

På vej mod nye  
horisonter med EPJ  
– hvad kan læres



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Aalborg Universitet*

# Udvalgte analyseområder

- 2001-2002: Datamodeller, kommunikation og integration (GEPJ, DOM og SUP)
- 2002-2003: Integrationsplatforme (DHE og EPJ-I)
- 2003-2004: Klinisk afprøvning af GEPJ
- 2002-2005: It-arkitekturer



# Udvalgte analyseområder (2)

2004-2005: EPJ og services for patient og borger

2005: EPJ og sikkerhed

2004-2005: EPJ og kvalitetsudvikling

2005: Udfordringer i EPJ-udviklingen

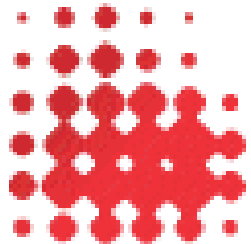
2006: Aktiviteten i de enkelte amter



# National Health Information Technology Coordinator (ONC)



Health Information Technology



**DIGITAL SUNDHED**

SAMMENHÆNGENDE DIGITAL SUNDHED I DANMARK



*Robert M. Kolodner, MD*

Interim National Coordinator  
Office of the National Coordinator for  
Health Information Technology

Department of Health and Human Services

200 Independence Avenue, SW

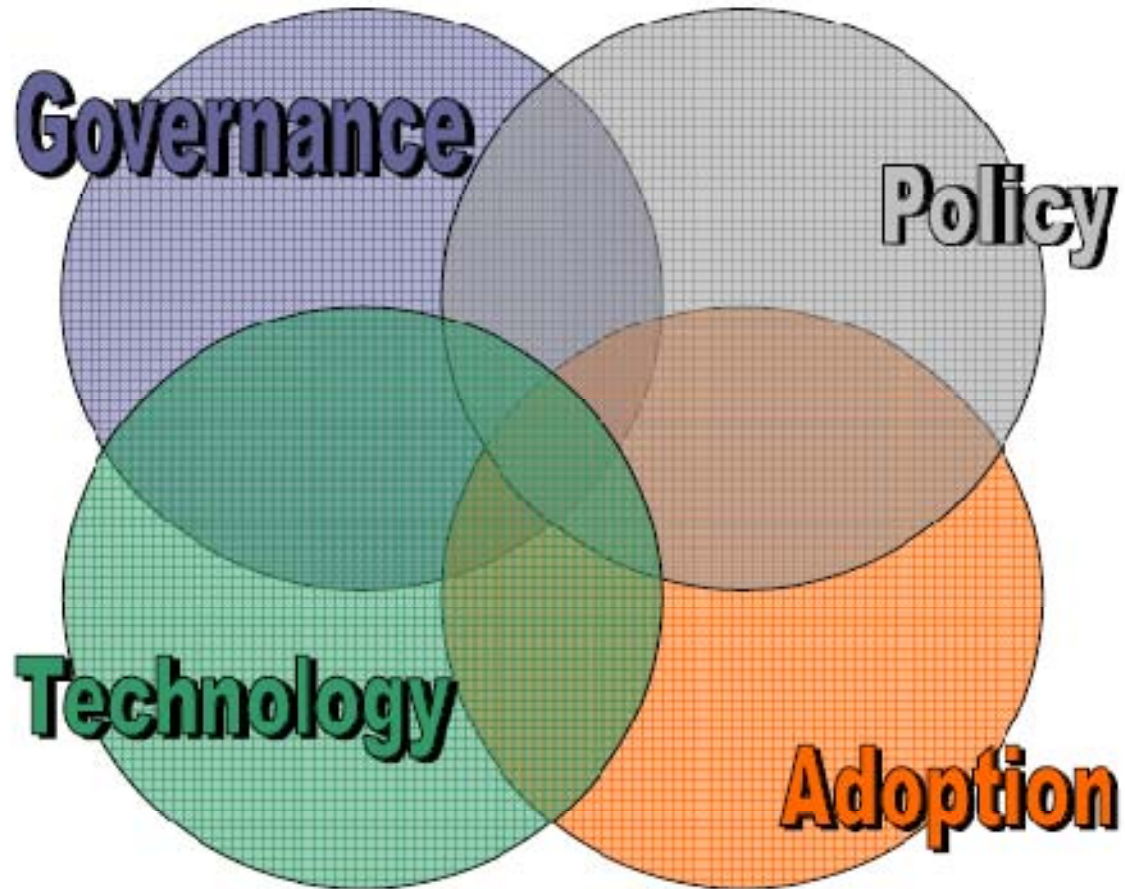
Washington, DC 20201



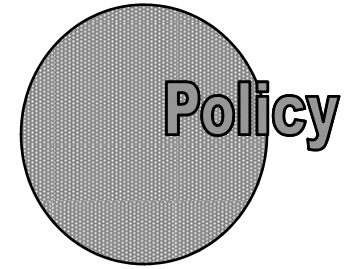




# Health Information Technology



# Strategi målsætninger



## Health Information Technology

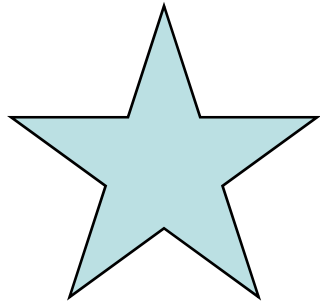
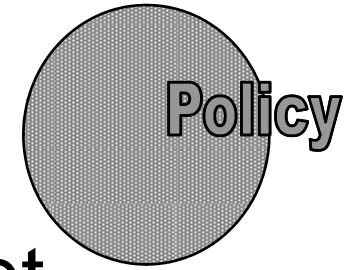
"..to link all health records through an interoperable system that protects privacy as it connects patients, providers and payers, resulting in fewer medical mistakes, less hassle, lower costs and better health."

-- HHS Secretary Mike Leavitt

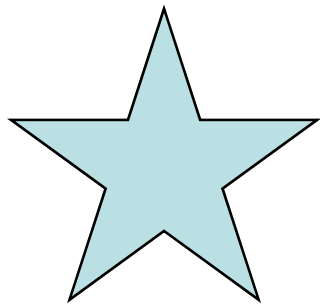


- Improve health care quality;
- Prevent medical errors;
- Reduce health care costs;
- Increase administrative efficiencies;
- Expand access to affordable care.

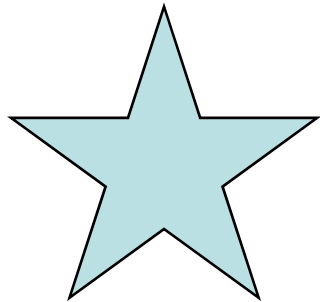




Understøtte kvalitet og effektivitet i sundhedsvæsenet



