

**UiO : University of Oslo**

**Margunn Aanestad, Miria Grisot, Antonella La Rocca, Xenia Vasilakopoulou**

«Connected Care – creating patient-oriented digitally supported health services»

Researching Digitalization Workshop, LSE May 19th 2015



# Researching Digitalization in Health

- Digitalization: “a sociotechnical process of applying digitizing techniques to broader social and institutional contexts that render digital technologies infrastructural”  
(Tilson, Lyytinen, and Sorensen, 2010)
- Researching Digitalization in Health through multiple longitudinal case studies: projects at different stages, with different project owners and ambitions.
- Analysis of trajectories followed – focus on the interplay between novel digital capabilities and established communication practices, organizational arrangements, technological setups, value logics, regulatory provisions.

# Projects Followed

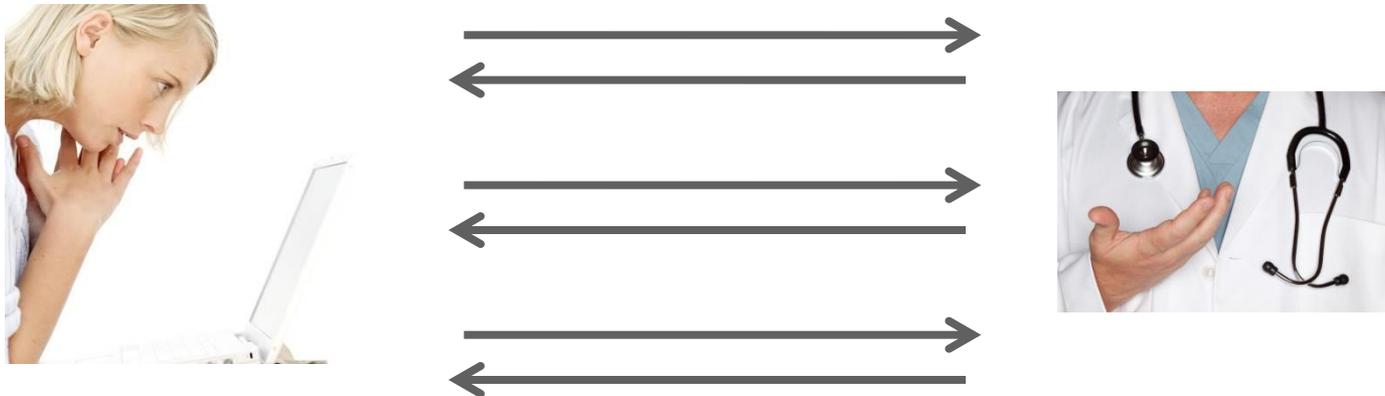
Vision	Status	Owner	
“National Platform”	National infrastructure for patients: access to trustful information (1 <sup>st</sup> stage), secure dialogue services (2 <sup>nd</sup> stage). A blend of patient and provider controlled components.	Ongoing. Initiated in 2010.	Government
“My Record”	A door to the hospital: tailored services to patients based on relationship with specific clinics. Hospital controlled.	Ongoing. Initiated in 2005.	Hospital clinics
“My Health Book”	Solution for network storage and web-sharing tailored to healthcare. Patient controlled.	Ongoing. Initiated in 2012. Pilot start in 2014.	Private initiative
Rehab	Improve the interface between the clinical side of care and patients by introducing novel patient-provider communication channels (i.e. including text, video, etc.).	Ongoing. Initiated in 2008. New organisational structure in place to deal with the new patient relation (telemedicine outpatient clinic)	Hospital
BEPPL0	implementing electronic care messages between the hospital and municipal care	Ongoing .	Government, (hospitals, municipalities)

# «Citizen platform» (helsenorge.no)



New service «Digital Dialogue» (e-consultation)

# Example: paying for e-consultation



- What types of medical consultation can be made available?
- How much to charge? Shall it be charged exactly as a physical presence consultation?
- What will be the definition of start and end for consultations performed via asynchronous communication (sequence of messages)?
- How can it be ensured that patients will be aware of charges beforehand?
- How the charged amounts will be collected (e-invoices, e-payments, regular payments, etc.)?

