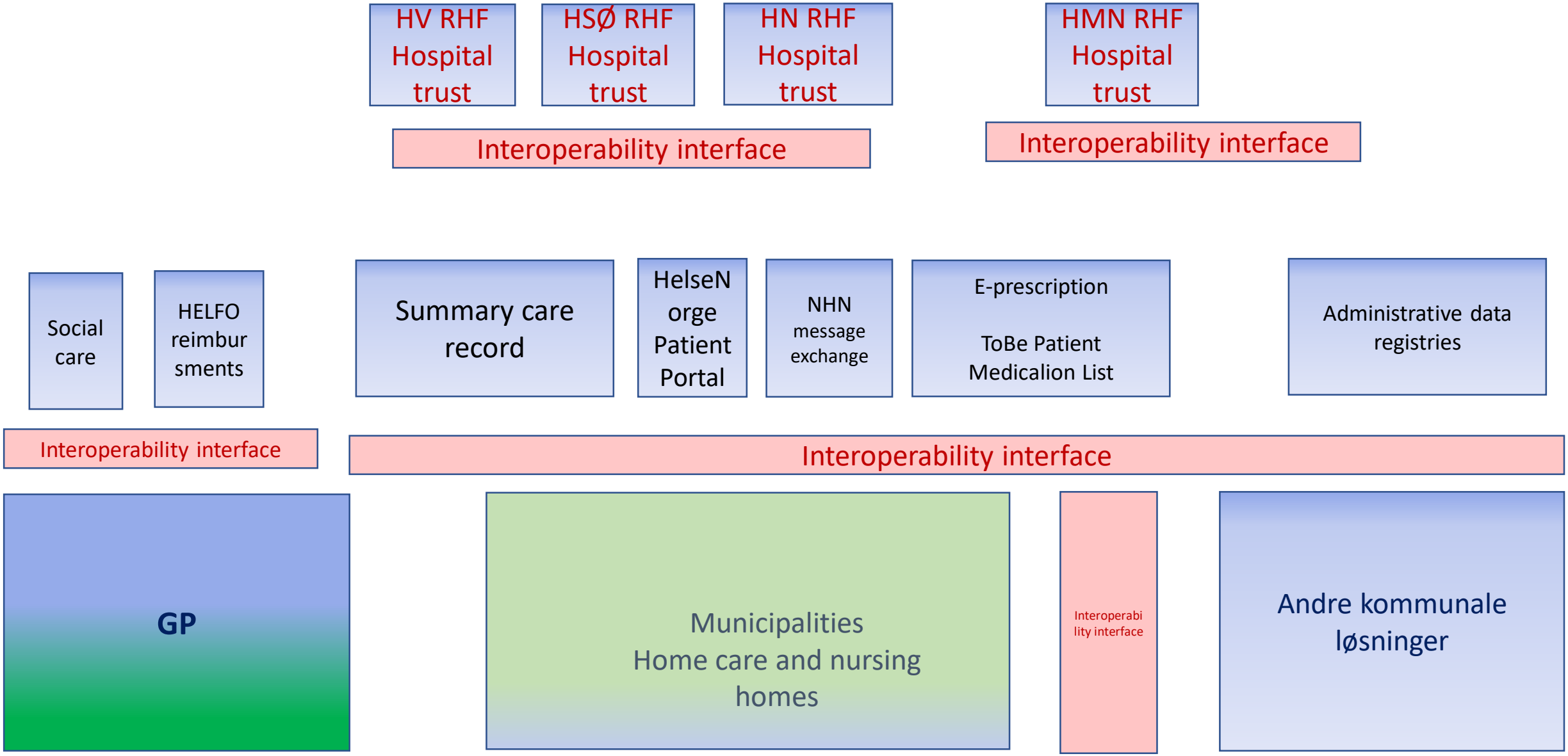
EHR COVERAGE: 0 – 100% from 1984-2013



Each GP Office, municipality and hospital has their own local EHR.