Skabe bedre service for borgere, patienter og medarbejdere



Forbedre sammenhængen på tværs af enheder og sektorgrænser



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# Governance => stying



Health Information Technology



*Provide leadership*

*Promote collaboration*

*Develop policy*

*Support financial management*

*Enhance communication and outreach*

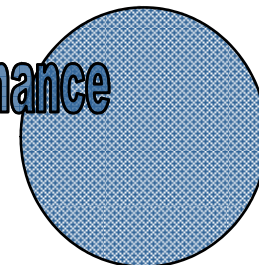
*Evaluate effectiveness*



**Coordinate; Collaborate;  
Inform; Encourage**

# Governance

Governance



Forudsætninger for udvikling af governance principper:

- EPJ-udvikling er præget af modsætningsforhold
- EPJ udvikling foregår i iterationer
- Enhver iteration skal evalueres



# Udvikling af EPJ systemer som det ukomplette utopiske projekt

Judith Gregory:  
Sorcerer's Apprentice:  
Creating the Electronic Health Record,  
Re-inventing Medical Records and Patient Care

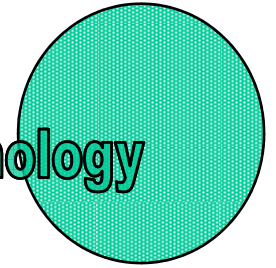
Ledelses  
dimension

EPJ

Kliniske  
dimension

Tekniske  
dimension

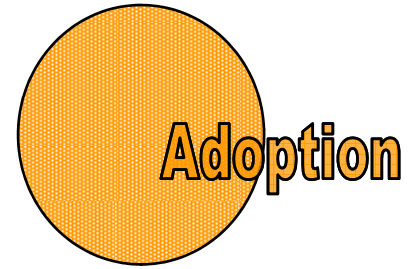




# Technology

- Interoperability
- Security
- Nationwide Health Information Network (NHIN)





# Adoption

- EHR Assessment
- Technical Considerations
- Medical - Legal
- Financial Alignment and Value



# Electronic Patient Records: Moving from Islands and Bridges towards Electronic Health Records for Continuity of Care

Petra Knaup<sup>1</sup>, Oliver Bott<sup>2</sup>, Christian Kohl<sup>1</sup>, Christian Lovis<sup>3</sup>, Sebastian Garde<sup>4</sup>

<sup>1</sup>Department of Medical Informatics, University of Heidelberg, Germany

<sup>2</sup>Institute for Medical Informatics, Technical University of Braunschweig, Germany

<sup>3</sup>Service of Medical Informatics, University Hospital of Geneva, Geneva, Switzerland

