How eHealth is organised in Finland and other Nordic countries

PI RKKO KOURI  PhD, PHN, RN
Principal Lecturer in Healthcare Technology, Savonia University of Applied Sciences, Finland
Coordinator for the Master programme development group in Savonia UAS
International Society for Telemedicine and eHealth, Member of Board of Directors
Finnish Society of Telemedicine and eHealth Board member and secretary
International Medical Informatics Association/Nursing Informatics Education Working Group Member
Chair of Regional Cancer Association

CONFERENCE:  CBTMS 2015 - Telehealth for Universal Health Coverage
TIME:  28-30 October 2015
Place:  UERJ Campus Maracanã, R. São Francisco Xavier, 524 – Maracanã Rio de Janeiro, Brazil
Contents

• Nordic countries in brief
• eHealth in Finland and in Nordic countries
  – Guiding decisions related to eHealth
  – National eHealth development
• Future
Nordic countries
Population: 26 million altogether
Life expectancy: Men 79.9 years, women 83.9 years
Key features: High standard of education, well-established systems of primary health care and hospital services with advanced specialist treatment. Nordic countries have been in the forefront of the ICT penetration and use.

Finland, Sweden and Denmark are members of European Union (EU). Before joining, every nation must amend its laws to match EU treaties and incorporate new legislation agreed by the EU through their national parliaments.
Principles of Nordic Welfare Model e.g.

- A strong government role in all policy areas
- Comprehensive public responsibility for basic welfare tasks
- A welfare system based on a high degree of universalism
- Income security based on basic security for all
- Gender equality is a guiding principle
- Well-organised labour market and a high level of work participation in which tripartite cooperation is key
- Funding from taxation and redistribution

Source: Kautto M. et al. 1999, Nordic Social Policy
eHealth in Finland and in Nordic Countries
Finnish National development
Guiding Decisions related to eHealth

- First ministerial strategic document in 1996
- Government decision in 2002: Finland should have a nation wide interoperable EHR system by end of 2007
- National eHealth Road Map 2007
  - Availability of patient information regardless of time and place, both in public and private sector
  - Participation of patients and citizens
    - access to own patient information and log data
    - access to high quality health information
    - development of eServices
Guiding Decisions related to Finnish eHealth 2/2

Today’s development work:
Agreement on the National archive for health information (KanTa) comprising three nation wide services

– ePrescription
– eArchive
– For citizens: eView and Patient Information Service

• New legislation was needed to allow the new features
  – Placing the centralized service to national insurance system (Kela)
  – Consent management, privacy & security aspects

eSocial services for Social care
  – National Data warehouse and archiving solution for social care (in definition phase, local pilots 2011)
  – legislation to be done

Slide by Maritta Korhonen, Finnish Ministry of Social Affairs and Health
Main standards in eHealth tech

- HL7 V3: CDA R2 Level 3 and Medical Records
- IHE IT-I Profiles
- W3C XML DSig
- WS Addressing, WS-I
- TLS, X.509

In accordance MSAH 2015
KanTa - experiences this far

- The elephant is big
  - It has to be eaten bite by bite
- Using common standards is mandatory
  - Freedom makes systems incompatible
  - Not only systems, but health care staff too
- Improving an existing system is difficult
  - The new national system must be fit in an almost ready puzzle
  - The requirements are high
Local and regional eHealth situation in Finland by 2015

**Delights**
Strong base for further development
- Electronic Health Record (EHR) coverage 100% (public prim and sec healthcare), 80% (private)
- EHR information exchange 90% (public, hospital districts)
- Electronical referrals and discharge letters 95%
- Wide use of national solutions (KanTa-system: ePrescription, eArchive, eAccess)

**Drawbacks**
- Forerunners dilemma: old EHR systems, usability
- Interoperability problems
- Slow adaptation of citizen eServices

Slide by Maritta Korhonen, Finnish Ministry of Social Affairs and Health
Future
Challenges

- aging population and health care professionals
- increasing costs

We need

- new ways of thinking
  - structural changes
  - new ways to deliver care
  - better usage of eHealth opportunities
- to empower our people
  - help people to help themselves
  - better preventive care
# National Finnish eHealth and eSocial Strategy 2020