Little cloud hosting, although increasing

Norwegian e-health Architechture at a glance



Technical standards in use in Norway

https://ehelse.no/standarder-kodeverk-og-referansekatalog

Push: ebXML messages (Norwegian proprietory)

- Referrals (GP->hospital)
- Discharge summaries (text bloc+)
- Requisitions and test results
- Nursing reports and dialogue between hospitals and home care/nursing homes, and GPs and Home care

Synchronized shared repository:

- E-prescription (Norwegian proprietory)
- Alert information in Summary care record (HL7 FHIR)

See-through: Norwegian proprietory

- Hospital contacts in Summary care record

Pull: IHE XDS and ebXML (autumn 2019)

- Discharge summaries via Summary care record

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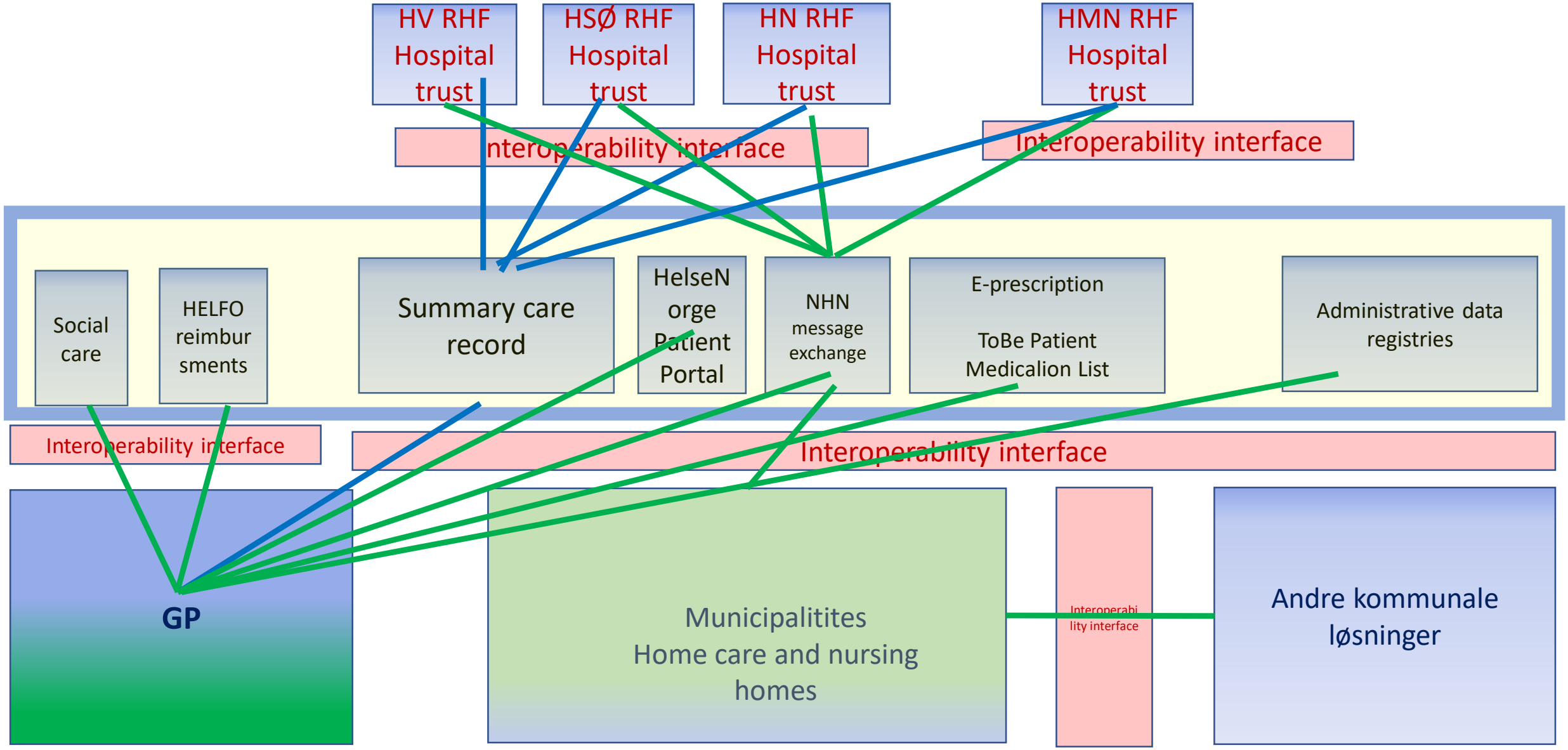
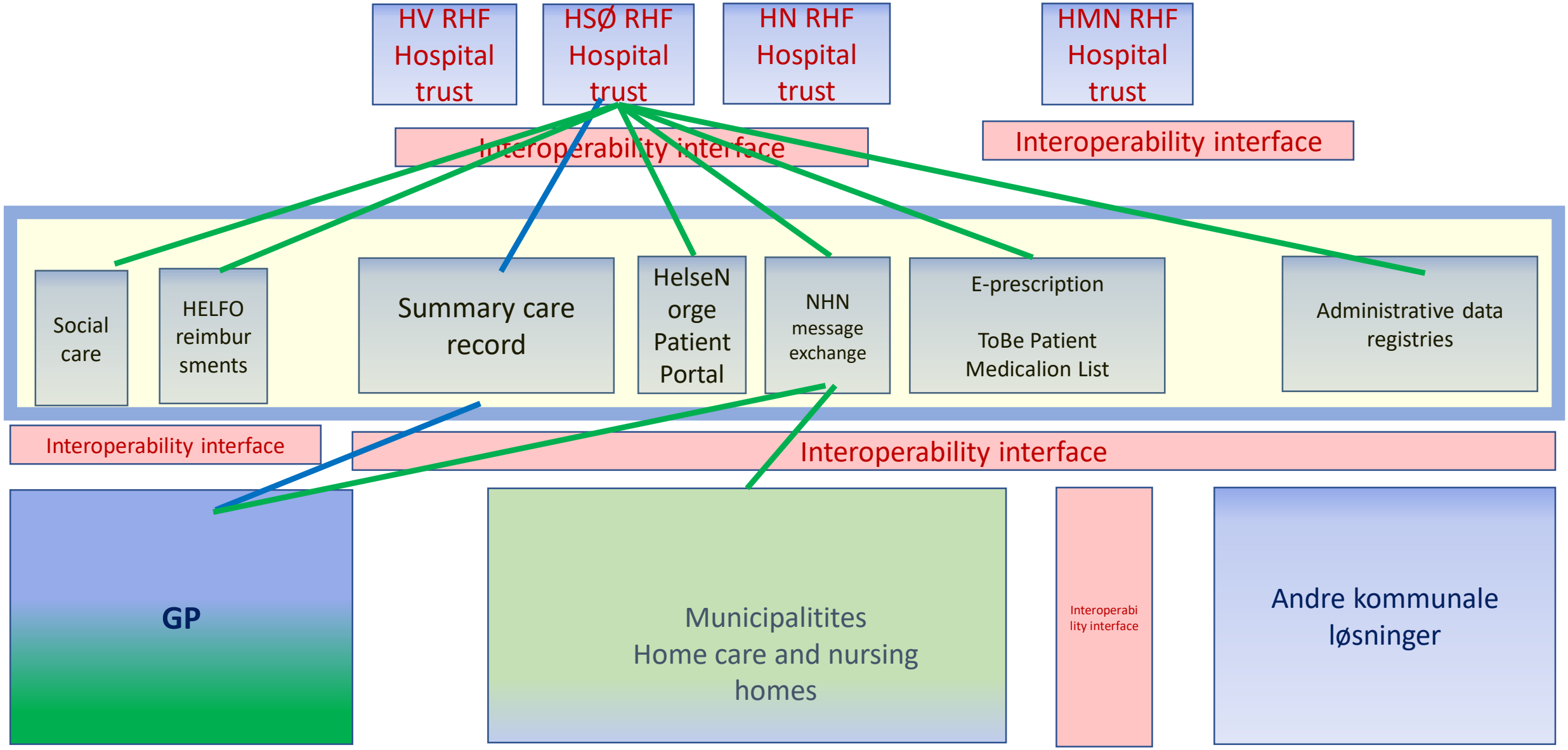
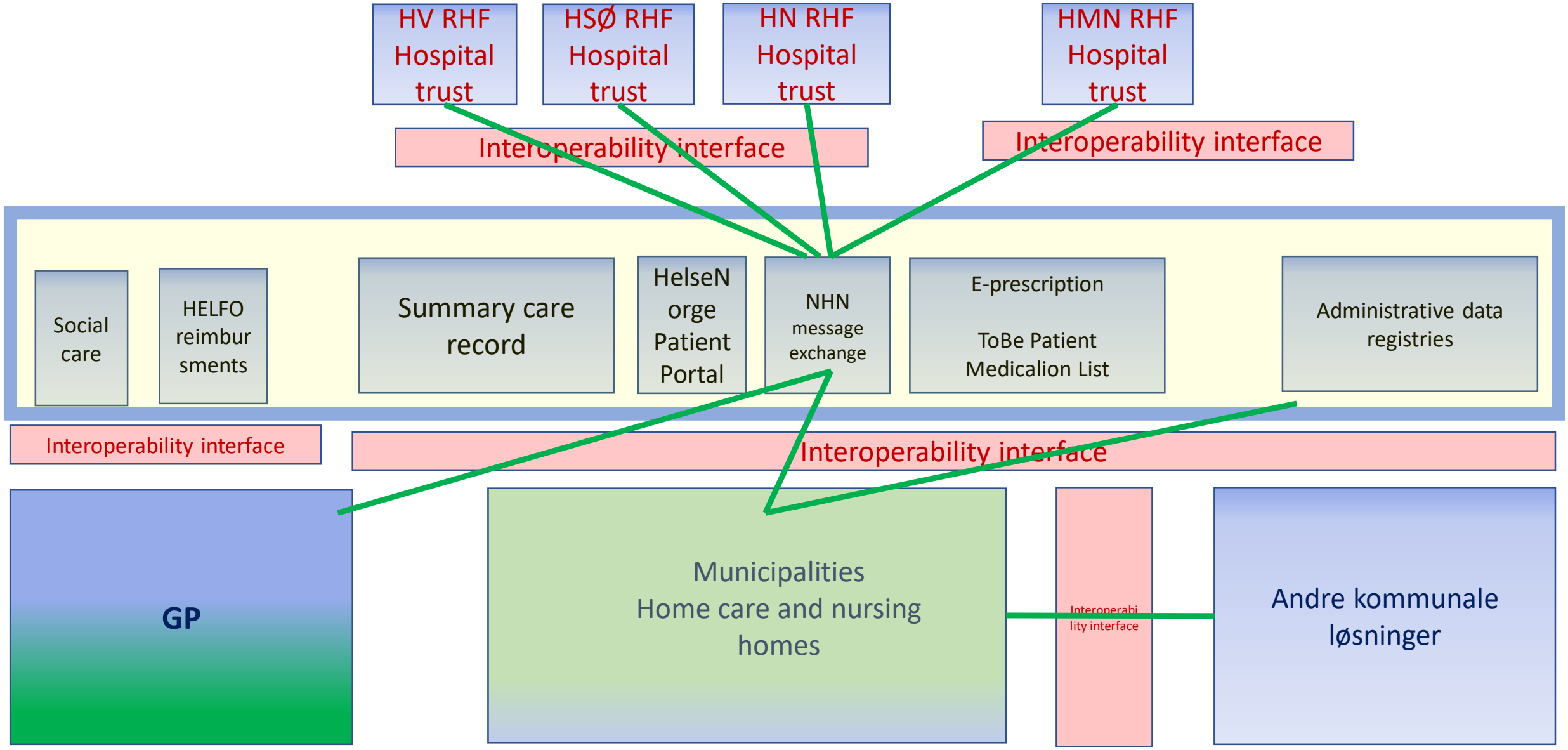
Norwegian e-health Architechture at a glance – GP viewpoint



