



PMAC

PRINCE MAHIDOL
AWARD CONFERENCE

2024

Transformative Digital Technology for Future Health



Harnessing technology for better health policies in countries: what will it take?

Dr. Daniel Mwai

Health Economist and Senior Lecturer, University of Nairobi, Kenya

Presidential Advisor on Health under the Presidential Economics Transformation Team in the Executive Office of the President in Kenya

Harnessing technology for better health policies in countries

Dr. Daniel Mwai

Health Economist and HSS specialist

Presidential advisor - health and standard Kenya

Senior Lecturer - University of Nairobi.

Mentor - Futures Health Economics and Metric

<https://www.futureshealth.org>

Pillars of UHC Agenda

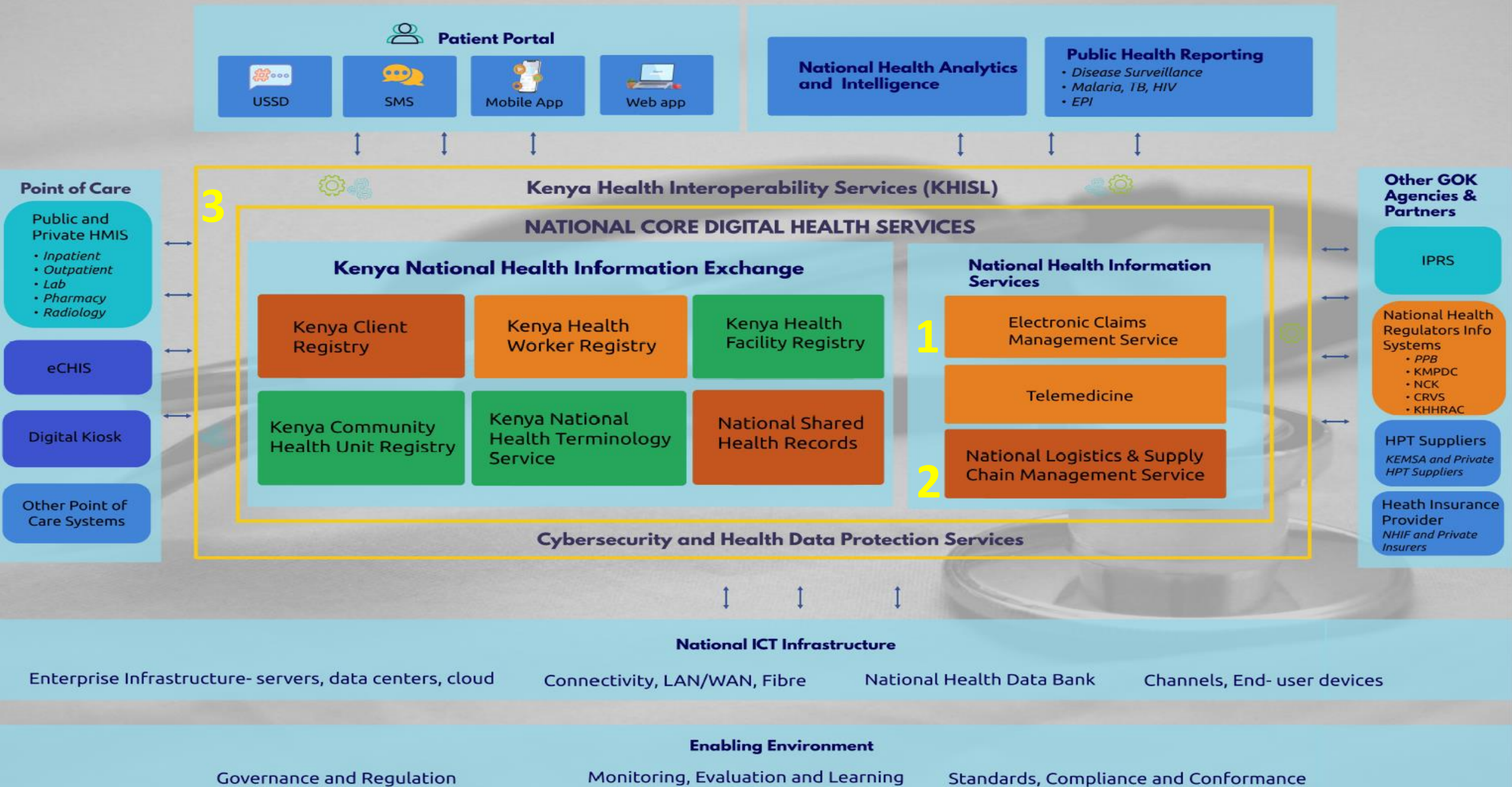
1. Integrated Health Information Management ecosystem

- Health Financing
- Health Commodity Security
- Human Resources for Health

As sweet as honey? Candy?...

