Digital health supporting health systems transformation in the WHO European Region

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About myself

- Born in Sydney, Australia.
- Employed at the WHO Regional Office for Europe, Copenhagen, Denmark.
- 22 years of experience in working for the United Nations.
- Responsible for leading the initiative for Digitalization of Health Systems in the WHO European Region.
- Experience in working with countries to develop their national digital health strategies and engagement plans and guiding implementation of national level digital infrastructure development and integration of health information.
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WHO actions for developing digital health in countries are anchored in the UN Sustainable Development goals and Universal Health Coverage

The implementation of digital health must ensure no-one is left behind through ethical and morally responsible policies, good governance frameworks, accessible and affordable solutions and digital public goods for all.

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Geography of the WHO European Region

53
Member States

900
million population

How does digital health contribute to the achievement of universal health coverage?

- Extending the scope, transparency and accessibility of health services and health information
- Widening the population base capable of accessing the available health services (including reaching marginalized and underserved populations)
- Improving public health surveillance
- Facilitating training of the health workforce
- Offering innovation and creating efficiency gains in the operation of health systems and the provision of health care

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World Health Assembly Resolution on Digital Health WHA71.7 May, 2018

- Passed unanimously by Member States globally in the 71st session of the WHA
- Frames the development of Digital Health within the agenda for Health System Strengthening and "as a means of promoting equitable, affordable and universal access to health for all"
- Provides high-level guidance on future priorities and activities of WHO and its partners in the digital health domain

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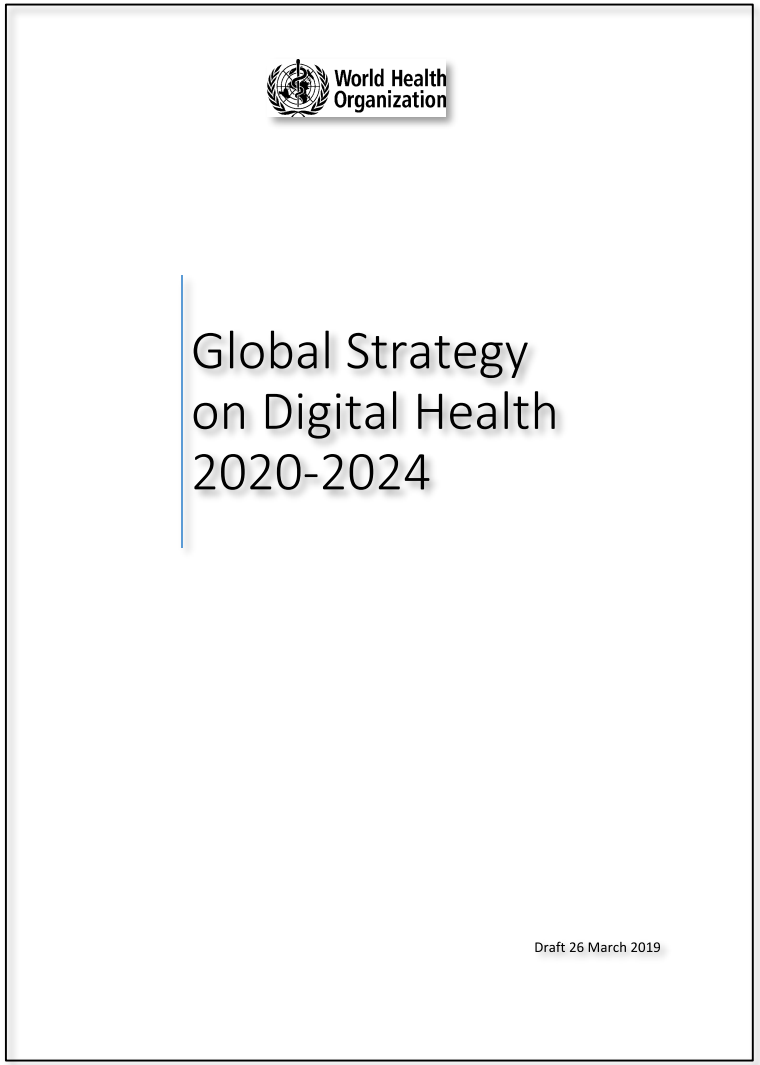
WHO Global Strategy on Digital Health

