

Constructing Technology-in-use Practices: EPR-adaptation in Canada and Norway

Prepared for the 3rd International Conference on IT in
Health Care (ITHC). Sydney, Australia.

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ACTION for Health

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Applied Communication Technology: Information . Organizations . Networks

Constructing Technology-in-use Practices: *EPR-adaptation in Canada and Norway*

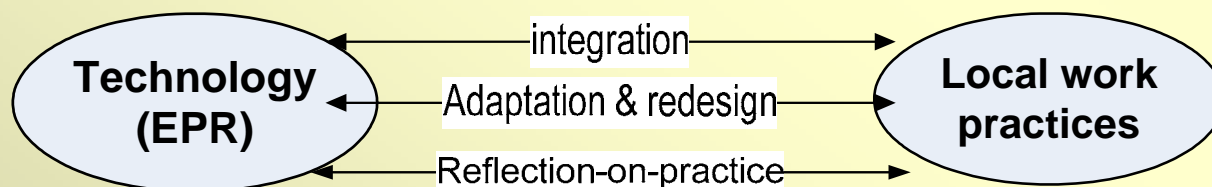
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Nina Boulus & Pernille Bjørn

1. Introduction

❑ Electronic Patient Records (EPRs):

- ❑ Introduced in the 60s-70s
- ❑ 'Magic silver bullets' → solve financial problems
- ❑ Funded through national or provincial initiatives
- ❑ \$ + Expectations → High
 - Despite that, many goals have not been met yet
 - Therefore, research grounded in real case studies is highly important and can access the construction of alternative approaches