## Meldinger

### Meldingstjenesten i MinJournal

I Norge er det ikke lov til å kommunisere på vanlig epost når det dreier seg om sensitiv informasjon (om eller til pasienter). Derfor har vi opprettet en sikker meldingstjeneste. Her kan du på en trygg og sikker måte kommunisere med helsepersonell. Hvis du fyller ut din vanlige e-postadresse på siden for "innstillinger" vil du få en e-post med beskjed om at du har fått en ny melding i MinJournal. De du kan sende meldinger til vil du finne i nedtrekksboksen.

Denne tjenesten må ikke brukes ved akutt behov for legehjelp.

Verktøy

**MinJournal - meldinger**

Innboks    Viktige meldinger    Sendt    Felles postboks    Sendt felles    Behandlet

Søk:  Vis...

Avsender	Mottatt	Tittel
Trollkvinne Testpasient	07.03.2012 21:59	Hei trolldamen
testmottak marte	06.06.2011 12:35	Automatisk svar fra testmottak marte
Marit Hansen	17.12.2010 12:12	Juleferiel
Anette Christiansen	17.12.2010 11:17	Juleferiel
Marte Haugen	17.12.2010 10:50	Juleferiel
Anne Vad	15.12.2010 08:18	GOD JUL!
Anne Vad	15.12.2010 08:18	GOD JUL!

**Innhold**

Ny melding    Videre send    Svar    Viktig    Velg mottaker...

Emne: Hei trolldamen

**B**   *I*   U   ABC     Stiler    Avsnitt

yo dudette  
=== Opprettet 07.03.2012 21:56 av Marte Haugen ===

Tester meldingstjeneste

Mvh Marte Bø  
45217440

### Hjelp - meldinger

I meldingsfunksjonen kan du skrive meldinger til dine behandlere og lese meldinger du har fått.

Du kan skrive en ny melding ved å trykke på knappen for "Ny melding" i nederste del av vinduet.

Du velger hvem du vil sende til i nedtrekksmenyen "Velg mottaker". For å få frem nedtrekkslisten trykker du på den lille nedoverpilen (v) til høyre for vinduet "Velg mottaker..."

Sett inn en tittel i ruten ved siden av "Emne".

Deretter kan du skrive inn meldingen din.

Så trykker du på "Send"-knappen.

Dersom du ønsker å videregjøre eller svare på en melding du har fått tilsendt, trykker du på knappen for "svar" eller "videre send", skriver inn meldingen din og trykker på "send".

På denne siden kan du også lese gjennom meldinger du har sendt tidligere hvis du trykker på "Innboks" eller "Sendt" boksene.

Når du får en melding i MinJournal vil du vanligvis få en e-post for å advare deg om dette. For å forhindre e-posten tilsendt til din e-postadresse, fyller du ut personalfeltet og trykker på "send".

«MyRecord»

Linking  
hospital  
and patient

Popular generic services:

Secure email

Change appointment

Prepare for appointment

## Example: change appointment

- Patient can register a wish to change the assigned appointment time:
  - Triggered by a 'real problem' (avoid phone queueing)
  - Minimum information required, does not require log in
- Adoption process by the various outpatient clinics exposed various challenges:
  - Diversity: somatic vs psychiatric patients
    - Phone calls purpose
  - Occasion for educating and disciplining patients
    - Making patients aware of waiting times and instil realistic expectations
  - Expose different policies of appointment management