- Development of global strategy on digital health, mandated by WHA Resolution 71.7 (2018)
- Draft produced and both public and Member State consultations were conducted (MS consultation closed 19 September)
- Document consists of both **Strategy** and **Action Plan** (AP to be periodically updated to reflect advancements in technology)
- Final version of strategy to be presented to the World Health Assembly for adoption in 2020.



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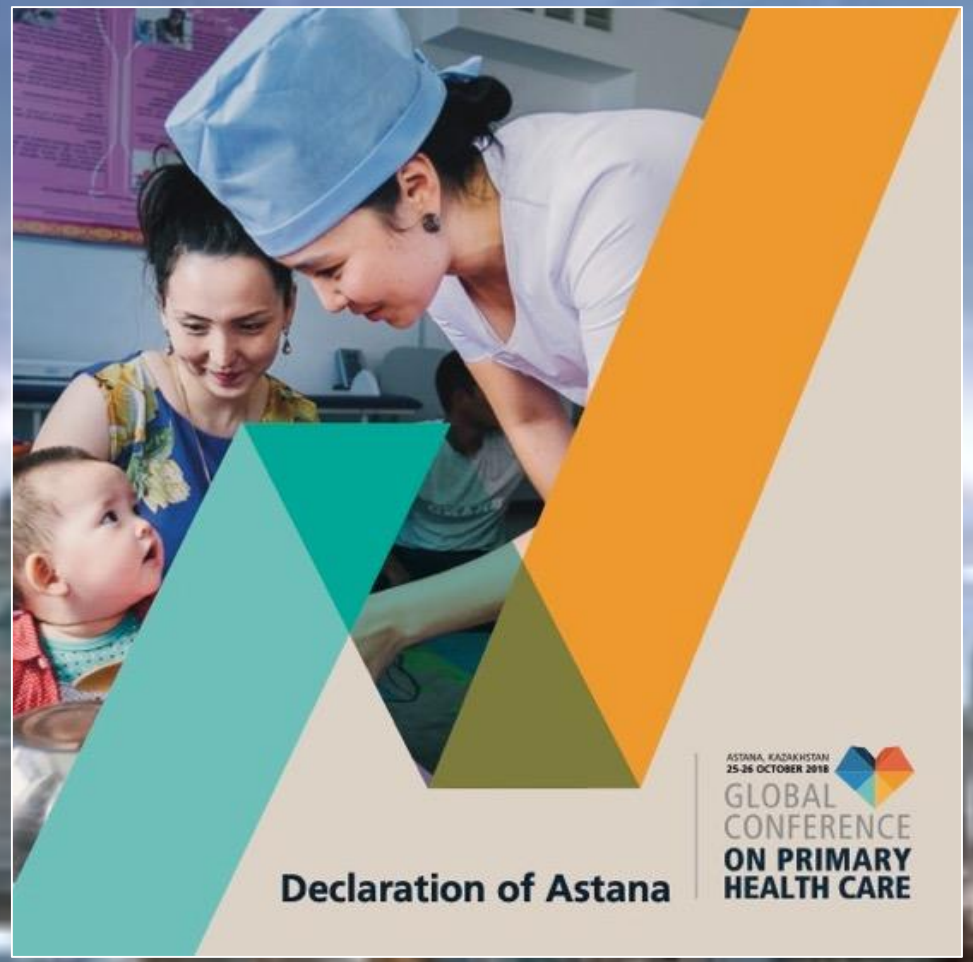