2. Setting the stage: Case studies

Case A: Norway

Case B: Canada

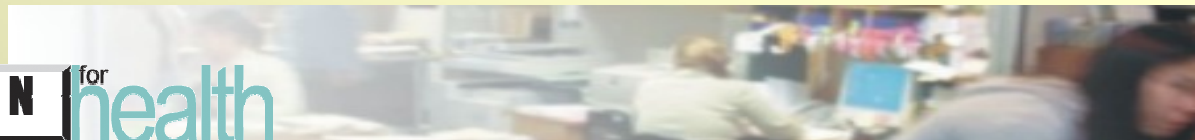


Hospital



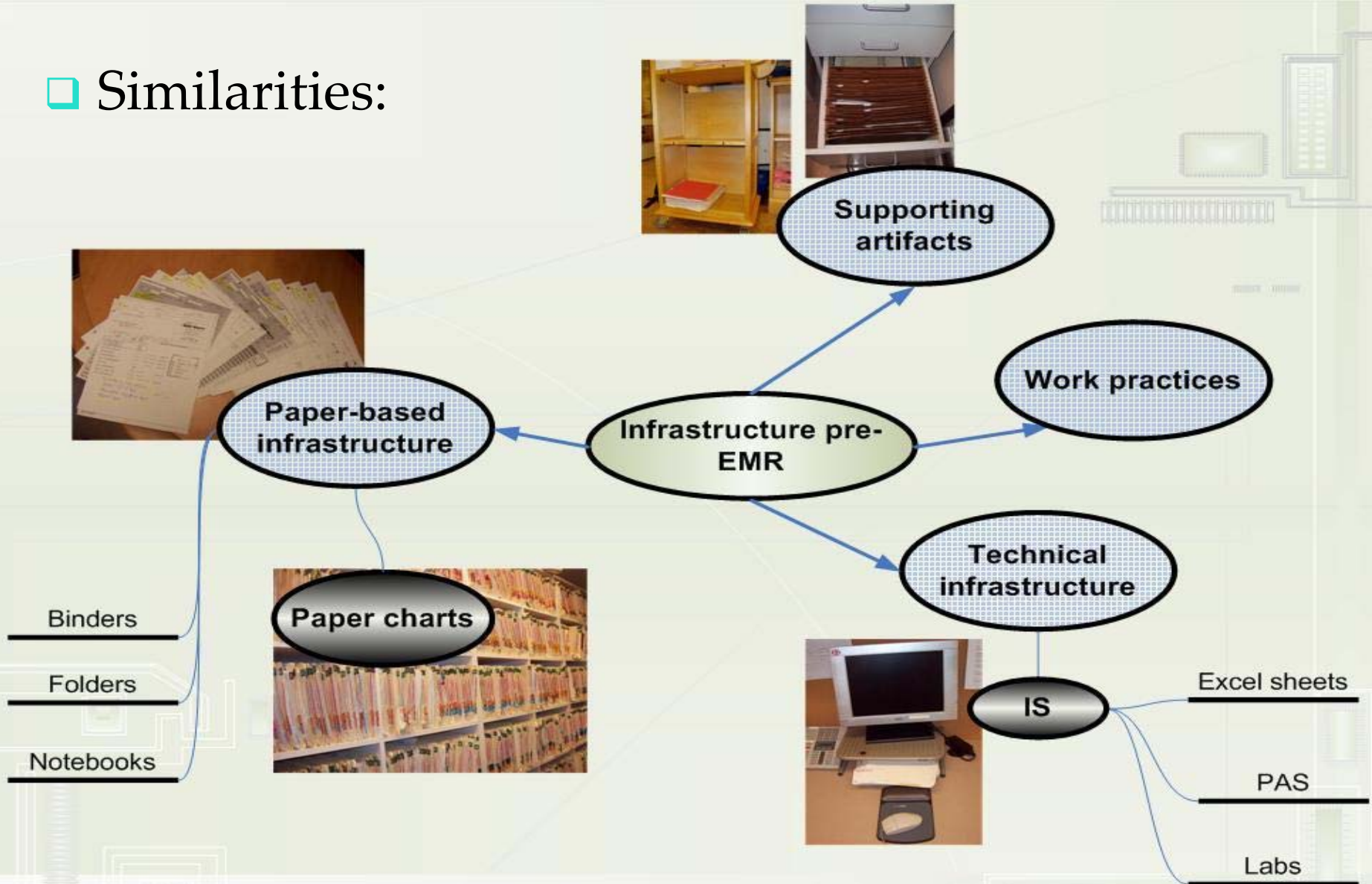
Community health centre

Aim of study: Investigate the driving forces that promoted the adaptation processes



2. Setting the Stage

Similarities:



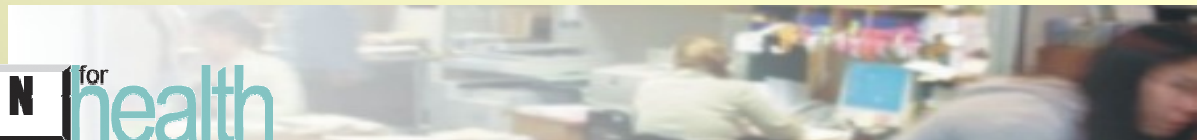
2. Setting the Stage

□ Differences:

- Institutional structures, organizational size, and technical architecture of the EPR system

□ But:

- Comparing the adaptation process in these 2 different settings, we have the opportunity to provide insights into the way in which technology-in-use practices develop and evolve over time