Norwegian e-health Architechture at a glance – Hospital viewpoint – all similar



Norwegian e-health Architechture at a glance – municipality viewpoint



Why is interoperability hard?

…when technology, policy, and business needs are aligned, data flow.

John D. Halamka, M.D. and Micky Tripathi, Ph.D.

N Engl J Med 2017; 377:907-909
DOI: 10.1056/NEJMp1709851

DEN NORSKE LEGEFORENING

What kinds of Interoperability?

Technical interoperability

- Technical standards

Medical interoperability

- EVB Guidelines

Semantical interoperability

- ICD-10, Snomed CT, etc

Practical interoperability (process standardisation)

- Relevant for medicine?

Easier

Harder

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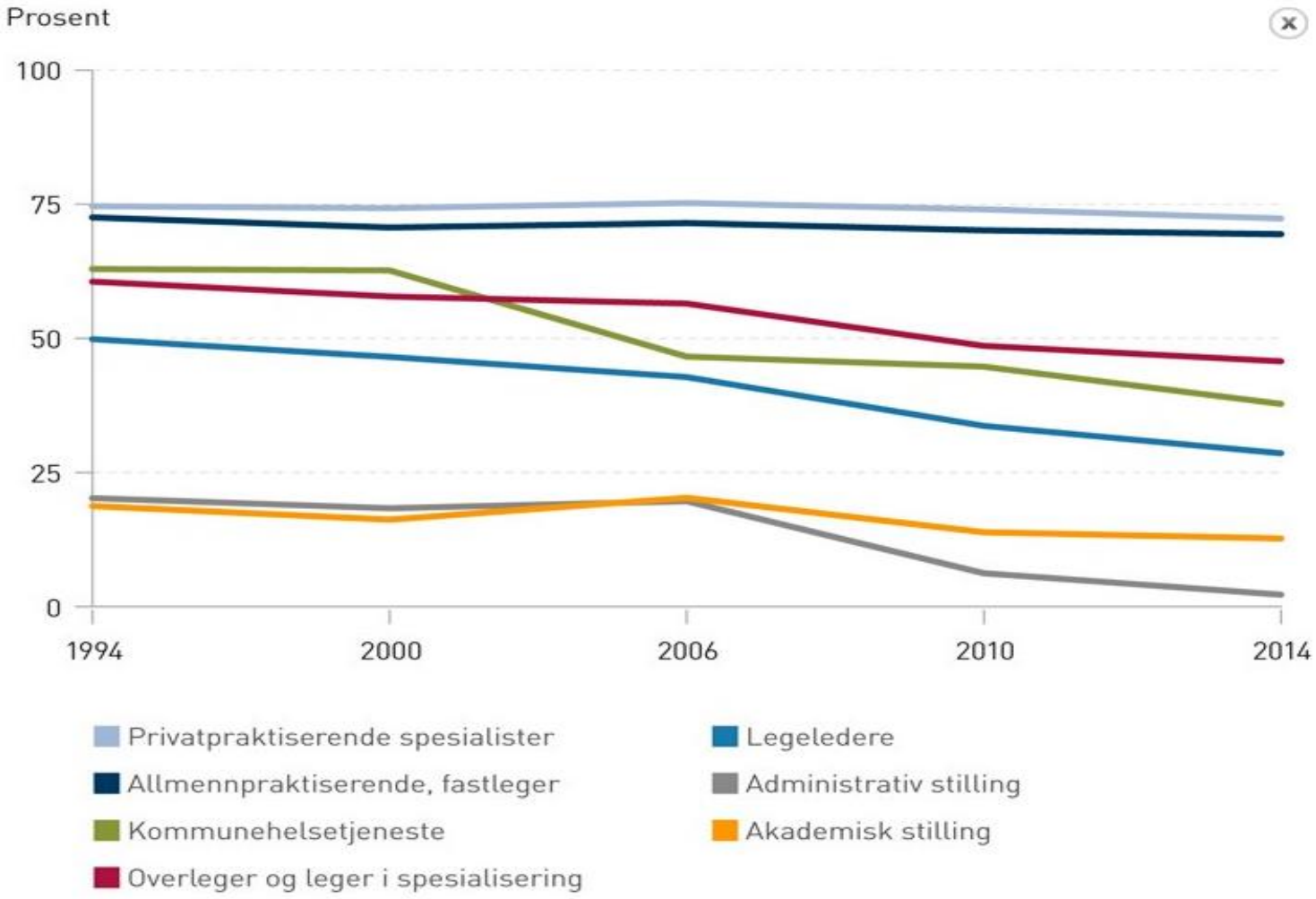
A small task done 50 times is not small for those doing it

For Norwegian hospital doctors the part of work time spent in direct patient contact falled fra 61 % in 1994 til 46 % in 2014



Andel tid brukt til direkte pasientarbeid for leger i ulike stillingsgrupper. Data fra LEFOs legepanel

Rosta J, Aasland OG. Legers arbeidstid og tid til pasientarbeid i perioden 1994 – 2014 / Doctors' working hours and time spent on patient care in the period 1994 – 2014. Tidsskr Nor Legeforen 2016; 136: 1355-9.

