



Building the ecosystem Finland

6th June, 2023 Barcelona

Pirkko Kortekangas

openEHR Finland, co-chair

Chief Specialist UNA Oy, MD, specialist of Surgery and Neurosurgery

Deeply involved in bulding the public health and social ICT ecosystem in Finland > 20 years





Logic of the presentation

Elements of Finnish ecosystem - what's the point

Stakeholder

Kanta UNA Legislation Data Lakes

Why to add openEHR to our ecosystem?

How to go on?







Non-profit association of users, vendors, developers and authorities

Finnish institute for health and welfare

- Promotes and supports the use of application interfaces and message specifications needed to integrate health care information systems in Finland: HL7v3, Dicom, IHE, FHIR, openEHR
- Key role in the process of change of the national standards
- Our way to implement standards in real life systems
 - Refinement and validation of proposal for standards reminds of openEHR

<u>UNA Oy</u>

Non-profit company of Welfare Districts

- Co-operation of development
- Shared ICT-modules for public social and health care providers and their professionals

https://twitter.com/una_oy

https://www.linkedin.com/company/unaoy/ab out/





Population of 5,6 million

Health and Social Services Reform 1.1.2023

Organisational enabler of change

The responsibility for organising healthcare, social welfare and rescue services from municipalities and joint municipal authorities to wellbeing services counties

Financial enabler to steer to more cost-effective data

Age structure of population on 31 December management



Wellbeing service counties are funded by Ministry of Finance.

In old system, providers had many variations of system combinations of social and health care systems with their own data silos

Most of the Welfare Regions have system procurements in progress or in planning

5 co-operation districts around University Hospitals 21 + 3 Wellbeing Service Counties



National ecosystem of social and healthcare ICT

Kanta Services

- To store/archive and share
 - patient record documents
 - social record documents
- E-prescriptions
- Citizen interface OmaKanta to get access to your own records
- Informed consents (national legislation) and prohibitions
 - concerning release of documents via Kanta between care providers

Population Information System

• Personal data incl. id for any person residing in Finland

Kanta Services are used by:

of public healthcare

of private healthcare

0.3%

74% of public social services

of pharmacies

100%

s of private social services

Code service for social and healthcare Standardised document structures, code sets and register data collections

Suomi.fi services

- Safe messaging from authorities to citizens
- E-authorization
- Identification service of citizens
- the Data Exchange Layer



Kanta

Notes of Kanta

EHR information is packed to meet the requirements of Kanta document structures

- Most original data structures of the EHRs is lost or restructured in the storage process
- Demands concerning the structure are not demands of how to show a documentation sheet in applications

The main users of Kanta documents today are patients – document format does not meet the needs of professional use and automatic data processing **Earnings and learnings** in **openEHRrish**

We have lot in common with openEHR

 Expanding set of national and via Kanta sharable templates

openetyr

- Experience to understand and manage the difference of *compositions* and *templates*
- Ability and habit to use standard segments to structure free text
- The idea of exporting datasets from the original systems to Clinical Data Reporitory <u>without delay</u> is familiar to all vendors and systems
- Structure of social care records that reminds architypes, includes templates but misses segments and compositions

Components of UNA ecosystem





Notes of UNA

Core UNA collects and transmits data ad hoc for the user's usecases

National documents are broken down into the smallest possible granular size

Each granule includes metadata of the source context

Earnings and learnings in openEHRrish

openerry Our document oriented ecosystem is not all bad Management of access in possible to outsource

- EHR systems are capable of exporting data in *arhcitype* like structures
- Its possble to split Kanta documents and show data in a professional oriented manner by utilizing segments and the *action architypes* inbedded in the national documents
- It was possible to build the access control of data in the yet present legislative enviroment
- The change from conventional point to point(s) integrations to a joint integration model and access control platform needs efforts on communication and marketing





Notes

Finnish national legislation takes huge steps 1.1.2024

"All in one"

Patient data and social care customer data don't match with EHDS concept of health data

Earnings and learnings

- We have sufficient regulation on national document level
 - user's working role and professional status
 - technical proof of the customer relationship
 - purpose of use
 - source of documents
 - type of information
 - responsibilities
- We know relation between data and national documents thanks to Kanta history

→ Our legislation is now mature enough to be applied to management of data

... if each data granule includes the similar set of contexts as national documents





Notes

Some ambitious solutions upp and running, i.e. Helsinki University Hospital, Turku

Both ways - to model the data before transferring to lakes and transfer raw data as it was born – have challenges

Purpose of use was meant to be both primary and secondary use but...

Earnings and learnings

- Reuse and refinement of data of <u>various</u> source systems need endlessly both human and AI resources
- Path from innovation to a commercial MDR solution is long (except if the same product both collects and uses the data)
- System-specific databases primarily serve data processing functionalities of the system itself – not sharing nor reuse of data
- Shared data offers huge perspectives for alla stakeholders – if you could trust on the quality of data

Why to implement openEHR in our ecosystem?

ref "Should I Stay or Should I Go" by Clash Who sings to who in the future?



To stay on 2010s or to go to 2020s?

To stay on 2010s

- Put even more resources on national template level and forget the vision of data driven integrated care paths?
 - Poor quality data imbedded in free texts may be understood by professionals
- Believe that some vendor some day will solve the mystery?

To go to 2020s and 2030s

- Allocate investments to efforts to capture the data where it is richest or fully understood
 - Quality of data is a matter of primary storaging
 - once missed contexts are lost forever
 - Poor quality data does not enable automatic data processing without huge costs
- Utilize the options of health care reform
 - Wellbeing Services Counties begins to own their data in practice and may open it without further integration work to any application bringing added value to their professionals and citizens and management of services



How to go on to Data Supported Care Data driven wellbeing system

Raising awareness

Procurement

Localisation



Raising awareness of importance of primary storage data models

Why

- resourcing
- implementation deadlines
 Who should be aware?
- Politicians
- Ministries
- Professionals
- Citizens
- Authorities
- Data administrations of Wellbeing Service Counties

Actors

...

EHK

- openEHR Finlans
- Sitra Future fund??

Procurement of regional data repositories

Strategy

Data strategy of Wellbeing Service Counties

Responsibilities

Roles in proxcurement to achive interoperability and ownership of data at all levels (physical, technical, contextual and conseptual)

Implementation

Begin the procurement process Clinival Data Repositories Demografic Data Repositories

Localisation of international models

Gradually

- openEHR architypes Adding all we have agreed on allready plus
 - National reference data
 - + Snomed
- **National templates** Kanta, FHIR, OMOP
- openEHR reference model

Mapping and enlargement of standardisation of our concepts Mapping especially the national documents

Suppported

In the established co-operation of vendors, authorities, universities and professionals





-in comparison to our past efforts -

Thank You!

pirkko.kortekangas@unaoy.fi LinkedIn