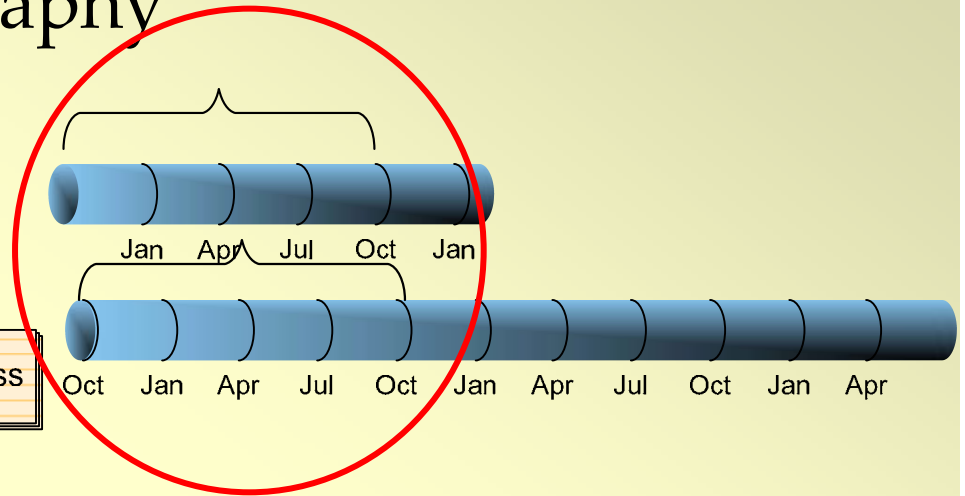
3. Research Methods

- Longitudinal ethnography

- Fieldwork:

- **Case A:** Oct 2002- 2003

- **Case B:** Oct 2004- Still in progress



Data collection techniques:

- Open-ended interviews
- Participant observations
- Participation in formal & informal meetings
- Collection of various documents
- Attending EPR-Training sessions

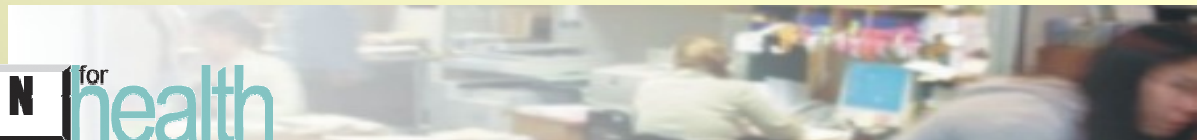
3. Research Methods

□ Cross-case analysis:

- Identify diversities and similarities between the management, execution, and impact of the reflective spaces
- Identify technology-in-use practices

□ Findings:

- Meetings had different degrees of impact on the adaptation process in the 2 cases
- Continuous reflection-on-practice activities



4. Case A: Technology-in-use practices:

- ❑ 1 day training



- ❑ Adaptation process: led by the IT department
- ❑ The same 'go-live' date for: physicians & secretaries
- ❑ Introductory meetings: conducted by the IT department

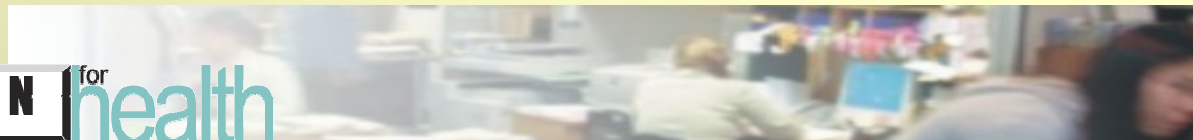
4. Case A: Technology-in-use practices:

Initial Technology-in-use practices:

Physicians:	Secretaries:
Validating & signing notes	Transcribing & correcting notes

Emergent Technology-in-use practices:

Physicians:	Secretaries:
Transcribing & correcting notes Partial use of prescriptions Partial use of doctor's notes Retrieving information Internal electronic referrals	Creating templates Piloting scanning



4. **Case B:** Technology-in-use practices:

- 1 day training



- Adaptation process: led by the EMR committee:

- Representatives from each professional group
- Weekly meetings
- Aim: discuss challenges, evaluate the transition process, and define new goals

4. **Case B:** Technology-in-use practices:

Initial Technology-in-use practices:

Physicians:	Secretaries:
Entering medical notes Prescriptions Search function	Scheduling Billing Scanning

Emergent Technology-in-use practices:

Physicians:	Secretaries:
Entering medical notes Retrieving information Prescriptions Search function Billing Referrals Creating templates Visual graphs & diagrams Scanning	Grooming & updating the <i>EPR</i> Scanning

