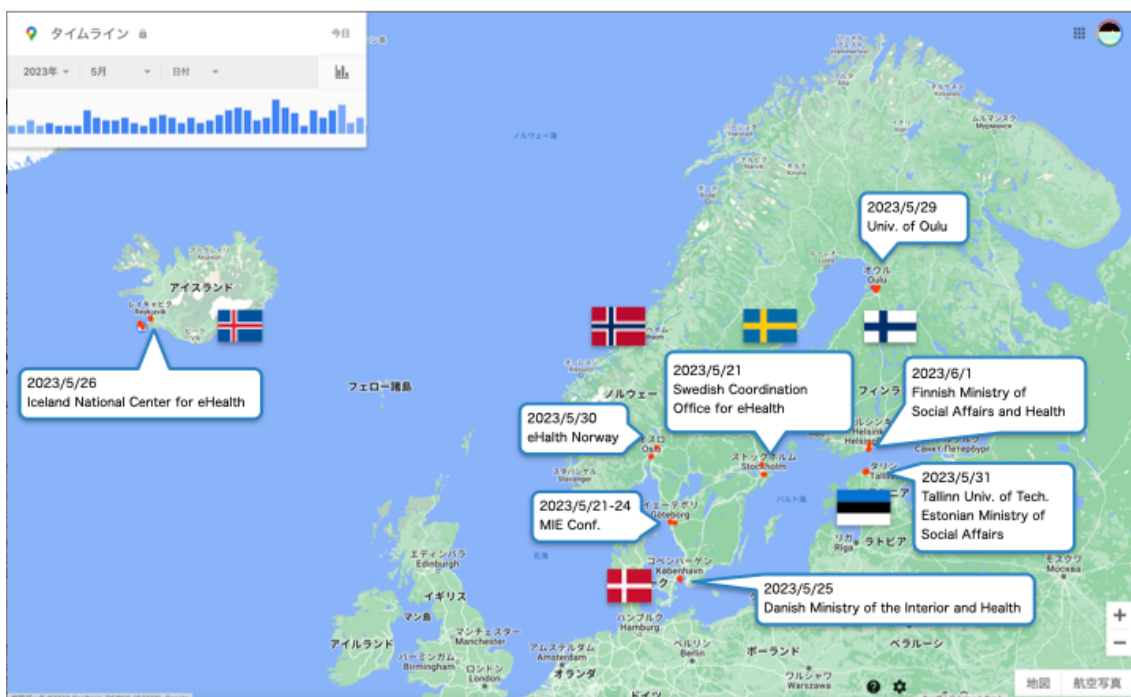


(分担報告書資料) ヒアリングサマリ

以下の文書は、ヒアリングを文字起こしし、それを第三者の目でサマリに纏めたものである。掲載順序は、下記の訪問順序のとおりである。なお、残念ながら、Swedish Coordination Office for eHealth については、技術的トラブルで録音記録が無く、サマリは黒田の記憶によるものである。

1. Swedish Coordination Office for eHealth
2. Danish Ministry of the Interior and Health
3. Iceland National Center for eHealth
4. University of Oulu, Finland
5. eHealth Norway
6. Tallinn University of Technology, Estonia
7. Estonian Ministry of Social Affairs
8. Finnish Ministry of Social Affairs and Health



Sweden Summary:

1. Discussion:
 - 1.1. Swedish healthcare system is mainly controlled “regions” which is political level between municipality and nation. (Just like states of US)
 - 1.1.1. Regions collect tax and can decide healthcare policy (spending) independently. So, it is difficult for national government to initiate change. (It IS politicians’ issue···)
 - 1.1.2. For example, regions can manage their own healthcare system including primary care either by themselves or via contract with private providers.
 - 1.1.2.1. Primary care is provided by 50% of private bodies and 50% of regions (public).
 - 1.1.3. Around 2015, new legislation to let people to have healthcare via a medical doctor who is not registered as one’s GP.
 - 1.1.3.1. GP’s cost is reimbursed by registered number of patients. On the other hands, once a patient took treatment from a MD who is not registered as GP, MD’s care is reimbursed under fee-for-service system. It looks double payment for one patient.
 - 1.1.3.2. This legislation boosts online primary doctor movement. Big private healthcare providers start online primary care services. Their care is reimbursed by fee-for-service system.
 - 1.1.3.2.1. Several regions don’t take “premium” to access online-doctor as political decision to increase inhabitants. But usually, the premium is between 100-150 SEK per “visit.”
 - 1.1.3.2.2. 99.7% of prescriptions are e-prescriptions. All pharmacies must be connected with National Database to receive e-prescriptions. So, it is not a problem for online-doctor.
 - 1.2. National ID system start from 60’s.
 - 1.2.1. The ID is mainly Bank-ID.
 - 1.2.2. People can access to their own data via portal (1177) using Bank-ID.
 - 1.2.2.1. Access is controlled bar-cord + mobile-phone + biometrics (FIDO) system.
 - 1.2.3. Medical specialists (MD, Ns, Pharm···) access right is declared by that person with certain commission and approved by national healthcare ID authority.
 - 1.3. MD’s has free access right to patients’ data for primary use with patient’s consent.
 - 1.4. Talking about secondary use, several academic activities to develop repositories goes under regions, but it is not connected with national database.
 - 1.4.1. Detailed regulations and strategy for secondary use is not clear, as Ms. Tellingier is not specialized in that field.