## Improving Coordination between primary and secondary care in Norway

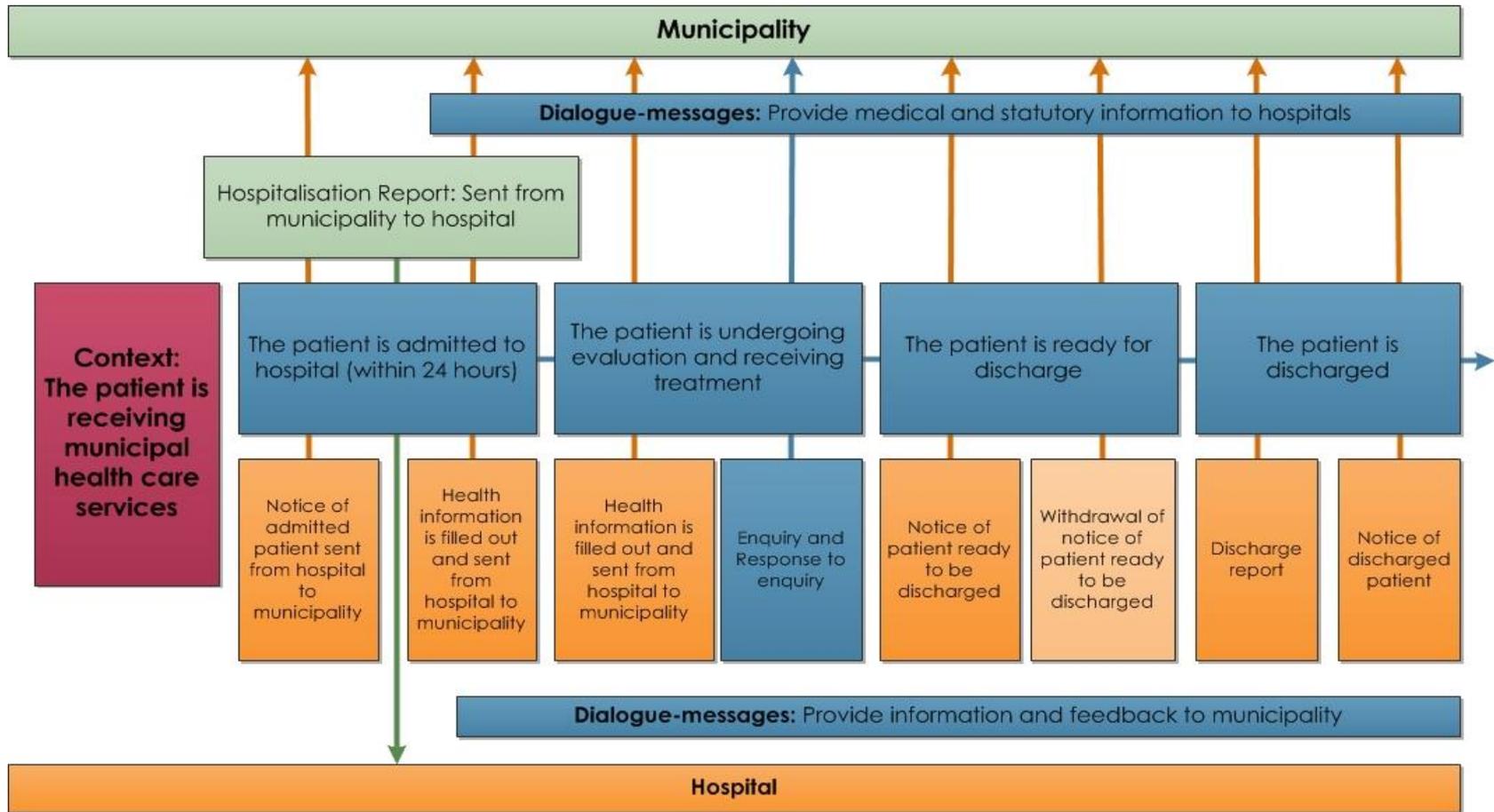
### *Means of the coordination reform:*

1. Supporting communication through the introduction of ICT based communication between hospitals and municipal health care units
2. Economic incentives:
  - Reallocated care funding (5 billion NOK) from hospitals to municipalities
  - Municipal co-payment of general hospital admissions (on selected somatic health services) **incentive for prevention**
  - when a municipality can not receive a patient ready for discharge, it must pay the hospital 4500 NOK for every 24 hours the patient has to stay in hospital.

# What we looked for and how

- We examined the effects (benefits and drawbacks) of the two measures as perceived by health-care professionals in primary and Hospital care, and discusses the consequences for primary-secondary care coordination
- 27 Interviews: at Hospital and at 8 different Municipalities (mainly ordering office) and 1 Advisor of Health Authority
- The interviews developed along the following themes:
  - issues of concern in collaborating with the counterpart
  - benefits/challenges of the new communication system and effects for the coordination primary -secondary care
  - effects of the changed incentives system (co-financing and payment regulation) for the coordination primary -secondary care

# PLO design -(Hospital view )



## Possible directions emerging from framing as “digitalization”:

- Digitization as a form of representation triggers a chain of transformations ala Latour (reduction and amplification),
- Digitization as a form of mediation creates new arenas for bestowing actors with rights of selection, exclusion, interception, etc.
- Digitization as datafication: "byproducts" of digitized acting (data generated) acquire value and follow their own trajectories