- Boost efficiency in service provision- prevention , promotive, curative care based on the epidemiology data.
- Robust referral system , patient data Portability
- Administration of the Social Health Authority payment
- Electronic claims management systems.
- Fraud detection
- End to End tracking of commodities.
- Telemedicine
- AI, big data analytics, and M&E health-related targets

KENYA DIGITAL HEALTH SUPERHIGHWAY



Global scale issues and country-specific challenges in digitization



- What is hindering the pace and quality of the digitization process and ability to utilize digital platforms.
 - lack of technical resources,
 - lack of human resources,
 - lack of financial resources.
 - robust health data infrastructure to power up new digital capabilities
- Geopolitical competition amongst the “great” powers in digital divide impacts on access, inclusion and representation driven by history, culture, and social inequalities.
- The donor community has huge effect on how/ which digital tools are adopted in the health sector for medical diagnosis , treatment, and digitalization cost
- Digitalization could increase inequity owing to different pace of digitalization, data proliferation and fragmentation, and the uneven distribution of digital tools, resources, knowledge and skills

The sweet can be made Bitter.



THANK YOU.

Sharing health data across borders: What can we learn from the experience in Asia?

Ms. Aarthi Raghavan

Asia House Fellow, Digital Health Innovation in Asia, India

Sharing health data across borders: What can we learn from the experience in Asia?