2. Questions arouse to me after the discussion.
 - 2.1. Do you think digital health can contribute to universal health coverage (UHC)? From your discussion, you may feel it can be big thread. If so, what kind of limit should be introduced for digital health?
 - 2.2. EHDS looks very optimistic from this aspect. How Swedish authority deal with EHDS optimistic view and realistic challenges?
 - 2.3. Please provide any possible document to understand the current system and strategies.

Summary: Interview with Denmark

The interview revolves around Denmark's digital journey in the healthcare sector, primarily focusing on the transition to Electronic Health Records (EHR) and the subsequent steps taken to make healthcare data more accessible to citizens. Initially, the focus was on improving efficiency within hospitals, general practitioner (GP) offices, and municipalities by digitizing health records. Later, an e-health portal was introduced to provide citizens with access to their healthcare data from all sectors, aiming to make patients more active participants in their treatment. Concerns about privacy and reactions from clinical workers, particularly GPs, regarding patient data accessibility are discussed, with emphasis on the importance of GPs in Denmark's healthcare system. Additionally, the role of municipalities in providing primary care and the shift towards more patient care at this level are highlighted.

The interview covers also several key aspects of Denmark's healthcare system, including electronic identification for professionals, data privacy concerns, access to patient data, management of lab test results, and the administrative structure of healthcare services. It highlights the importance of standardized documentation and regional oversight for maintaining data quality. Additionally, the growing responsibilities of municipalities in healthcare, driven by demographic shifts, are discussed.

The interview goes beyond various aspects of Denmark's healthcare system, including **MedCom**, which is a publicly funded non-profit organization financed and owned by the Ministry of the Interior and Health, Danish Regions and Local Government. Medcom is tasked with coordinating and certifying IT systems for data sharing standards across the country.

The interview illustrates also the complexity of agreeing on standards due to diverse opinions and data intricacies.

It highlights the need for structural adjustments in healthcare delivery to accommodate digital solutions and address resource allocation challenges. They touch upon the separation between primary and secondary data use and the complexities involved in utilizing healthcare data for research purposes.

In conclusion, the discussion also touches upon the **European Health Data Space (EHDS)** proposal and its potential impact on data sharing across borders. Trust, security, and certification criteria for accessing identified data are key considerations, with a focus on balancing access and maintaining public trust in the system. The importance of purpose-driven access to data and the need for rigorous criteria for researchers seeking access is noted.

Key points:

- Denmark's digital healthcare journey focuses on transitioning to Electronic Health Records (EHR) and improving accessibility of healthcare data.
- Introduction of e-health portal for citizens to access healthcare data aims to enhance patient participation in treatment.
- Concerns about privacy and reactions from clinical workers, especially GPs, regarding patient data accessibility are discussed.
- Municipalities play a crucial role in providing primary care, reflecting demographic shifts towards more patient-centered care at this level.
- Key aspects discussed include electronic identification, data privacy, access to patient data, lab test result management, and regional oversight.
- **MedCom**, is a publicly funded non-profit organization financed and owned by the Ministry of the Interior and Health, Danish Regions and Local Government. Medcom coordinates IT implementation across the country with different actors in healthcare and certifies vendor systems for data sharing standards, highlighting challenges in standardization.
- Structural adjustments are needed in healthcare delivery to integrate digital solutions and address resource allocation challenges.
- Separation between primary and secondary data use and complexities in utilizing healthcare data for research.
- Access to data for research purposes involves an application and approval process.
- **European Health Data Space (EHDS)** proposal's potential impact on cross-border data sharing is discussed, emphasizing trust, security, and certification criteria.
- Balancing access and maintaining public trust is crucial, focusing on purpose-driven access and rigorous criteria for researchers.