<table>
<thead>
<tr>
<th>Focus area</th>
<th>How to get it done</th>
</tr>
</thead>
<tbody>
<tr>
<td>Citizens:</td>
<td>Taking own responsibility - doing it yourself</td>
</tr>
<tr>
<td></td>
<td>national platform</td>
</tr>
<tr>
<td>Professionals:</td>
<td>Smart systems for capable users</td>
</tr>
<tr>
<td>Service system:</td>
<td>Effective utilisation of limited resources</td>
</tr>
<tr>
<td>Information use:</td>
<td>(Refinement of information and knowledge management)</td>
</tr>
<tr>
<td></td>
<td>Knowledge-based management</td>
</tr>
<tr>
<td>Steering and co-operation:</td>
<td>From soloists to harmony</td>
</tr>
</tbody>
</table>
The evolution of the service system – from hierarchy to ecosystem

**Different units in hierarchy**
- Municipal based structure.
- Added value from hierarchy
- Main focus is on the organization and professionals

**New administrative framework**
- Administratively integrated structure.
- Added value from economies of scale.
- Main focus is on the organization and professionals

**Functional integration**
- Functionally integrated structure.
- Added value from data.
- Main focus is on the citizen

**Ecosystem**
- Integrated ecosystem
- Added value from Big Data
- Main focus is on the citizen

---

Slide adapted from Health Tuesday 4.3.14, Pentti Itkonen (Eksote)
The main parts of the Finnish Social- and Healthcare reform – total integration of services

- The service system is not only for the organizations and professionals
- Every Citizen has a right to equal and high quality services in whatever proper way the citizen wants
- eHealth, Telehealth, Telecare
- National strategy
- Integrated service system
- New legislation
- New financing and health impact model
- Working group to be set

Co-creative patient and customer: Knowledge, Skills, Family, Friends, Colleagues, Community

Slide adapted from Health Tuesday 4.3.14, Pentti Itkonen (Eksote)
BigData in Social and Health Care

Real time financing and health impact system

Statistics Finland

Social Insurance Institution

Population Register Centre

National Institute for Health and Welfare

Social and Health Care Providers

Genetic Data

Slide adapted from Health Tuesday 4.3.14, Pentti Itkonen (Eksote)
eHealth in Nordic Counties

EU commission eHealth Benchmarking 2012-2013: Nordic countries are the leading countries in EU (European Union)
Brief history Nordic telemedicine

First Nordic telemedicine project was in 1993 – 1995, teleradiology between Oulu, Reykjavik, Tromsoe.

Teleradiology/telemedicine conferences arranged by Swedish SPRI in early 1990 –ties.

1996 First Nordic Conference for Telemedicine” in Finland

1998 Nordic Council of Ministers financed Dr Thomas Steengard from Greenland to write a Report of Telemedicine in the Nordic Countries

1999 ”Nordic Telemedicine Association” was founded 7.9.1999 in Ilulissat in Greenland as a federation of the national telemedicine associations and respective organisations.
Collaboration

- In 2012 the Nordic Council of Ministers set up a Nordic eHealth group to bring eHealth higher on the Nordic agenda.
- The eHealth group established 15.2.2012 the Nordic eHealth Research Network (NeRN) and Nordic team focused on Health Information Exchange (HIE) and Patient Portal functionalities.

References:

Nordic countries strategies
eHealth communication
Overview of e-Health Communication in Sweden

My Healthcare Contacts e.g My Care (secure login) lets citizens request, cancel, or reschedule healthcare appointments, renew prescriptions, and request contact with a specific clinician or hospital. 

1177.se – The Care Guide, national phone number and website for questions and guidance about symptoms, diseases, and healthcare. Decision support for nurses giving advice on the phone. (Available in different languages)

National Patient Overview
All care providers publish patient Information. Healthcare staff can access if the patient consent. Not so much used—shared EMR systems in the counties/regions reduces the need.

Read more: http://www.nationellehalsa.com/national-ehealth
Overview of e-Health Communication in Norway
Overview of e-Health Communication in Denmark

Citizens (Orange), GP/Specialists (Green), Hospitals (Blue) and Health Authorities (Purple) can see different information through the portals.