Data

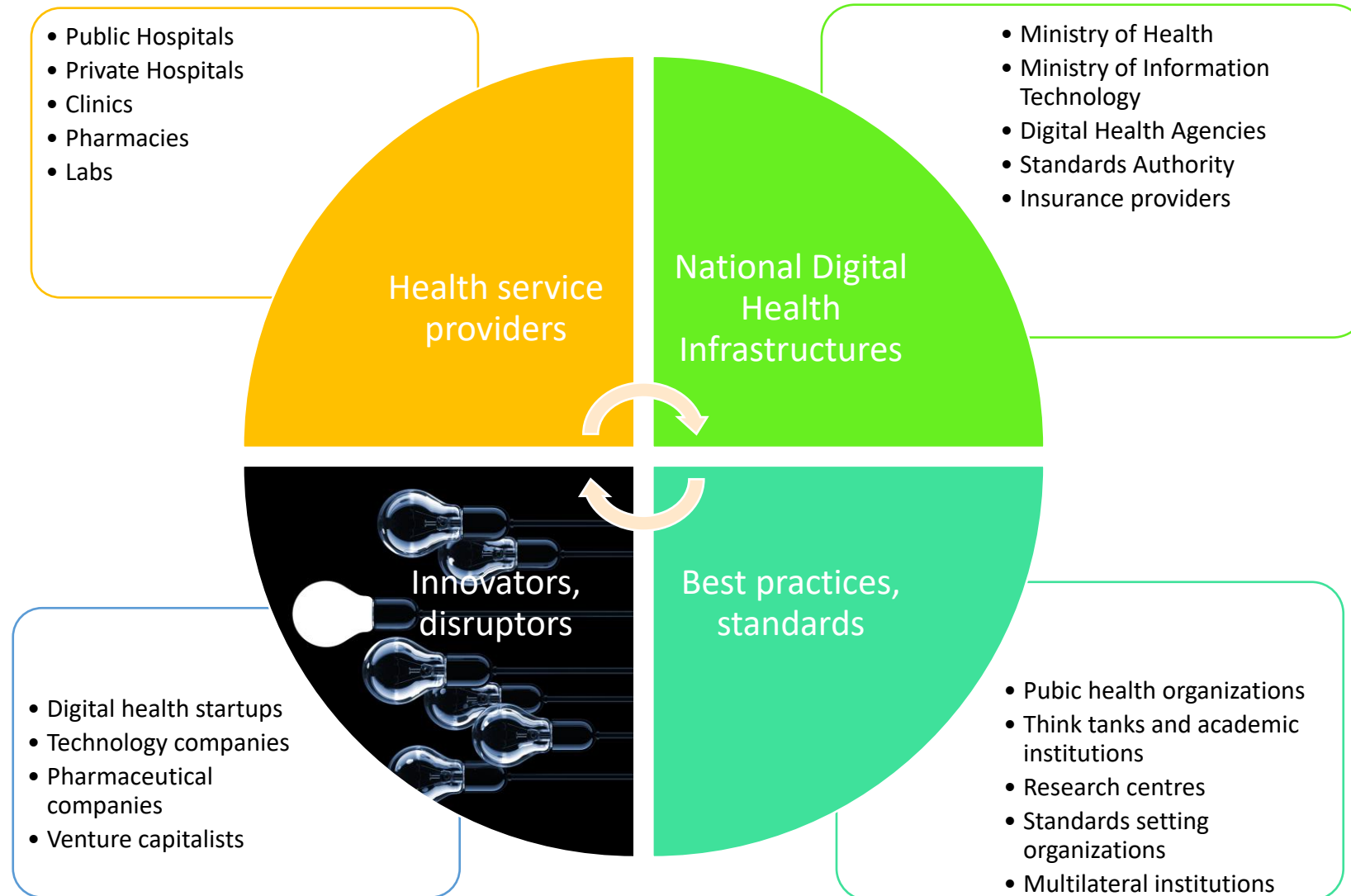


Oncoshot



Lessons

Sharing health data across borders: What can we learn from the experience in Asia?



Sharing health data across borders: What can we learn from the experience in Asia?



What can we learn from regional
engagements to digitise the
economy and what are the
implications for the health system?

Dr. Toomas Palu

Adviser, Health Systems and Financing, WHO, Estonia



Digital in Health and Economy: EU Perspective

Toomas Palu, WHO, World Bank

Digital Republic of Estonia, EU member state

A Europe Fit for the Digital Age

One of the 6 priorities for European Commission 2019-2024

Health sector included because

- Benefits to citizens
- Opportunities for business

Technology
that works for
people

Digital skills
Ultrafast broadband, including for health care facilities
Super-computing capacity for innovative solutions, including medicines

Fair and
competitive
digital
economy

Increase access to high-quality data while safeguarding personal and sensitive data

An open,
democratic
and
sustainable
society

"European health data space" to foster targeted research, diagnosis and treatment

Digital Health and Care



TRANSFORMATION OF HEALTH AND CARE IN THE DIGITAL SINGLE MARKET - Harnessing the potential of data to empower citizens and build a healthier society

European health challenges

- ⊗ Ageing population and chronic diseases putting pressure on health budgets
- ⊗ Unequal quality and access to healthcare services
- ⊗ Shortage of health professionals

Potential of digital applications and data to improve health

- 📌 Efficient and integrated healthcare systems
- 📌 Personalised health research, diagnosis and treatment
- 📌 Prevention and citizen-centred health services

What EU citizens expect...

- 90% agree** To access their own health data (requiring interoperable and quality health data)
- 80% agree** To share their health data (if privacy and security are ensured)
- 80% agree** To provide feedback on quality of treatments

Support European Commission:



1

Secure access and exchange of health data



Ambition:

Citizens securely access their health data and health providers (doctors, pharmacies...) can exchange them across the EU.

Actions:

- eHealth Digital Service Infrastructure will deliver initial cross-border services (patient summaries and ePrescriptions) and cooperation between participating countries will be strengthened.
- Proposals to extend scope of eHealth cross-border services to additional cases, e.g. full electronic health records.
- Recommended exchange format for interoperability of existing electronic health records in Europe.

2

Health data pooled for research and personalised medicine



Ambition:

Shared health resources (data, infrastructure, expertise...) allowing targeted and faster research, diagnosis and treatment.

Actions:

- Voluntary collaboration mechanisms for health research and clinical practice (starting with "one million genomes by 2022" target).
- Specifications for secure access and exchange of health data.
- Pilot actions on rare diseases, infectious diseases and impact data.

3

Digital tools and data for citizen empowerment and person-centred healthcare



Ambition:

Citizens can monitor their health, adapt their lifestyle and interact with their doctors and carers (receiving and providing feedback).

Actions:

- Facilitate supply of innovative digital-based solutions for health, also by SMEs, with common principles and certification.
- Support demand uptake of innovative digital-based solutions for health, notably by healthcare authorities and providers, with exchange of practices and technical assistance.
- Mobilise more efficiently public funding for innovative digital-based solutions for health, including EU funding.