Technology. We support broadening and extending access to a range of health care services through the use of high-quality, safe, effective and affordable medicines, including, as appropriate, traditional medicines, vaccines, diagnostics and other technologies. We will promote their accessibility and their rational and safe use and the protection of personal data. Through advances in information systems, we will be better able to collect appropriately disaggregated, high-quality data and to improve information continuity, disease surveillance, transparency, accountability and monitoring of health system performance. We will use a variety of technologies to improve access to health care, enrich health service delivery, improve the quality of service and patient safety, and increase the efficiency and coordination of care. Through digital and other technologies, we will enable individuals and communities to identify their health needs, participate in the planning and delivery of services and play an active role in maintaining their own health and well-being.

WHO has a key role in strengthening regional and global governance for digital health and health systems

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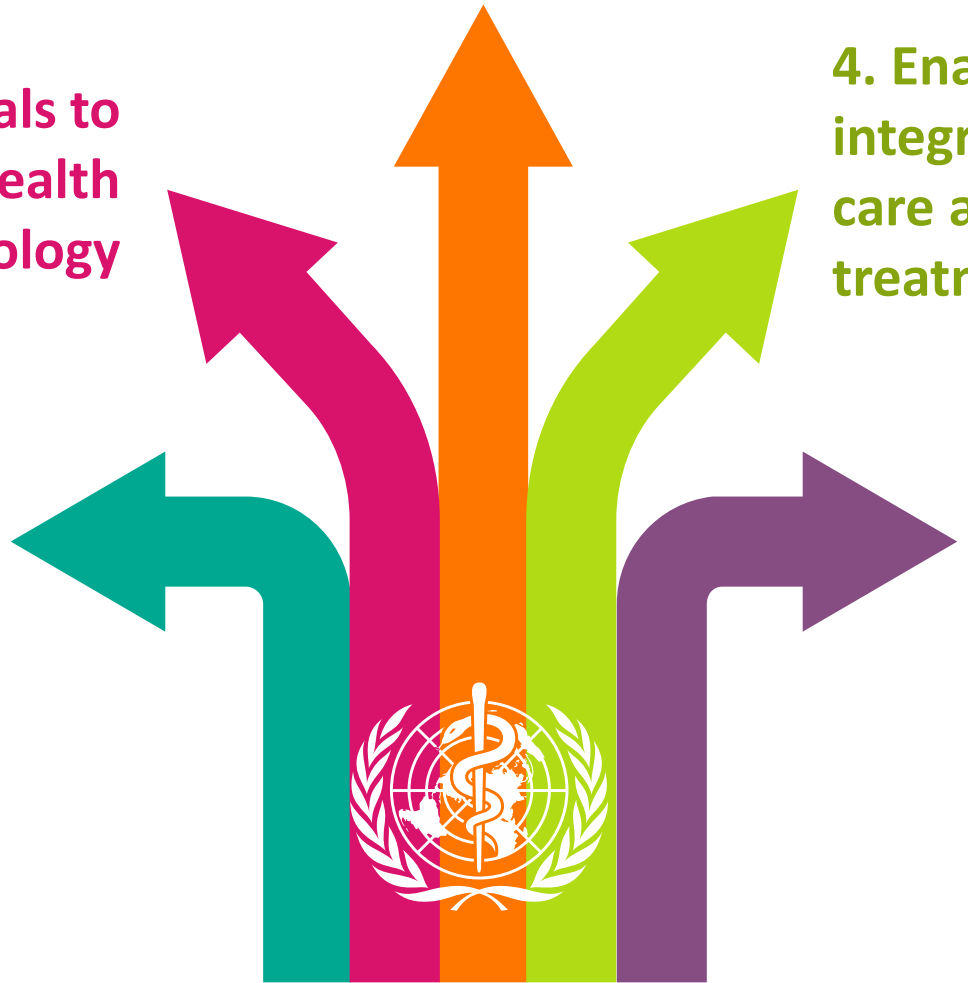
The WHO/Europe Digitalization of Health Systems Initiative