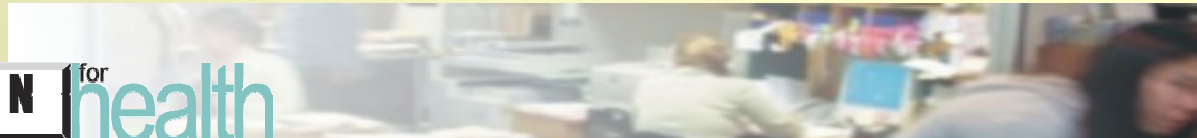
4. Cross-case analysis

- ❑ Technology practices evolved in both cases
- ❑ But the extent to which the work practices changed was different
 - ❑ **Case A:** Developed technology-in-use practices over time
 - ❑ **Case B:** Developed greater amount of changes and increased use of EPR



4. Cross-case analysis

- ❑ What are the **factors** promoting the adaptation process?
- ❑ One of the major driving forces in **Case B** was the establishment of the *EPR committee* and their *meetings*



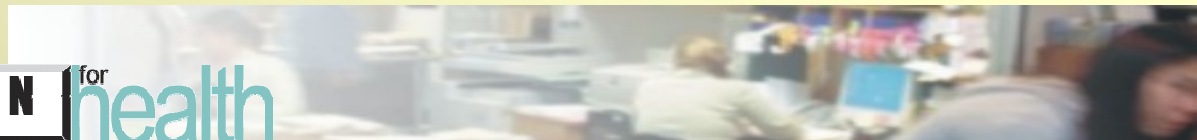
5. Discussion

	Case A	Case B
EPR meetings:	IT department	EPR committee
Decisions:	Challenging	Continuous discussions & negotiations
New function:	Struggle with workload	<ul style="list-style-type: none"> - Comments - Pilot testing new work practice - Feedback & evaluation
Source of change:	External (IT department)	Internal (health care personnel)
Approach:	'Top-down'	'Bottom-up'
Participants:	Randomly chosen	Self-selected
Frequency of EPR-meetings:	At the beginning	Weekly basis (then biweekly & monthly meetings)

5. Discussion

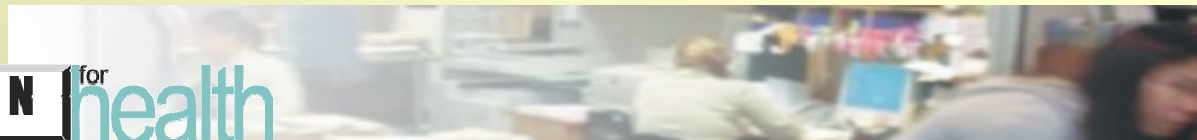
Case B:

- ❑ Content of meetings:
 - ❑ Continuous reflection-on-action activities
 - ❑ Technology-in-use practices emerged from situated actions
 - ❑ Space to engage in critical debates and question existing rigid routines.



5. Discussion

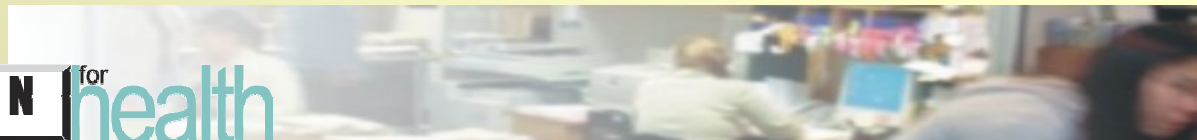
- ❑ Introduction of new functions:
 - ❑ **Case A:** Discussed in isolation
 - ❑ **Case B:** Evaluated in context
- ❑ View of the technology:
 - ❑ **Case A:** Time-demanding & disrupting
 - ❑ **Case B:** Embedded in the medical practice and enhances quality of care



6. Concluding Remarks

Our findings lead to the following recommendations:

- ❑ Change should be internally initiated
- ❑ Space for reflection-on-practice



Thank you for listening!

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