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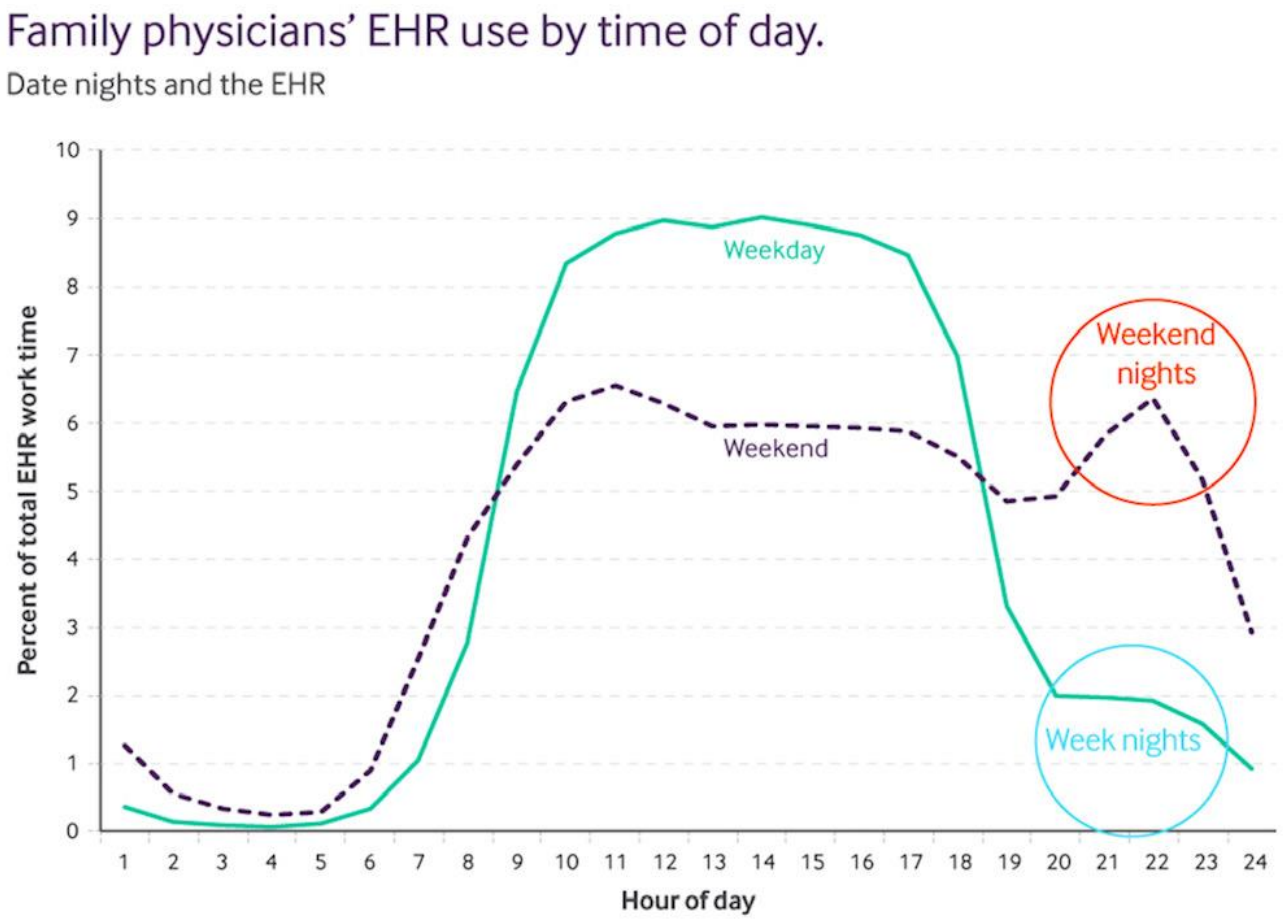
Physician burnout – too much process standardisation?



Modified from B. Arndt, et al., *Tethered to the EHR: Primary Care Physician Workload Assessment Using EHR Event Log Data and Time Motion Observations*, Annals of Family Medicine.

NEJM Catalyst (catalyst.nejm.org) © Massachusetts Medical Society

Tethered to the EHR: Primary Care Physician Workload Assessment Using EHR Event Log Data and Time-Motion Observations

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ABSTRACT

PURPOSE Primary care physicians spend nearly 2 hours on electronic health record (EHR) tasks per hour of direct patient care. Demand for non–face-to-face care, such as communication through a patient portal and administrative tasks, is increasing and contributing to burnout. The goal of this study was to assess time allocated by primary care physicians within the EHR as indicated by EHR user-event log data, both during clinic hours (defined as 8:00 AM to 6:00 PM Monday through Friday) and outside clinic hours.

METHODS We conducted a retrospective cohort study of 142 family medicine

Maybe we should rethink

Technical interoperability

- Technical standards

Medical interoperability

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Maybe we should rethink:
– how do we approach Practical interoperability?

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