Digital Health and Care in the EU

Subsidiarity Principle and Health Systems in EU

- 27 different health financing, organization, data, digital maturity systems, work in 24 languages

EU legislation to protect people

- patients' rights in cross-border healthcare
- medicines and medical devices
- serious cross-border health threats
- cancer, tobacco and promotion of good health
- organs, blood, tissues and cells

Cross-border health care

- Free movement of people and right to access health care
- European Health Insurance Card

eHealth Digital Infrastructure ensuring continuity of across members states

- Prescription and eDispensation
- Patient summaries

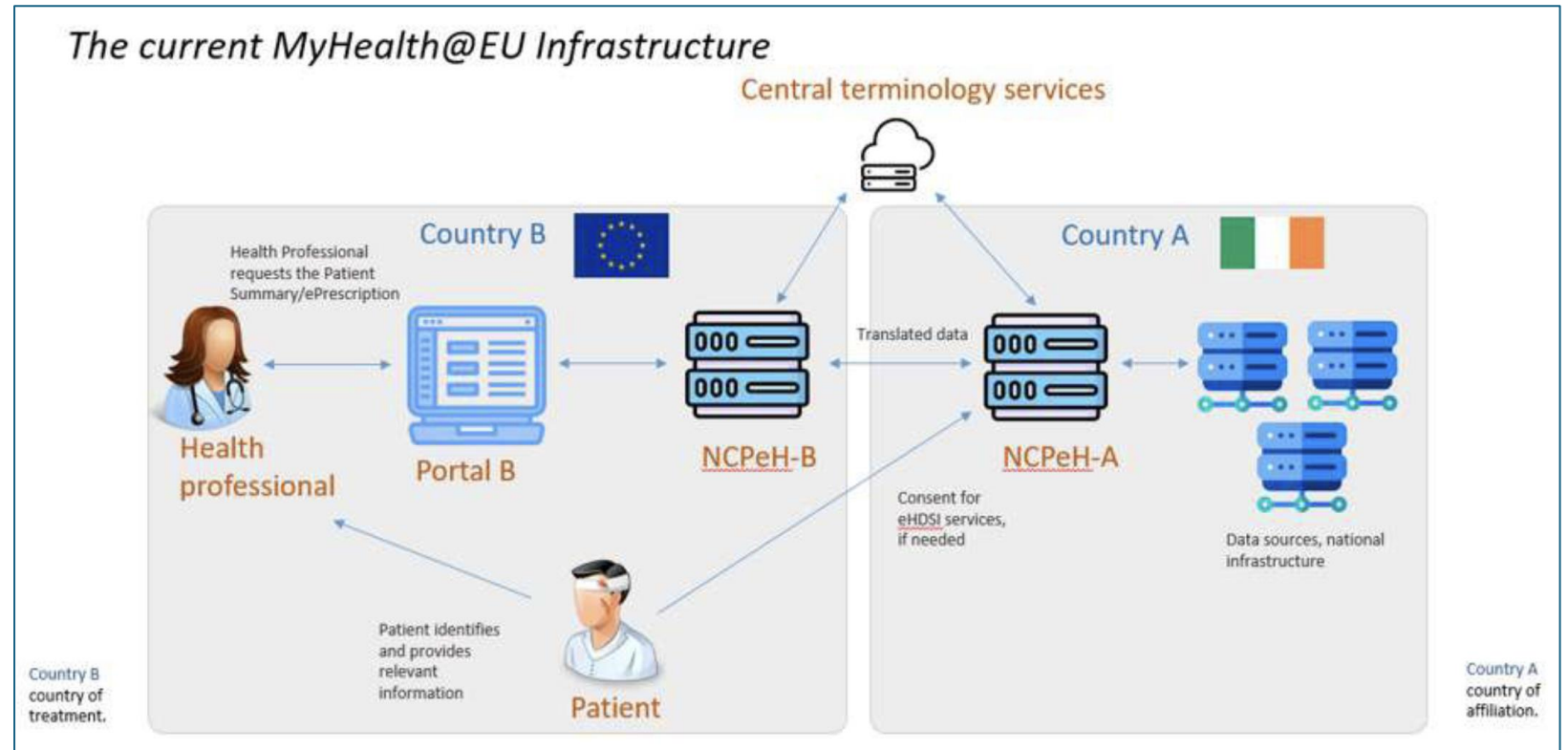
Up and coming

- Hospital discharge reports
- Digital imaging and reports
- Lab results and reports



