Data and digital health in the WHO European Region in 2023

A year in review

We are on the cusp of a digital health revolution yet millions risk being left behind

Statement by Dr Hans Henri P. Kluge
WHO Regional Director for Europe

Leveraging data and digital health in the WHO European Region for better health

For the Division of Country Health Policies and Systems at the WHO Regional Office for Europe, 2023 was a significant year, with numerous activities, missions, workshops, briefings and technical guidance to assist the Member States of the WHO European Region. The Data and Digital Health team of the Division of Country Health Policies and Systems worked to make all these initiatives focus on enabling the improvement of people's health through digital transformation and better data for better health.

Our new **digital health flagship report** *(1)* emphasized the crucial role of data and digital health in making health care more efficient and accessible. Featuring new evidence on the current state of data and digital health in all 53 WHO European Region Member States, the report highlighted policy options and barriers to their successful implementation across the European Region.

This document summarizes the WHO Regional Office for Europe's activities and achievements in data and digital health in 2023.

By numbers

In 2023, the Data and Digital Health team completed:

190 activities

37 webinars, trainings, and workshops

61 briefings and communication materials

36 documents on tools and technical guidance for Member States

5 country profiles and stock take presentations

Furthermore, the team completed country missions in the form of:

36 missions

16 technical missions and 16 functional assessments

6 partner engagement activities

With regards to tools and technical guidance the team were also behind:

36 activities related to tools and technical guidance

23 tools related to WHO guidance, policy briefs and reports

6 activities linked to knowledge management

1 external publication

Other events, meetings and webinars included:

70 events with 1244 participants

33 technical meetings

21 trainings and workshops

16 webinars on technical topics

10 high-level events in the European Region

46 bilateral meetings

The flagship report on digital health

In September, the WHO Regional Office for Europe presented its new flagship report: *Digital Health in the WHO European Region: the ongoing journey to commitment and transformation (1),* reviewing the state of digital health in all 53 WHO European Region Member States.

The report noted that the digital transformation of health care across the Region is advancing and has been further accelerated by the COVID-19 pandemic. However, the troubling gaps identified in the report could widen unless they are explicitly addressed.

Notably, only 19 countries in the WHO European Region have developed guidance on how to evaluate digital health interventions, which is vital to their safety and quality. Just over half the countries in the Region have developed policies for digital health literacy and implemented a digital inclusion plan.

Many countries still lack a dedicated entity responsible for oversight of mobile health applications for quality, safety and reliability, with just 15% of countries reporting evaluations of government-sponsored mobile health programmes. Slightly more than half of the countries have developed a data strategy regulating the use of Big Data and advanced analytics in the health sector.

The European Region can – and should – be a digital health leader because we are starting from a strong position.

Dr Hans Henri P. Kluge
WHO Regional Director for Europe

On the report, Dr Hans Henri P. Kluge, WHO Regional Director for Europe stated at the **dedicated press briefing** *(2)* that "The European Region can – and should – be a digital health leader because we are starting from a strong position". He further highlighted that "Our report shows that the vast majority of countries in the European Region already have a digital health strategy, use some form of electronic health records, and have legislation safeguarding the privacy of personal data."

But, he also acknowledged that millions of people are at risk of being left behind, adding that "Access to digital heath tools is only useful if you know how to use them", urging for investment in digital health literacy.

The Regional Director outlined four key recommendations to advance a sustainable digital transformation of health systems in the European Region:

Trust	Infastructure
Building trust in digital health is fundamental to its adoption. Digital health will only be successful at tackling inequalities if the users believe their data is safe and secure.	Ensure that reliable, low-cost broadband is available in every household and every community.

Investment	Collaboration
Governments and health authorities must start viewing digital health as a strategic long-term investment, not a luxury for the few.	More international collaboration and knowledge-sharing.

Dr Natasha Azzopardi-Muscat, Director for Country Health Policies and Systems at the Regional Office for Europe, brought readers' attention to the issue of gender inequality, stating that "We need to make sure people can trust digital health tools, and that everyone, everywhere, can access them equally" and that "This requires a particular focus on women and girls who are, in many societies, often excluded from accessing the latest advances in technology. Closing the digital skills gender gap is critical to leveraging the potential health benefits such technologies can bring to women and girls."

We need to make sure people can trust digital health tools, and that everyone, everywhere, can access them equally.