Summary: Iceland

The Interview illustrates the implementation of e-health solutions in Iceland, particularly focusing on the national e-health strategy, access to electronic health records, and the patient portal called "**My pages**" on **Heilusvera.is**.

Here's a summary of the key points covered:

- **E-Health Strategy:** Iceland's e-health strategy aims to provide seamless and coordinated healthcare by ensuring health professionals and patients have access to electronic health records. The strategy supports innovation, research, and quality of care.
- **Infrastructure and Access:** Iceland has a comprehensive infrastructure for e-health, with 96.7% coverage across healthcare institutions. The **unique ID system** allows for seamless access to patient information across different databases and healthcare settings.
- **Heilusvera.is & My Pages:** **My Pages** is a national citizen portal offering information about health and diseases, promotion, and online chat with nurses. It allows patients to access their health information, renew prescriptions, communicate securely with healthcare providers, and view test results and vaccination certificates.
- **Implementation Challenges:** Implementation faced resistance from medical professionals initially, but legislation mandates patient access to health records. There were concerns about security, but overall satisfaction with the portal is high.
- **Usage and Impact:** **My Pages** has seen significant utilization, with over 90% of citizens accessing it. It has contributed to increased access to healthcare services, saved time and money, and enabled better monitoring and management of health conditions, including during the COVID-19 pandemic.
- **Future Plans:** The focus is on expanding access to electronic health records, integrating patient-reported outcomes, and improving services on the patient portal. Plans include giving patients access to doctor's notes and expanding services for

various health conditions.

In summary, Iceland's e-health initiatives, particularly the **My Pages portal**, have greatly enhanced patient access to healthcare services, facilitated communication with healthcare providers, and improved health outcomes through better monitoring and management of health conditions.

The interview shows the process of e-prescription renewal, emphasizing its simplicity for both patients and doctors through electronic systems. It also discusses the payment structure for medical services in Iceland, highlighting that e-prescription renewal does not incur direct charges for patients, who typically pay small fees for healthcare visits.

The use of health data for research is regulated, with strict guidelines for access and anonymization. Ownership of health data, including opt-out options for patients, and discussions about the **European Health Data Space (EHDS)** are also covered.

The conclusion drawn from this interview is the recognition of the intricate nature of managing health data, which involves balancing patient privacy, facilitating medical research, and adhering to stringent regulations. Key points highlighted include the simplicity and efficiency of the e-prescription renewal process, the payment structure for medical services in Iceland, and the strict regulation surrounding the use of health data for research purposes.

Additionally, the interview touches on the ownership of health data, the implementation of the European Health Data Space (EHDS), and the process for adding new data to health registries.

Overall, the text underscores the importance of careful data management, collaboration among healthcare stakeholders, and alignment with regulatory frameworks to ensure the effective and responsible use of health information.

Summary: Interview with Finland, Oulu

In the first half of the interview, a discussion was held from Prof. Kuroda's presentation;

They discuss the importance of data identification and acquisition for research purposes with a representative from Finland, Oulu explains that data management is essential, especially when gathering data from multiple sources. They highlight the process of obtaining data from specific entities like universities or hospitals for research purposes, emphasizing the need for proper permissions and data management protocols. However, they acknowledge challenges such as resource limitations and high costs for researchers. They also discuss the complexities of timing and data interpretation in the medical field.

Interviewer raise concerns about potential conflicts between data providers, government bodies, and users, particularly regarding data privacy and compliance. Finland, Oulu mentions the necessity of informed consent and the implications of secondary data use.

Regarding data access for research, Finland, Oulu

explains that access depends on the type of research and data requested, with academic researchers needing to follow specific protocols and provide clear research purposes.

Finally, they discuss criteria for researchers and users accessing data, highlighting the importance of protocol adherence and research purpose justification. They conclude that once access is granted, ongoing oversight may not be necessary if proper protocols are followed.

The second half of this interview begins with a discussion about the challenges faced by European countries, particularly in healthcare services and integration. They discuss the difficulties in healthcare delivery systems and reforms, focusing on Finland's situation. The conversation covers various aspects such as public health services, primary care, hospital districts, and data management systems.