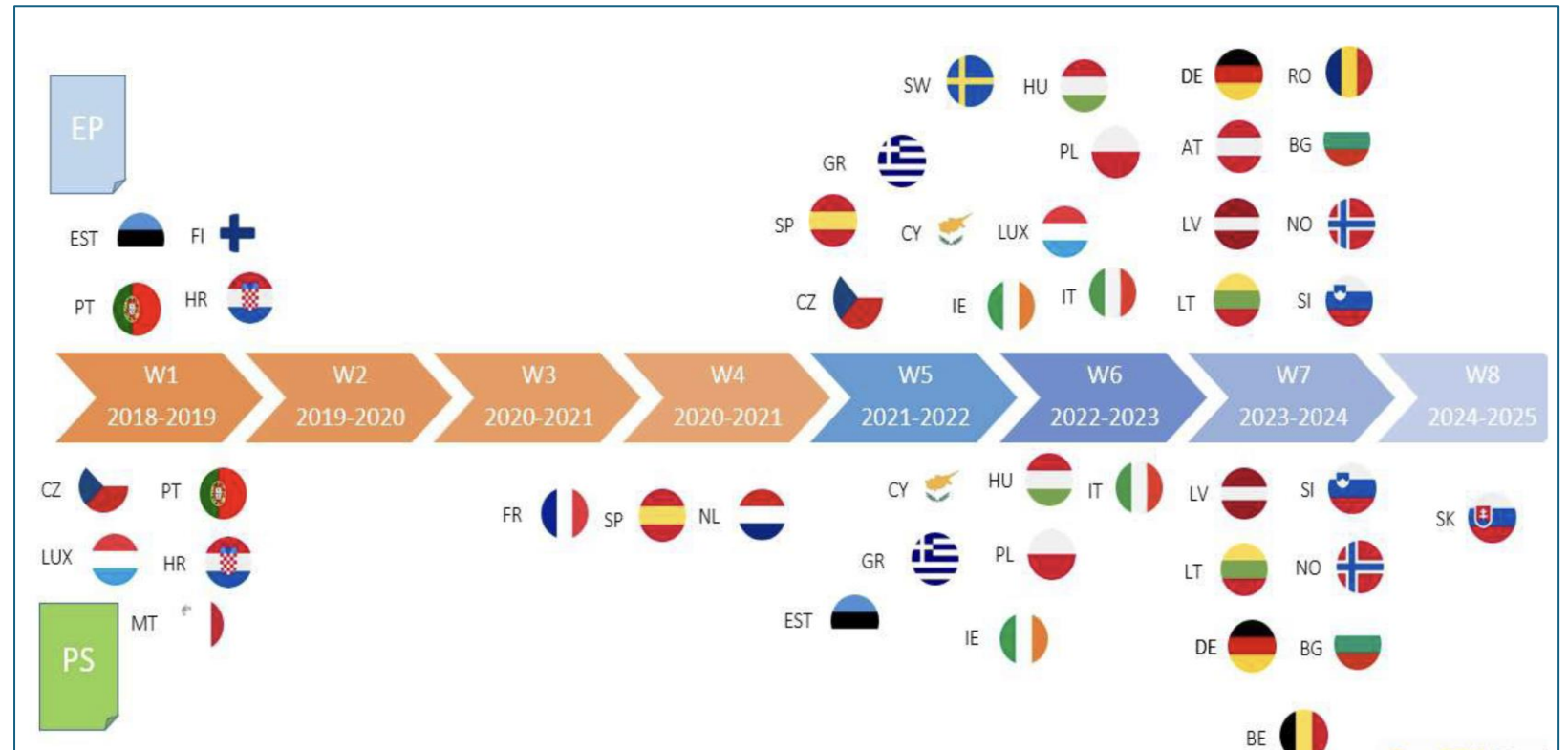
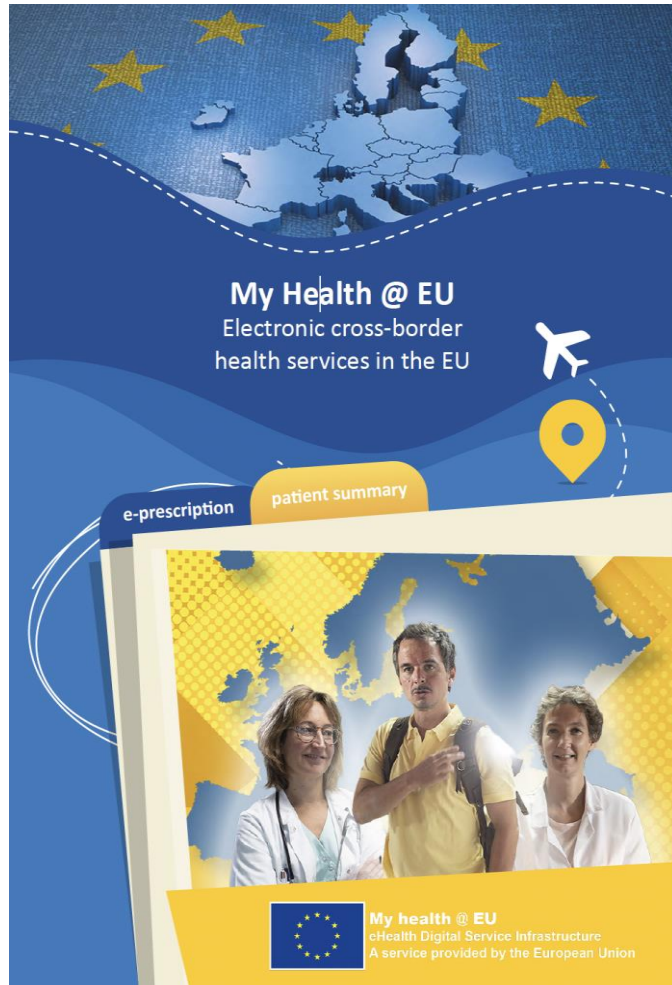
My health @ EU
eHealth Digital Service Infrastructure
A service provided by the European Union