Supporting countries in their digital health systems transformation

3. Improving the operational efficiency and responsiveness of the health system

2. Empowering individuals to better manage their own health and well-being through technology

4. Enabling the transition to integrated, person-centred models of care and facilitating the move from treatment to prevention



1. Designing the future of health service delivery and access

5. Technology and innovation facilitating achievement of key public health initiatives

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WHO guideline on digital health interventions for health system strengthening

- WHO/HQ released the first WHO guideline on digital health interventions on April 17 this year.
- Provides 10 ways that countries can use digital health via mobile devices to improve people's health and essential services.
- Demonstrates that health systems need to respond to the increased visibility and availability of health information.

http://bit.ly/WHO-Guideline-Digital-Health-Interventions

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WHO-ITU Focus Group on AI4Health

Developing standardized assessment of AI for health solutions

1. Identify standardization opportunities for a **benchmarking framework.**

2. Create a technical framework and standardization approach of AI for **health algorithm assessment & validation**.

3. Develop open benchmarks, targeted to become international standards, and serve as guidance for the assessment of new AI for health algorithms.

https://www.itu.int/go/fgai4h

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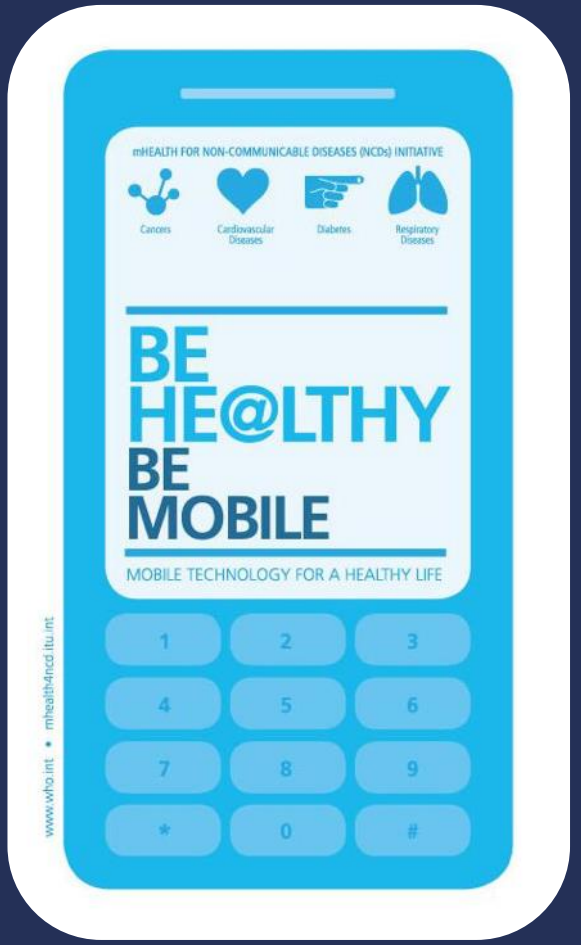
WHO-ITU-EC mHealth Knowledge and Innovation Hub

- Project between WHO and ITU under Horizon 2020 funding to establish a mHealth Knowledge and Innovation Hub for Europe.
- Will serve as a mechanism to share success in mHealth across the European region and boost uptake of mHealth solutions amongst national governments.
- The *Andalusian Agency for Healthcare Quality (ACSA)* has been selected as the hub host, backed by a consortium of 19 public and private partners across Europe.



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WHO Symposium on the future of digital health systems in the European Region

6-8 February 2019

3 key messages from the Symposium

1. Digitalization is challenging our understanding of how and where healthcare can be delivered, and is driving a transition to predictive and preventative models of care.

2. Digitalization of health systems is not simply a notion of "continuing what we're doing now, faster and more efficiently" but is:
   - putting the individual at the centre of their own health and well-being;
   - addressing how the rights and consent of the individual can be respected and acted upon;
   - harnessing the value of data for health.