Natasha Azzopardi-Muscat
Director for Country Health Policies and Systems
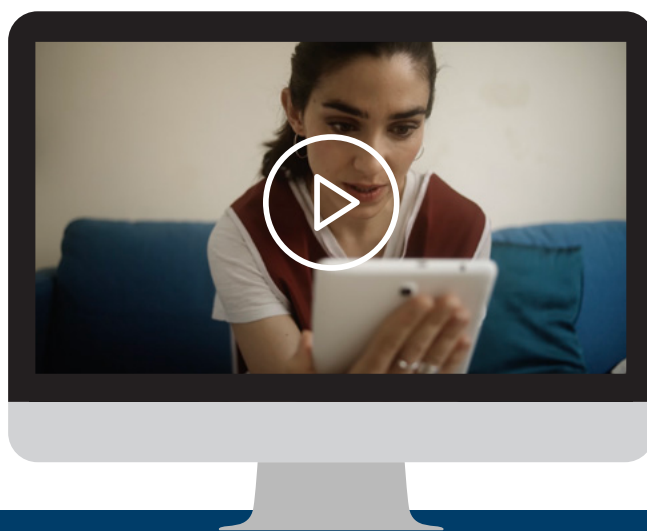at the WHO Regional Office for Europe

Second WHO symposium on the future of health systems in a digital era in the WHO European Region

Our flagship report was launched during one of the most important events in the WHO European Region in 2023 – the **Second WHO symposium on the future of health systems in a digital era in the WHO European Region** *(3).* Co-hosted with the Portuguese Ministry of Health and the National Health Service in Porto, Portugal on 5–7 September, it attracted more than 1000 participants, including 571 in-person attendees.

The symposium included a Ministerial panel, 3 technical panels, 15 technical sessions, 1 fireside chat, and a Ministerial lunch. The Portuguese Shared Health Services of the Ministry of Health and Health Cluster Portugal provided an exhibit for the event.

A powerful short film *(4)* premiered at the symposium expressed the WHO Regional Office's vision where accessible, safe and reliable digital tools can transform health care for generations to come.

"We are on the cusp of a digital health revolution," said Dr Kluge as he opened the event.

In further **remarks** *(2),* the Regional Director emphasized that our collective efforts must ensure that new technology for health leaves no one behind – a sentiment echoed throughout the symposium.

Dr David Novillo Ortiz, Unit Head and Regional Adviser for Data and Digital Health at the Regional Office for Europe described the symposium as a "much-needed meeting point for key stakeholders." And **stated** that "Digital health is bigger than the sum of its parts. However, it is the synergy of these parts that will secure an equitable and safe future for health systems in the digital era" *(5).*

New findings on data and digital health: tools and technical guidance

Throughout 2023, the Regional Office for Europe has engaged in scientific research to explore the impact of data and digital technologies on various sectors of health care and beyond.

A study conducted by the Data and Digital Health team in 2023 found that **digital tools positively impact health workers' performance** *(6)* and that **digital health literacy is key to overcoming barriers for health workers** *(7)*.

Another study *(8)* found that that knowledge-management tools can help identify health problems, inform health planning and resource allocation, increase the use of evidence by policy-makers, and stimulate discussion. It mapped existing knowledge-management tools and mechanisms and identified gaps.

The released **guidance on intersectoral monitoring for health** *(9)* reiterated that policies and factors outside of the health sector influence population health. This is why effective intersectoral action is essential to tackle health challenges. The guidance summarized different forms of intersectoral monitoring.

A **further study** indicated that artificial intelligence (AI) has potential in mental health services and research *(10)*. At the same time, significant flaws have been found, including how AI applications process statistics, infrequent data validation and little evaluation of the risk of bias.

A scientific paper entitled *Digital Health Information Systems in the Member States of the Commonwealth of Independent States: Status and Prospects (11)* examined the status of the development of national digital health information systems in Commonwealth of Independent States countries, showing the progress achieved so far.

The WHO Regional office for Europe contributed to a study that examined **digital health reimbursement** *(12)* strategies in nine countries. It found that reimbursing health-care providers for the use of digital health tools can be key to accessing new technologies.

Leaving no one behind

In a special **editorial for the International Journal of Medical Informatics** *(13),* three senior WHO Regional Office for Europe officials outlined the dangers of leaving disadvantaged populations behind.

Dr Hans Henri P. Kluge, Dr Natasha Azzopardi-Muscat and Dr David Novillo Ortiz wrote about the barriers in digital health and recommended five actions:

Effective governance
Establish effective governance of digital health, promoting national and international intersectoral cooperation, with a focus on achieving health objectives.