My Health @ EU at Work



IHE, Europe; Experience Day 2022, Klara Jirakova

My Health @ EU at Work



IHE, Europe; Experience Day 2022, Klara Jirakova

Next Milestone: European Health Data Space

- 2022 – European Commission's proposal to create EHDS
- 2023 – European Council's position on a new law to facilitate exchange and access to health data
- Objectives
 - Primary use – support health services delivery
 - Secondary use – inform health research and innovation
- Negotiations with European Parliament to reach provisional agreement

Cross-border access to health data

- More control over data for individuals
- My health @ EU will be expanded
- Interoperability – European EHR data exchange format
- EU countries to set up a digital health authority

Research


- New platform HealthData@EU for cross-border access
- National health data access bodies (HDABs) to be established

Where is geopolitics in all that?



Competition, collaboration, knowledge and technology transfer

- A lot of politics to be navigated among EU member state to reach consensus
- Opportunities for knowledge transfer among member states
- Access to standardized big data important in global competition for research, AI applications, biotech industry
- A case study for other regional entities to learn from



Let's hear from you

How can we maintain the integrity of technology in the global context and what are the implications for the health sector?

Mr. Low Jia-Rong

Vice President Stakeholder Engagement and Managing Director - Asia Pacific, Internet Corporation for Assigned Names and Numbers ICANN, Singapore


PMAC 2024 - ICANN



Jia-Rong Low

VP, Stakeholder Engagement &
Managing Director, ICANN APAC



The background is a vibrant blue-toned digital landscape. On the left, a portion of a globe is visible, showing continents and oceans. The foreground and middle ground are filled with a grid of binary code (0s and 1s) that recedes into the distance. On the right side, there are glowing, curved lines and streams of light, suggesting data flow or digital connectivity. A bright light source is visible in the upper right, creating a lens flare effect.

How can we maintain the integrity of
technology in the global context?

What are implications for the health sector?



What is Internet?

- The technology that enables my device to connect to your device
- 3 'things' are required to do so:
 - Protocols
 - IP Addresses
 - Domain Names
- **Unique Identifiers**

Model of
volunteer-based
global
cooperation:

Multistakeholder Internet Governance



Domain Names -
ICANN



IP addresses –
Regional Internet Registries



Protocol Parameters –
Internet Engineering Task Force
(IETF)

A close-up photograph of a person's hands gently cradling a small, colorful globe of the Earth. The globe shows continents in green and yellow and oceans in blue. The background is a soft, out-of-focus brown. Overlaid on the center of the globe is the text 'Global Issues', 'Data Privacy', and 'Cybersecurity' in white, sans-serif font.