3. Digital health is **centrally important to achieving universal health** coverage with more efficient and effective modes of providing quality and equitable access to health for all.

WHO Symposium on the future of digital health systems in the European Region
6-8 February 2019

Symposium Reports

- Print Report (English)
https://apps.who.int/iris/bitstream/handle/10665/329032/9789289059992-eng.pdf

- Print Report (Russian)
Coming soon!

- Interactive Report
https://issuu.com/whoeurope/docs/whoisdigital

Reflections from the Symposium on building a digitally capable health workforce

- Common hurdles voiced by countries include ensuring that the workforce is ready to embrace change. In this context, fear of job losses in the health sector is largely unfounded – although digitalization may eliminate the need for certain specializations and change the nature of others.

- Collaboration and co-production between individuals and health workers can be facilitated by using health informatics but requires building high levels of digital health literacy in both groups.

- More focus is required on clinical health informatics in professional education programmes at both the pre- and postgraduate levels.

- Professional education programmes for health-care workers should embrace the potential of digital tools to enable the involvement and engagement of patients. These programmes should be developed in collaboration with professional organizations.

- The potential of digital tools to offer new strategies, both for learning and for new ways of delivering care, needs to be explored.

- eHealth tools should be introduced in the context of other clinical problem-solving skills.

Digital health: Country challenges and concerns

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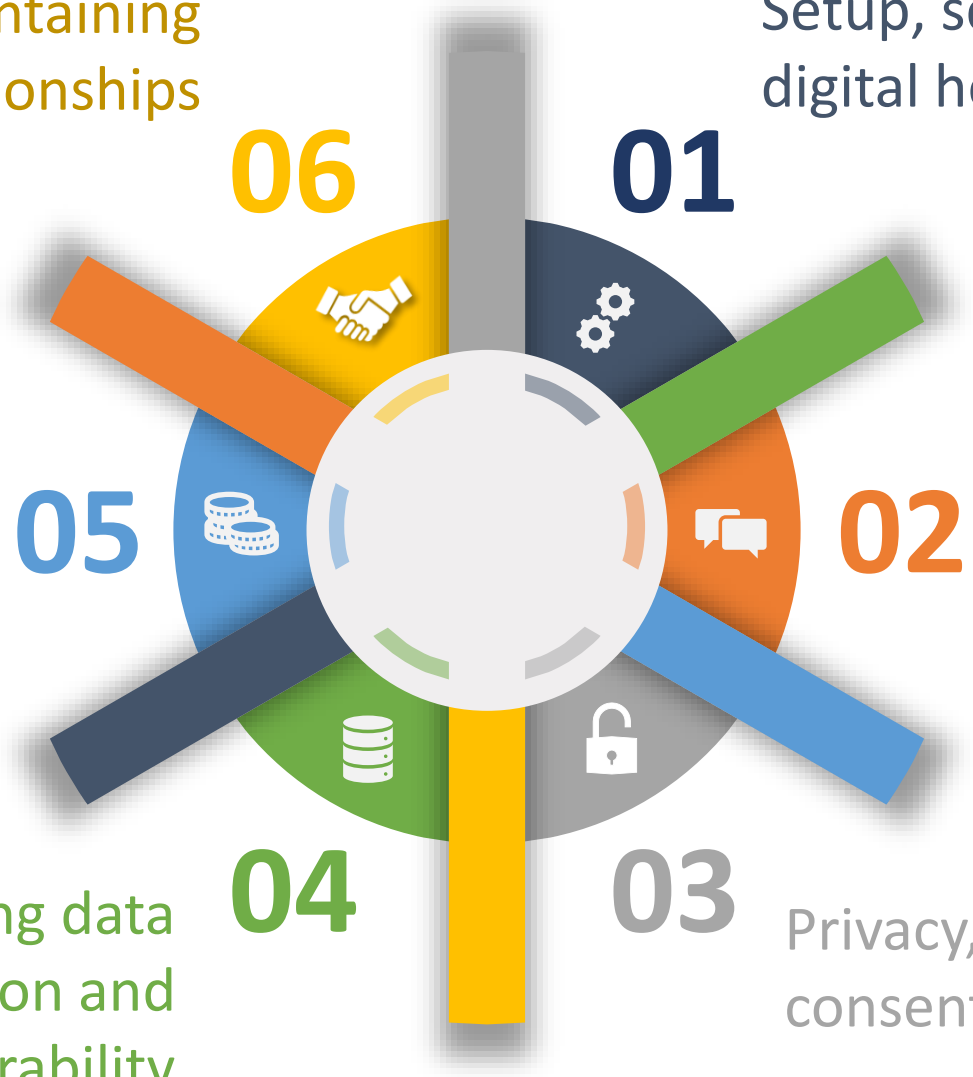
Key digital health challenges in Europe