Robust guidance
Develop robust guidelines to evaluate interventions and increase digital health literacy to accelerate implementation and promote empowerment.

Sustainable financing and collaboration
Promote sustainable financing and collaboration, including through public and private partnerships to enhance innovation and guarantee continuity.

Enhance health data
Continue enhancing data exchange and sharing and standardization of health data to leverage its full potential.

Patients at the centre
Promote a patient-centred, inclusive approach to digital health, so that countries can effectively integrate digital solutions in their health and care systems, making them accessible to everyone.

The Regional Committee and Data and Digital Health

At the 73rd session of the WHO Regional Committee for Europe in October 2023, the 53 Member States of the European Region discussed the importance of data and digital health in the **European Programme of Work 2020–2025 – "United Action for Better Health in Europe"** *(14),* which sets priorities including an important flagship initiative called Empowerment through Digital Health.

As the Regional Director noted in his welcome **address** *(15),* digital solutions, including AI, should be safe and ethical, and in practical terms, digital solutions need to be the modulator of transformation.

You have to give the people more influence and power over their health and care, be it by making appointments themselves, by having access to their own medical file, or by having governments that recognize that health and care workers are the beating heart of the health system.

Dr Hans Henri P. Kluge
WHO Regional Director for Europe

The European Health Information Gateway and Core Health Indicators

The **European Health Information Gateway** *(16)* is a powerful tool to access a wealth of health data, information and resources for all 53 WHO European Region Member States, and it is continuously being updated. In 2023 the Gateway was renewed with fresh databases on mortality, health for all and the health and care workforce. It has indicators that cover basic demographics, health status, health determinants and risk factors, as well as health-care resources, expenditures and more.

In addition, the WHO Regional Office for Europe reports annually on Core Health Indicators, providing key insights into the health profiles of countries and their advancements toward important health goals. **The 2023 edition** *(17)* evaluated the European Programme of Work at its midpoint.

The Core Health Indicators and the Gateway illustrate how timely and credible data continue to be the foundation for informed decision-making in public health. Good data empowers governments, health-care providers, and organizations to respond effectively to challenges, improve services and health outcomes, reduce costs and make evidence-informed plans and forecasts. Good data helps countries address health issues proactively and efficiently.

Strengthening Data and Information Systems

Countries need to strengthen their health data and information systems and ensure that data flows smoothly – from collection to use – without obstacles.

In their article for the Journal of the American Medical Informatics Association *(18)*, senior WHO and Regional Office officials identified four actions that WHO and Member States can take to strengthen the quality and availability of health data, namely to:

National coordination
Establish a national data coordination mechanism to facilitate data comparison and secondary use of data

Enhance monitoring
Enhance the monitoring of the public health environment and resources needed to tackle public health threats

Exchange data
Exchange relevant data that will inform public health and socioeconomic decision-makers

Data-driven culture
Promote a data-driven culture to allow citizens to access, use and manage health data

In December, during the **Tallin Charter 2023 Conference of the WHO Regional Office for Europe** *(19)*, WHO/Europe celebrated the 15th anniversary of the Tallin Charter – a high-level document aimed at improving health and wealth through strengthened health systems in the European Region. Countries are making huge strides in improving health care – recognizing the key role of quality data in driving this progress. During the event, Dr Novillo Ortiz presented the Regional Office's approach to leveraging digital data sources, such as social media and online platforms to enable a more precise analysis and better understanding of complex issues surrounding Europe's health systems.

This year we also launched the Knowledge Communities initiative. This project – more commonly known as communities of practice – are standardized virtual self-contained environments focused on solving one complex problem whose potential solutions can only be found through collective experience and experiential knowledge.

Support to countries

In 2023 the Regional Office for Europe supported countries in the Region in multiple areas related to data and digital health. Activities included high-level meetings with health authorities, lectures, the development of specialized solutions, assessments, direct technical assistance and support and more.

Experts in data and digital health from the Regional Office for Europe provided direct support to **29 countries** in the Region in activities related to data governance, health information systems, cybersecurity, Big Data, Geographic Information Systems, telemedicine, e-prescriptions, among others.

Support was provided in:

Albania	Iceland	Slovakia
Armenia	Italy	Slovenia
Austria	Kazakhstan	Spain
Belarus	Kyrgyzstan	Sweden
Belgium	Montenegro	Switzerland
Bosnia and Herzegovina	Poland	Turkiye
Cyprus	Portugal	Ukraine
Czechia	Republic of Moldova	United Kingdom
Georgia	Romania	Uzbekistan
Greece	Serbia	

The importance of training and events

The WHO Regional Office's Data and Digital Health team, in collaboration with Universitat Politècnica de València organized a five-day **Impact Training for Big Data in Health care**. The training empowered health information and policy specialists to address critical aspects for the successful implementation and maintenance of a Big Data infrastructure and related tools in health care. Nominated participants arrived from Georgia, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan.