Global Issues

Data Privacy

Cybersecurity

Implications



TECH-RELATED GOVERNANCE ISSUES
BECOME ISSUES FOR HEALTH SECTOR
AND VICE VERSA



WHAT WILL THE FUTURE BE LIKE?
MULTISTAKEHOLDER MODEL AS A
REFERENCE POINT

Thank you

jiarong.low@icann.org



Generative AI, health, and global AI policy

Prof. Gary Marcus

Emeritus Professor of Psychology and Neural Science, New York
University, United States of America

Governance of digital
technology for health and the
use of evidence:
A perspective from AI

ChatGPT

The question "**How should digital health tech be governed or regulated for global health?**" touches on a complex and multi-faceted issue that intersects technology, healthcare, and policy. Here are some key points that can be considered in the governance and regulation of digital health technology for global health:

- 1. Privacy and Security:** Given the sensitive nature of health data, strong privacy protections and security protocols need to be in place to prevent unauthorized access and breaches.
- 2. Standardization:** To facilitate interoperability between different systems and devices, there should be standardized formats and protocols for health data.
- 3. Evidence-based Approaches:** Digital health solutions should be validated through rigorous testing to ensure they are safe and effective before being widely implemented.
- 4. Accessibility and Equity:** Regulation should ensure that digital health technologies are accessible to all populations, including marginalized and under-resourced communities.
- 5. Ethical Considerations:** The development and deployment of digital health technologies must adhere to ethical standards, including informed consent and the avoidance of biases.
- 6. International Collaboration:** As health challenges often cross borders, international cooperation is essential for setting global standards and sharing best practices.
- 7. Adaptability:** Regulations should be adaptable to keep pace with the rapid evolution of technology, ensuring that they remain relevant and effective.
- 8. Transparency:** Companies and organizations involved in digital health should operate with a high degree of transparency, especially concerning data handling and algorithm functionality.
- 9. Patient-Centered Approach:** Regulations should prioritize patient outcomes and experiences, ensuring that technologies add value to patient care.
- 10. Accountability:** There should be clear lines of accountability for the performance and outcomes of digital health technologies.

The governance and regulation of digital health tech are dynamic and require ongoing dialogue among stakeholders, including policymakers, healthcare providers, patients, technologists, and researchers, to ensure that the digital transformation of healthcare benefits all and safeguards against risks.

How evidence based are (my) responses?

My responses are based on a large dataset of diverse and comprehensive information sources, including textbooks, academic papers, websites, and other educational materials. This dataset was current up to my last training cut-off in April 2023. However, it's important to note a few key aspects:

- 1. Scope of Knowledge:** While my training includes a wide range of topics, I am more informed in some areas than others. In fields like healthcare, economics, and technology, where I have been trained on a substantial amount of specialized content, my responses tend to be more informed and evidence-based.
- 2. Accuracy and Reliability:** I strive for accuracy, but I can sometimes provide information that is outdated, incomplete, or in need of further context. For the most current or specialized inquiries, especially in fast-evolving fields like healthcare and technology, consulting the latest research or a subject matter expert is advisable.
- 3. No Personal Experience or Opinions:** Unlike human experts, I don't have personal experiences or opinions. My responses are generated based on patterns in the data I was trained on, aiming for objectivity and neutrality.
- 4. Ethical and Policy Considerations:** In areas involving ethics, policy, or subjective judgment, my responses are based on a synthesis of various perspectives present in my training data, rather than any form of personal moral reasoning.

Discussants

Ms. Cecilia Oh, Programme
Advisor at the HIV, Health and
Development Group of the
United Nations Development
Programme (UNDP), Thailand

Dr. Basant Garg

Indian Administrative Service
(IAS), Additional CEO, National
Health Authority (NHA), Ministry
of Health and Family Welfare,
India

The background features a network of black dots connected by thin grey lines, forming a grid-like pattern. Overlaid on this are several large, overlapping speech bubbles in various colors: red, green, blue, orange, yellow, purple, and brown. At the bottom, there are four black silhouettes of people's heads and shoulders, facing each other as if in conversation.

Panel discussion



Let's hear from you



Summary