06 Establishing & maintaining trust relationships

01 Setup, scale-up & governance of digital health services

05 Sustainable financing & competing with other health system expenditures



02 Communication & Health workforce engagement & training

04 Tackling data fragmentation and interoperability

03 Privacy, security & consent

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Health decision-maker concerns about digital health

- Do investments in digital health reflect their comparative value to health and health systems?
- Will adopting digital health create an unwanted digital divide?
- How can resistance to innovation and technology-based change in health be addressed? How can digital literacy and training of the health workforce be accelerated?
- How can an acceptable balance in access vs. protection of health data for different uses be reached? And the role of the private sector?
- How can healthcare professionals concerns be reduced when there is no recognized certification mechanism for many digital health solutions?

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Country progress in digital health adoption

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What are European countries doing in digital health?

01

Digitalizing health information

Digitalizing and integrating clinical systems and disease registers and making health information interoperable and accessible to healthcare professionals and citizens (EMR/EHR and national data portals).

02

Implementing a portfolio of national digital health services

Implementing national ePrescription systems (and supply chain management of pharmaceuticals) together with other key national digital health services (eVaccination, eAppointmentBooking, ePathology, PACS etc.)

03

Scaling up mHealth & Telehealth applications

Scaling up mHealth and Telehealth applications (mostly for vertical, disease-specific interventions).

04

Developing health data analytics capacity

(Slowly) developing methods for basic data analytics for decision making in policy and for health systems efficiency.

05

Addressing privacy & security

Implementing mechanisms of data protection & consent, finding an acceptable balance between data privacy and sharing, (EU Countries) (still) assessing and implementing the GDPR.

What are European countries doing in digital health? (advanced)

01

Establishing biobanks and personalized medicine

Establishing biobanks and experimenting with personalized medicine

02

Establishing national big data initiatives

Thematic Big Data initiatives and national data lakes

03

Implementing blockchain-based solutions

Implementing Blockchain-based smart contracts for consent and EHR operation

04

Experimenting with clinical applications of AI in health

Oncology diagnostics (e.g. Machine Learning based tissue classification and feature evaluation/Understanding differential oncogenic wiring across cancers), Image recognition for automated skin anomaly analysis etc.

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The future of digital health is bright
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Future digital health trends

- Develop more concrete approaches to enhancing the digital capabilities of the healthcare workforce, coupled with a difficult dialogue on changing roles and responsibilities. Need for a new digital health competencies-based approach.
- Continued incorporation of population-based data analytics back into primary healthcare settings for risk factor identification in individuals.
- New focus on combatting clinician burnout through initiatives for streamlining and integration of digital solutions in health systems.
- Addressing an increased appetite/demand for citizen access to their own health data together with concrete action for increased *digital health literacy.*
- Further acceleration of AI in health with an increased focus on data issues and development of an AI Commons platform for health.

https://ehealthresearch.no/whoisdigital2020

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