Digital Health in Korea

• Highly digitized society

• Large digital medical records in both state (National Health Insurance System) and hospitals (high EMR rate ~90%) : estimated 6 trillion data

• Heavy government involvement in R&D and utilization of digital health : Building data platform -> utilization of big data for digital technology (e.g. A.I) -> commercialization

• Strong drive from both state and private sector to foster the digital health industry and ease the restriction : relaxation of data protection act
Impact of COVID-19

• Relaxation of rules: restriction on tele-medicine is temporally lifted

• Integration of non-medical (everyday life) data to medical data: KCDC can access GPS tracking/credit card usage for contact tracing of COVID-19 patients

• For economic boost in post-pandemic era, state sees health as a major industry for market revitalization
State, or platform provider?

• Korean government provides substantial budget for building data platform

• New data protection law (Data 3 law : Personal Information Protection Act, Credit Information Act, Information and Communications Network Act) allowed use of pseudonym information

• Private companies now has more flexible access and utilization to public health records from personal health records in public sector
Key examples (public-funded)

- **My Health Way**: Health data collection platform allows patient to integrate data from public, private and personal health records. Government only provide means of transmitting the data.
  - Concerns: privacy, data protection, democratic control of personal data, commercialization of personal data

- **Dr. Answer**: Diagnostic A.I. to be introduced in clinical setting 2022. Involves 25 major hospitals and two largest IT company (Naver/Kakao) for data collection, storage, and processing.
  - Concerns: Validity and effectiveness of technology, collection methods and further utilization of data fed into A.I., centralization of digital health resources into few large hospitals
Key Issues in Korea

• **Democratic control over personal data**: Rapid expansion and centralization of personal data collection - health, financial and administrative records into single platform

• **Allocation of digital health resources**: Largely centered around big hospitals - risk of further distorting the medical system, and targeted to those who already have access to technology and data

• **Data ownership**: No clear guidelines of third-party use of data provided by government

• **Sharing benefit**: No guidelines on benefit sharing from public-funded digital health program, or utilizing developed technology in primary health/public health improvement

• **Governance**: Lack of system to allow participation of civil society in decision making process
Response from Civil Society

• Reactive rather than proactive response due to rapid technological transformation
• Mostly concerned with privacy and data protection – but is it enough?
• Growing needs for robust framework to analyse upcoming issues
Evaluation criteria

- **Validity** (reproducibility and effectiveness): does it promote health?
- **Safety**: Is there any risk, such as errors, using the service, technology, platform?
- **Affordability**: (basis that it’s effective and safe) Does it have enough supply?
- **Accessibility**: (basis that it’s effective and safe) How is the economic, physical, informational **accessibility**
- **Acceptability**: (basis that it’s effective and safe) is this culturally acceptable?
Evaluation criteria

• **Equity**: Is there any inequality in service, technology, platform access, use, and outcome?

• **Participation, autonomy**: Does it assure participation and autonomy?

• **Commercialization**: Is service, technology, platform traded goods? If so, who gets the economic gain?

• **Governance, ownership**: who owns the service, technology, platform?

• **Perspectives from global south**: technology/data/brain drain, become testbeds for unproven technologies, priorities in resource allocation