One topic of discussion is Helsinki University Hospital's role in providing primary care, which prompts a broader conversation about healthcare funding and taxation.

The conversation delves into the complexities of data management, especially regarding patient records and prescriptions. They discuss the challenges and responsibilities associated with data sharing and system integration, including issues of technical stability and user experience.

They also touch upon initiatives for digital transformation in healthcare, such as the MEDigi project aimed at harmonizing and digitizing medical education across universities in Finland. The conversation concludes with reflections on data protection laws like GDPR and the implications for healthcare data usage and exchange.

Overall, the discussion highlights the intricate challenges and ongoing efforts in improving healthcare systems, data management, and digital transformation in European countries like Finland.

Norway summary:

In the context of Norway's involvement, despite not being an EU member but part of the European Economic Area (EEA), the proposed EHDS would affect Norway due to its EEA membership. The Interview touches upon challenges faced in aligning national systems with European standards, particularly regarding authentication of healthcare professionals for data access.

Key Points:

- European Commission's initiative: Focuses on improving accessibility and use of healthcare data through the **European Health Data Space (EHDS)**.

EHDS Objectives:

- Create a joint European market for health data.
- Enable data sharing for secondary purposes like research and policy making.
- Empower citizens for personal health management.
- Improve cross-border healthcare, efficiency, and research opportunities.

Impact on Norway: Despite not being an EU member, Norway's involvement is inevitable due to its EEA membership.

- Challenges in aligning with European standards: Include authentication of healthcare professionals for data access.
- Coordination and collaboration: Key to addressing challenges and achieving common healthcare goals effectively.
- Implementation of **EPR System (Electronic Patient Record)**:
 - Referral communication between GPs and hospitals is facilitated through messaging and referral letters.
 - Both messaging and document sharing (including lab results and images) are integral parts of the system.
 - Updated medication lists are crucial for accurate communication between medical actors to avoid errors in prescriptions.

The interview revolves around the challenges and considerations regarding data sharing systems in healthcare, comparing perspectives from Japan and Norway. In Japan, concerns arise about physicians' responsibility and liability if critical information is missed in shared data, driven partly by high patient expectations and fear of lawsuits. Norway, on the other hand, emphasizes a balanced approach, where critical information is prioritized for sharing, and there's a growing trend toward patient empowerment and shared decision-making. Both countries discuss the complexities of data access, security, and patient consent, with Norway highlighting ongoing efforts to structure and regulate data for research and development.

In conclusion, the interview touches on different aspects in healthcare systems: insurance, government roles, and public expectations, with an emphasis on gradual improvements and collaboration between stakeholders to address challenges and optimize healthcare delivery.

Summary: Estonia TUT

The interview insights into Estonia's health system:

- **Taxation and Social Payments:** Estonia boasts a flat tax system with a low tax rate of 20%.
- **General Practitioner (GP) System:** Estonia's GP system is controlled by the government, with individual entrepreneurs or companies managing GP practices.
- **Healthcare Financing and Incentives:** Healthcare services, including emergency care and post-hospital care, are reimbursed by insurance. Incentives, such as bonuses for GPs using e-health systems and e-consultations, aim to encourage adoption of digital healthcare tools.
- **Digital Health Infrastructure:** Estonia has implemented e-health systems like e-prescriptions and patient summaries, facilitating data exchange between healthcare providers. These digital tools enhance efficiency and patient care.
- **Challenges and Solutions:** Resistance to digital health initiatives exists. However, legislative changes and improved controls aim to overcome these challenges and drive healthcare system modernization.

The discussion revolves also around Japan's healthcare system, insurance structure, and data management practices compared to Estonia's. They discuss the challenges of implementing e-health systems, resistance from medical associations, and the role of government in regulating healthcare data. Issues such as e-signatures, data sharing for research, and patient data ownership are explored in detail, highlighting differences in approach between the two countries.

Overall, the discussion emphasizes the importance of user experience, legal frameworks, and institutional collaboration in advancing healthcare technology and data management.

In conclusion, Estonia's healthcare system demonstrates a commitment to digital innovation and overcoming challenges to improve patient care and system efficiency.

Summary: Interview with Estonia Ministry

Both Estonia and Japan emphasize the importance of open data and efficient healthcare delivery. Estonia sees digitalization as a means to improve efficiency and reduce costs in healthcare, although concerns about income reduction for healthcare providers persist. The goal is to ensure data integrity and privacy in healthcare analytics. Overall, both countries grapple with balancing the need for data accessibility with privacy and security concerns in healthcare data management.