Two access portal: Sundhed.dk (Red), which is for citizens and professionals, and the Health Data Net (Cloud) which gives access to a variety of systems for professionals.
Analysis of Nordic National eHealth Strategies

- Strong adherence to standards, public funding and centralized governance.
- The emphasis is on improving information security and patient privacy.
- Policy documents contain affirmations about increasing the quality, statements of empowerment and activation of patients/citizens to access information, and effectiveness of healthcare services through the use of IT within healthcare, especially in Denmark.
- ICT as a tool and support for the healthcare organisations’ change processes was important in Sweden and in Denmark.
- The make better processes with ICT was important too to Sweden and Denmark. (eHealth tools to doctors in Sweden and in Norway, and eHealth tools for the patients in Sweden & Finland)
- The infrastructure of well functioning ICT was emphasized in Finland.
- Plans for standardization were in Finland, Sweden and in Norway.
- To make better access health information and importance of using health IT to improve access to relevant health information to promote continuity of care and increase patient safety was mentioned mainly in Icelandic, Swedish and in Norwegian strategic plans.

References:
http://dx.doi.org/10.6027/TN2015-539
Features - eHealth in Nordic Countries

• All the Nordic countries have implemented or are in a process of implementing a National Health Information System (NHIS), and Finland and Sweden also have regional repositories.

• **Patient Portal** functionalities are either local or national e.g. “mediating prescriptions electronically to be dispensed from any pharmacy” and “viewing list of patient’s prescriptions” were available in 100% of public organisations in all the Nordic countries. The proportion of ePrescriptions of all prescriptions made in 2014 exceed 60% in all the Nordic countries.

• In Finland prescription data and in Iceland immunization data were also viewed relatively frequently.

References:
eHealth strategy for Nordic Nurses
Finland

- Finnish Nurse Association will launch its strategy Nov 2015
  1. Technology supporting patient/client participation
  2. eHealth services as part of nurse’s daily work
  3. Ethical guidelines and working models in eHealth services
  4. eHealth services and nurse competences / capacity
  5. eHealth services and nurse leadership
  6. eHealth, digitalisation, research and nurse developers
Content areas:
The strategy and concept of eHealth – areas of application
What is eHealth?
Development of eHealth
eHealth for nurses
Areas targeted for eHealth
Information management
Communication and collaboration
Core ethical values
Learning and competence
Leadership and management
Technical support
Research and development
Norway


Content

About eHealth
Correlation between NNO's principles programme and eHealth
NNO goals for eHealth
Driving forces for change
eHealth policy
Trends in eHealth

ETHICS

TARGET area 1 - strengthened user participation
TARGET area 2 - Improving competence and knowledge development
TARGET area 3 - Strengthening processes and health-related coordination within the nursing profession
TARGET area 4 - Service innovation and new tasks for the nurse

Politisk plattform for e-helse (available only in Norwegian), NSF 15.10.2014
• link: https://www.nsf.no/vis-artikkel/2196180/17036/Politisk-plattform-for-e-helse
Denmark

Danish have a policy paper on Nursing and Health/Welfare Technology with five main recommendations:

1. Focus on **patients** coping with their health challenges through welfare technology solutions
2. **Quality** of care must be ensured by increasing **research** in welfare technology
3. Health personnel must be involved in the **development**, implementation and further development of technology
4. Technology solutions to be disseminated throughout the **health system**
5. Important to create **partnerships** with industry as well as the community.

*Available in Danish: http://www.dsr.dk/Artikler/Sider/Fag/Velfaerdsteknologi%20og%20innovation/DSRs-udspil-om-velfaerdsteknologi.aspx*

Danish also have some recommendations and guidelines for nurses regarding the opportunities for influence on the new technology, demands and safety legislation as well as what you can expect of your workplace when introducing new technology.

*Document available in Danish: http://www.dsr.dk/Artikler/Sider/Fag/Velfaerdsteknologi%20og%20innovation/Indflydelse-paa-den- teknologiske-udvikling.aspx*
Iceland

Policy of the Icelandic Nurses’ Association in Nursing and Health Care 2011-2020: Nursing Knowledge for Your Benefit which has a chapter Nursing Informatics, includes eHealth issues.

Content emphases:

• nurses take an active part in the implementation of EPRs and adopt a unified system of electronic nursing records based on recognized classification standards
• international IT standards (for recording, storing and disseminating data)
• electronic data utilised for the collection, recording, storing, handling and dissemination of nursing data and should support the clinical decisions of nurses
• electronic data utilized to define quality indicators and for the assessment of the quality, cost and benefit of the care provided; similarly, electronic data and information on nursing intensity and staffing should be accessible at all times.
• hardware and software should be up-to-date and meet current requirements at all times

Thank you – Obrigada – Kiitos

President Dilma Rousseff, Brazil, and President Sauli Niinistö, Finland, met in Finland Oct 20th 2015 and agreed on bilateral collaboration