eHealth status in Finland

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Danish eHealth Observatory, 2nd Oct 2014, Nyborg, Denmark
Finnish trends of National eHealth development,

Contents:

• Info about home institution
• Finnish Health Care System
• Digitalization of Finnish healthcare - EHR and PACS
• Present status of the National Electronic Archive of Health information
• Citizen Involvement and Access
• Health care reform 2017
• Discussion: Highlights and Nordic collaboration options
Governance based on knowledge

- FinnTelemedicum/University of Oulu and National Institute for Health and Welfare (THL) have surveyed Finnish health information systems since 2003.
- In the STEPS research project 2013-2015, they are joined by Finnish Medical Association and Aalto University.
- Current 2014: availability and intensity of use of ICT in health care and social care, also professional user experiences and citizen opinions of ICT.
- Results benefit Nordic and OECD eHealth indicator work. The Nordic eHealth Research Network combines the results from the 5 Nordic countries.


2.10.2014 Jarmo Reponen
Introduction: the scattered health care organization in Finland as of 2014

Public sector covering about 85 % of health care

- Specialized health care
  21 hospital districts (5 of them univ. hosp.)
  provided by federations of municipalities
  about 70 public hospitals

- Primary health care
  161 health care centres with salaried doctors
  provided by municipalities

Private sector covering about 15 % of HC
Primary and specialized health care
Electronic Health Record (EHR) implementation in Finland 1999-2010 (Availability)

PACS Availability:

Hospital districts (n=21)

Primary care centres
2003, 2007, 2010

Digitalized, but with scattered, different systems!

- **Primary Health Care**
- **Specialist Care**

Before 2011: NOT ALLOWED to exchange information between units without special permission from the patient at every case!

Source: THL/OPER
The most important eHealth reform in Finland was not about technology!

A law from 5/2011 allows all public health care providers within one hospital district to see all patient information from other institutions, provided the patient has not prohibited this!

• All the primary care units and hospitals in a region can share a database, a feature that was technically available since 2002!
• Still legally restricted within boundaries of hospital districts

• Images from 2002: technically regional health care was possible 10 year earlier
National eHealth infrastructure

The KanTa services, HIE (Health Information Exchange)

Based on new legislation since 2007
KanTa - National Archive of Health Information - timetable

National information services for health care

- ePrescription service
  - >> 1.4.2012 (pharmacies), 1.4.2013 (public HC), 1.9.2015 (private HC)

- National pharmaceutical database
  - in use

- Patient data repository
  - >> 9/2014 (public HC), 9/2015 (private HC)

- My Kanta pages
  - portal for citizen’s own data (prescriptions, patient data)
    - in use

- Patient data management
  - Consent and will mgt and Patient summary mgt,
    - in use (first phase)
Main standards
- HL7 V3: CDA R2 Level 3 and Medical Records
- IHE IT I Profiles
- W3C XML DSig
- WS Addressing, WS-I
- TLS, X.509

Other national services
- National code server
  - Code lists and terminologies
- Healthcare and social care organizations register
- Pharmacies register
- Certification services
- Health care professionals register

Source: Konstantin Hyppönen KELA
Dispensed ePrescriptions and Reimbursed Prescriptions in Pharmacies by Month in 2009–2014 in Finland

(3 months moving average)

- Millions of Prescriptions
- Dispensed in Pharmacies

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<tr>
<th>Year</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
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- Reimbursed Prescriptions

- In public health care, usage rate of ePrescription is 91% in May 2014.

Source: THL/OPER
• User Interface for Citizens:
  • My Kanta Solutions
In Active Use since 20 May 2010

Source: THL/OPER
Data on Personal ePrescriptions

1) ePrescriptions

2) Data on Prescriptions & Deliveries

3) Log Data

Source: THL/OPER
Data on Personal Healthcare Use

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Source: THL/OPER
Citizens can allow or deny access to their patient information across organizational orders. One service for all Finland.

Find latest info at: http://www.kanta.fi
Kanta moves into operation…
Timetable 2010–2016

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Source: THL/OPER
National Repository of Patient Records: Plan of Document Classes to be Archived

2014

- Specialisation and Service Specific, Professional & General Healthcare Views
- Maternal / Well Baby Clinic & Student Healthcare Views
- Risk Data, Medications, Diagnoses, Operations, etc.
- Laboratory & Radiology Requests and Statements
- Consent Retrieval & Document Release Retrievals from Other Organisations

2016

- Documents Based on Mental Care Act: MI-MIII & Decision on Compulsory Treatment Restriction on Contact
- Personal Identification Data
- Medical & Other Statements
- Healthcare & Treatment Plan
- Referrals & Epicrises, Archiving
- Documents of Oral Diseases
- Medical & Other Certificates
- Notification of Registry

2016+

- Notifications to National Registries
- Local Document(s)
- Nursing Care Daily Markings
- Organ Donation Report
- Other Documents

Source: THL/OPER
Proposals for a national PACS architecture, three basic models

- Ministry of Welfare and Health gave a task to formulate suggestions for a national PACS architecture to be implemented after 2016.
- There were formulated three alternative proposals:
  - 1. Full centralized model
  - 2. Central link directory
  - 3. Federated model of regional archives.
- The models were tested via Proof of Concept (POC) partners.

Starting point assumptions for Interoperability:

1. International standards and profiles are obeyed (HL7, DICOM, IHE XDS, X* family).
2. Exam, request and report are combined using XDS document submission set under the same registry.
3. Operational RIS + PACS are separated from long term archive (VNA=vendor neutral archive).
4. Consent management, log-files, citizen eView and personal health record are centralized national services.
PoC (Proof of Concept) for hybride model 2013-2014

Lähde: Jari Porrasmaa / THL/ STM 4/2013
Finland: a **radical health care reform!**
- from 2017-

- Finnish government decided this spring (23.3.2014): the responsibility to organize care will be the task of **five special responsibility areas** (ERVA) instead of present system where municipalities share the task.

- Most probably the **operational EHR and PACS archives** will be consolidated within these **five regions**. With a connection to the national long term archive and health information exchange (HIE), the Kanta.

- The Ministry of Social Affairs and Health is currently preparing a **new strategy for information management** in health and social care.

- The vision (work in progress): emphasizes that “Welfare, health and service information should be in active use, thus enabling the renewal of services, them to become customer centered, effective and economically sustainable”.

2.10.2014 Jarmo Reponen
Discussion: highlights of Finnish eHealth today

• Finland is building a "back-office", which will contain not only patient summaries and prescriptions but also full patient narratives with laboratory and imaging data.
• Citizens have a wide possibility to access information and control its use.
• The data input and output interfaces are controlled and based on international standards.
Discussion: future possibilities of Finnish KanTa HIE

• The national services will make it possible to develop application software and user interfaces as well as mobile mHealth apps for professionals and citizens. They could rely on this "national EHR".

• Adherence to the standards required at the national level makes the regional systems more connectable.

• Alternatively, data mining possibilities should be discovered.
Discussion: Possible Nordic collaboration

- Nordic countries, which are amongst the five tops in health care digitalization, could have joint efforts in eHealth standardization.

- \textit{NMT}= Nordic Mobile Telephone
  NMT= Nordic Medical Technology standardization

- This could create a larger ”eHealth platform”, which motivates software vendors to a create products to this portal.

- Also Nordic countries are forerunner laboratories to show, which portal / web services are beneficial for patients and health delivery