The challenges and strategies associated with transitioning healthcare systems from paper-based to digital formats, particularly focusing on **Electronic Health Data Systems (EHDS)**. Here's a summary:

- **Introduction of Digitalization in Healthcare:** Estonia gives the example of the resistance case encountered when introducing digitalization in healthcare systems. They highlight the need for a "silver bullet" to convince stakeholders to adopt digital systems, similar to how a database management solution convinced hospital staff to transition to digital systems in one example provided.
- **Political Decisions and Healthcare Policies:** the role of political decisions in driving healthcare policies and the need for bold government initiatives to modernize healthcare services. The importance of considering healthcare as a service industry and advocate for the availability of digital healthcare services for citizens is supported.
- **Challenges in Digital Transition:** Challenges in the digital transition include resistance from healthcare professionals, concerns about data flow and management, and the need for consensus-building among stakeholders. Examples from Estonia's experience is given, where initially skeptical doctors eventually embraced e-prescription systems, leading to improved transparency and patient outcomes.
- **Legislation and Consensus-Building:** The need for supportive legislation and consensus-building to facilitate the transition to digital healthcare systems is advocated. Concerns about data privacy, financial burden, and aligning with societal expectations are discussed, along with the importance of transparency and trust in government initiatives.

- **Technical and Legislative Considerations:** Discussion about technical challenges, such as fitting EHDS into existing systems, and legislative challenges, such as implementing necessary regulations. They also emphasize the importance of maintaining trust and transparency in managing health data, including the development of consent mechanisms for data use.

Overall, the interview underscores the complex nature of transitioning healthcare systems to digital formats, highlighting the need for careful planning, stakeholder engagement, supportive legislation, and a focus on maintaining trust and transparency throughout the digitalization process.

Summary: Finland 1

The interview highlights Finland's healthcare system, particularly focusing on its digitalization efforts through the **Kanta system** and **Findata**.

Here are the key points:

- **Healthcare Reform:** Finland is undergoing a significant healthcare and social care reform, consolidating responsibilities under 23 welfare counties. This aims to combine health and social care aspects efficiently.
- **Digitalization Efforts:** Digitalization is a major focus post-reform, aiming to modernize processes, improve services, and facilitate policymaking. The **Kanta system** is a national digital platform used by citizens and professionals for accessing health records, prescriptions, and soon, social care records.
- **E-Prescription as a catalyst for Digital Health Adoption:** E-prescription systems, such as Finland's **Kanta system**, are seen as key drivers for digital health adoption among citizens. The ease of use and direct benefits to patients have contributed to their success integrating various systems and data sources, including those from different healthcare providers and national registers, poses challenges such as duplicate information and standardization issues.
- **Findata and Digital Services:** **Findata**, an independent authority, oversees data management. Efforts are made to expand digital services, such as personal health records accessible via Kanta, and discussions around data utilization for AI-driven services.
- **APIs and Data Accessibility:** APIs are provided to healthcare providers for accessing and uploading data to Kanta, with a focus on standardization and interoperability among local systems.
- **Future Directions:** Discussions are ongoing regarding improving data structuring for better utilization by professionals and patients, including integrating data from personal health devices. Other initiatives like **Health Village** offer specialized services for post-treatment monitoring.

Regarding the secondary usage ecosystem, Finland has established permitting authority for accessing data, with universities and enterprises as end users. This initiative aligns with Finland's health sector growth strategy to promote innovation and business activities. The Act on the Secondary Use of Health and Social Data aims to facilitate access to data while ensuring data security and protection. **Findata** serves as the single point of contact for data permits, streamlining the process for researchers and other users.

The conversation also touches on European initiatives like the **European Health Data Space (EHDS)**, which mirrors Finland's system but with modifications for EU-wide implementation. Despite high political commitment, challenges persist in achieving seamless data exchange across borders within the EU. Additionally, Finland and Estonia lead in cross-border prescription exchanges, highlighting successful regional cooperation despite being small countries.

Overall, Finland's healthcare system is undergoing digital transformation, leveraging technology to enhance accessibility, efficiency, and quality of care while addressing challenges in data management and integration.

In conclusion, the conversation underscores the complex interplay between technology, policy, ethics, and healthcare delivery in the digital age, with different countries adopting varied approaches based on their contexts and priorities.