<sup>4</sup>Health Informatics Research Group, Central Queensland University; Austin Health, Melbourne, Vic, Australia

## Summary

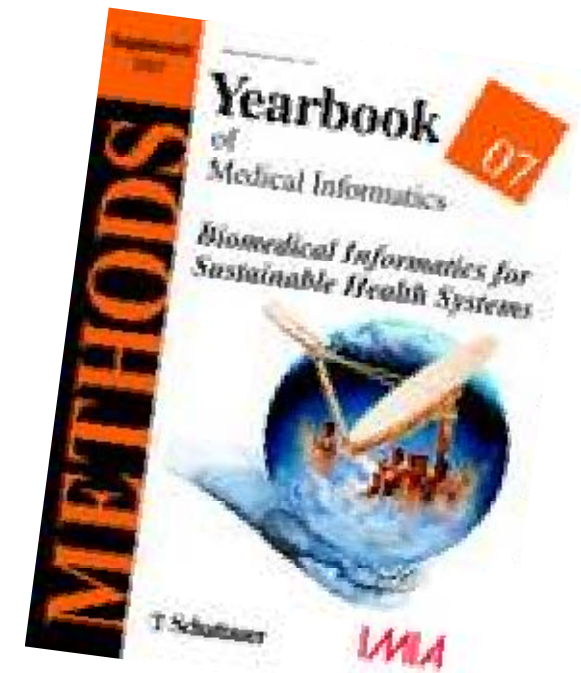
*Objectives:* Electronic patient record (EPR) systems are increasingly used and have matured sufficiently so as to contribute to high quality care and efficient patient management. Our objective is to summarize current trends and major achievements in the field of EPR in the last year and to discuss their future prospects.

*Results:* Integrating health data from a variety of sources in a

## 1 Introduction Subject and Relevance

Modern health care is increasingly influenced by e-health, although there is still no consensus on a comprehensive definition of the term [1]. The use of

letters are no longer sufficient, especially in times of highly specialized cooperative care, because they are often not in time or not available in time or not complete [6, 7]. Changes of media, processes and attitudes are necessary to move from historic paper-based



**Kernen i  
e-health og  
e-research**

**EPJ-teknologier  
og  
-arkitekturer**

**Standarder for  
semantisk  
interoperabilitet**

**Integration af  
EPJ i  
HIS**



Petra Knaub et.al. Electronic Patient Records: Moving from Islands and Bridges towards Electronic Health Records for Continuity of Care, in: A. Geissbuhler et.al. (Eds). IMIA Yearbook og Medical Informatics 2007. Methods.Inf. Med. 2007; 46 Suppl 1:34-46.

**Kernen i**

**EPJ-teknologier**

**Kernen i e-health og e-research**

Integration af gen data

Integration af data fra hjemme monitorering :

Udvikling af koncepter for visning af data



Petra Knaub et.al. Electronic Patient Records: Moving from Islands and Bridges towards Electronic Health Records for Continuity of Care, in: A. Geissbuhler et.al. (Eds). IMIA Yearbook og Medical Informatics 2007. Methods.Inf. Med. 2007; 46 Suppl 1:34-46.

**Kernen i**

**EPJ-teknologier**

**EPJ-teknologier og -arkitekturer**

Data sikkerhed og tryghed

Integration og interoperabilitet



Petra Knaub et.al. Electronic Patient Records: Moving from Islands and Bridges towards Electronic Health Records for Continuity of Care, in: A. Geissbuhler et.al. (Eds). IMIA Yearbook og Medical Informatics 2007. Methods.Inf. Med. 2007; 46 Suppl 1:34-46.

**Kernen i**

**EPJ-teknologier**

## Standarder for semantisk interoperationalitet

Standardiserede datatyper

Besked-udveksling og services

Arkitekturer for EPJ (HL7 v3 RIM, *openEHR*....)

Klinisk terminologi

Klinisk indhold

Omfang, funktionalitet

Præsentation af kliniske koncepter



Petra Knaub et.al. Electronic Patient Records: Moving from Islands and Bridges towards Electronic Health Records for Continuity of Care, in: A. Geissbuhler et.al. (Eds). IMIA Yearbook og Medical Informatics 2007. Methods.Inf. Med. 2007; 46 Suppl 1:34-46.

**Kernen i**

**EPJ-teknologier**

## Integration af EPJ i HIS

Arbejdsprocesser

Økonomistyring

Logistik ledelse

Maksimere brug af ressourcer

Optimere planlægning

Traceability



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e-health og  
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# Organisatoriske forhold

Indhold i klinisk arbejdspraksis

Arbejdsdeling

Metoder til evaluering





**Der skal navigeres**



**Der skal styres**



**Der skal roes**