A series of webinars on **Decoding Data and Digital Health** helped advance knowledge in this area. In 2023 the webinars addressed monitoring the implementation of digital health, advancing equity, inclusivity in health care through the use of telehealth, and demystifying digital health innovations and future technologies.

The Regional Office held a session on the role of digital transformation in contributing to health and well-being during the **Istanbul Partners Forum** in June. It focused on the challenges and opportunities in health systems, with a deep dive into the opportunities presented by the digitalization of health care.

In July, WHO organized a Member States briefing on the **Global Digital Health Certification Network** *(20),* a mechanism to support verification of health documents and certifications.

The Regional Office is working through many regional and global health networks. These play an important role in catalyzing collaboration, coordinating various actors and building expert knowledge on different areas of health care. One such network is **the Central Asian Republics Information Network (CARINFONET)** *(21),* which consists of five central Asian countries and a platform for improving health information systems.

The fifth meeting of the CARINFONET Steering Group took place in September in the scope of the Second WHO Symposium on the Future of Health Systems in a Digital Era *(3).* The participants took stock of the progress in their countries, discussed achievements, and adopted an updated work plan.

On 7 September 2023, the Mental Health Flagship team brought together experts from several European countries and international mental health and psychiatric organizations. They worked to develop the basis for a roadmap for Member States in establishing a safe and effective integration of emerging digital technologies in mental health services.

The Data and Digital Health team organized with the Healthcare Information and Management Systems Society two workshops about the Senior Health Leaders Orientation Programme for Digital Health. The workshops addressed the impact of the COVID-19 pandemic on digital transformation, key challenges faced by health, and the **Regional Digital Health Action Plan for the WHO European Region** *(22)* as a strategic roadmap to sustainable and equitable health systems.

Agreements and partnerships

This year, the WHO Regional Office for Europe organized the **First Regional Digital Health Partnership Forum**, held in Portugal on 7 September, with the participation of the United State's Centers for Disease control and Prevention (CDC) Eastern Europe and Central Asia Regional Office, the European Centre for Disease Prevention and Control, the European Commission, the International Organization for Migration, the Organisation for Economic Co-operation and Development, the United Nations Development Programme, the United Nations Children's Fund, and the United States Agency for International Development. During this event, partners presented their work on digital health in the European Region, networked, and discussed options for continuing to align agendas to strengthen cooperation to deliver digital health in the European Region.

Earlier this year, the WHO Regional Office for Europe issued an open call for applications to join the new **Strategic Partners' Initiative for Data and Digital Health** *(23)*. The network of selected international experts and government officials will work together to identify actions to improve the uptake of safe and equitable digital health.

Furthermore, the Regional Office embarked on an **ambitious new partnership with the European Commission** *(24)* to strengthen health information systems and boost health data governance and interoperability in the WHO European Region. The 4-year project, funded by the European Commission, will support health-care services for the nearly 1 billion people living across the 53 countries in the Region.

In addition, the **WHO Regional Office for Europe received a grant from the United State's CDC** to strengthen country capacities in data, analytics and health information systems to inform policy and deliver impacts *(25)*.

Regional mandates on data digital health in the WHO European Region

The work on data conducted during this year followed the **measurement framework for the European Programme of Work, 2020–2025** to measure progress in the European Region and to strengthen data and health information systems *(26).*

Furthermore, much of the work around digital health in 2023 was guided by the **WHO Global Digital Health Strategy** *(27)* and the landmark **Regional digital health action plan for the WHO European Region 2023–2030** *(22),* which details the strategic actions needed to promote digital health systems to improve health at scale in the Region.

The plan identifies four strategic priorities:

Setting norms and developing technical guidance

Enhancing country capacities to better govern digital transformation in the health sector and advance digital health literacy

Building networks and promoting dialogue and knowledge exchange

Conducting horizon-scanning and landscape analysis for patient-centred solutions that can be scaled up

Developed in consultation with the 53 countries of the Region and with partners, the plan notes that wider adoption of digital tools for health has real potential to help governments and people in the Region as they continue to work towards meeting existing health challenges, including those brought about by the pandemic.

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