Background

Digital technologies are transforming lives and businesses in all sectors across the world. Health sector is no exception. Health services at the population and individual levels have witnessed extraordinary improvements hailing new approaches to achieving universal health coverage (UHC) in the years to come. WHO has been catalyzing Member States progress in digital health by providing technical support, facilitation, and guidance to promote healthy lives and wellbeing for everyone, everywhere, at all ages.

The COVID-19 pandemic exerted enormous pressure on countries’ health system urging countries to develop and roll-out multiple digital solutions to mitigate the impact of the pandemic on service delivery and health systems performance. The SE Asia Regional Strategy for Primary Health Care 2022–2030 stresses the urgency to leverage the potential of digital technology to improve access to quality of equitable PHC. Leveraging India’s presidency of the G20 and the prolific actions and commitments of previous presidencies, the WHO SE Asia Regional office and the Government of India joined efforts to give new impetus to global collaborations and actions in the implementation of digital health technologies and innovations. Together, they hosted the Global Conference on Digital Health to shift the focus from strategy to achieving a global consensus on a Plan of Action that produces impactful results on the ground, through a set of digital health initiatives aimed at accelerate progress towards UHC.

Day 1: The inaugural session

The inaugural session included a welcome address from Mr. Lav Agarwal (Additional Secretary, Minister of Heath, and Family Welfare (MOHFW), Government of India) describing the potential of digital innovations to improve health outcomes, and the need to bridge the existing digital divide amongst nations through the promotion of curated digital health solutions as global public goods and standards-based scalable solutions. Director, Digital Health, and Innovation (DHI), WHO HQ, Professor Alain Labrique presented his opening remarks where he encouraged using the conference proceedings as a platform for action to plan and to strategize the digital transformation of the health sector. He highlighted the need to shift from siloed digital solutions to an ecosystem driven by government towards a person-centered health system. Health Secretary, MOHFW, Government of India, Mr. Rajesh Bhushan articulated the core objective of the conference “Taking UHC to the last citizen”. He shared key action points to accelerate the digital health transformation journey: i) countries must develop and adopt a dynamic digital health strategy; ii) countries must benefit by being part of a digital health network to bring synergy to national efforts; iii) digital health interventions and solutions must be interoperable; and iv) the unequivocal need for adequate financial resources to ensure a sustainable digital health transformation. Regional Director, WHO South-East Asia Region, Dr Poonam Khetrapal Singh, provided an insightful address highlighting how digital health and innovations can improve quality, accessibility, affordability and substantiality of person-centric health system and fast tracks countries progress towards UHC. She also stressed on importance of a shared culture of measurement and accountability to identify and address gaps in resources and to account for and prepare for the emerging challenges, especially in the wake of the post-pandemic years. In an inspiring keynote address, Dr Mansukh Mandaviya, Hon’ble Union Minister of Health and Family Welfare; and Minister of Chemicals and Fertilizers emphasized the importance of strong policies against a coherent framework to promote digital solutions while creating a digital ecosystem to enable the development of digital solutions for better health services. He underscored the importance of digital health as a key enabler to achieving UHC and urged all stakeholders to work together. Mr. Manoj Jhalani (Director, UHC/Health Systems, WHO (SEARO)) provided his vote of thank to all key dignitaries and participants. He wished everyone successful two days deliberation on moving from potential of digital transformation to impact on the ground. The conference hosted 144 participants in-person and online, with delegates from 21 countries and more than 20 development partners and international technical experts.

Conference objectives

Bringing together public health leaders, development partners, policy makers, academia, and other key stakeholders to:

- Accelerate the implementation of connected digital health initiatives and interventions as a cornerstone of building PHC-oriented and resilient health systems.
- Unlock the potential of delivering and sharing digital health solutions in an ethical, safe, secure, reliable, equitable and sustainable way.
- Invest, develop, and share digital technologies following principles of transparency, accessibility, scalability, replicability, interoperability, privacy, security, and confidentiality.
- Establish strategic and technology enablers required for implementing digital health at population scale.
Day 1: Digital Health as an imperative and strategic enabler for UHC

Moderated by Dr Ahmed Mandil (Coordinator, Research & Innovation WHO Regional Office for the Eastern Mediterranean (EMRO)) session 1 on “Digital Health- an imperative for UHC” included two keynote speakers, Mr. Lav Agrawal (MOHW, Government of India) and Dr Kidong Park (Director, Data, Strategy, and Innovation, WHO Regional Office for the Western Pacific Region (WPRO)). They highlighted the criticality of digital technologies to strengthen PHC-centric solutions. Mr. Agarwal emphasized the need to converge global efforts on digital health through “Global initiative on Digital Health”. The Global Initiative on Digital Health has been proposed by the Government of India under India’s G20 presidency to miniimize the digital divide by promoting digital solutions and innovation to accelerate UHC. Dr Park highlighted WHO’s mandate and strategic plan to support Member States use innovative and cutting-edge digital solutions to enable progress towards WHO triple billion targets, UHC and the health-SDGs. This was followed by invited interventions from Bhutan (by Dr Dasho Pemba Wangchuk, Hon’ble Secretary MOH), the Netherlands (by Dr Marcel Floor, Counsellor for Health, Welfare and Sport, Embassy of The Netherlands, New Delhi, India) and Singapore (by Mr James Chia, Director, Health Informatics and Technology Policy and Governance, MOH) who shared their digital transformation journey, and common views in the adoption of digital health innovation to improve accessibility and quality of service delivery. Equally recognized was the unique situations and needs of individual countries, yet the high value to sharing lessons learned, successes and failures of digital interventions with one another. From OECD, Dr Francesca Colombo (Head OECD Health Division Employment) demonstrated how digital transformation relies on policy reforms and strong strategy, governance and capacity that can set the process and pace for countries to leap forward through an integrated health strategy. From BMGF, Dr Santhosh Mathew (Country Lead, Public Policy, and Finance, BMGF) and the WBG, Dr Ajay Tandon (Lead Economist, WBG) argued for the unlimited potential of digital health in strengthening health systems and stressed UHC is a goal where everyone should have access to quality care without suffering financial risks.

Session 2 on “Digital health @ population scale – Strategic enablers” was moderated by Dr Nima Asgari-Jirhandeh (Asia Pacific Observatory on Health Systems and Policies (APO)) and hosted two keynote speakers. Dr Kiran Gopal Vaska (ABDM, National Health Authority, India) highlighted three main strategic enablers for digital health: i) a clear vision, mission, and purpose, ii) a conducive regulatory framework, and iii) an active and targeted ecosystem engagement. He emphasized that an integrated strategy, architecture blueprint and implementation roadmap are imperative for a strong digital health ecosystem that is efficient and sustainable. He also gave an overview of the Ayushman Bharat Digital mission and emphasized the importance of public consensus and use cases to create value and interest among the population to accept digital solutions. Dr Garrett Mehl (Unit Head, Digital Public Health, Technologies, WHO, DHI) deconstructed the digital transformation by examining key milestones in the roadmap for digital transformation using guidance and tools developed by WHO. He stressed that digital health is more than implementing a software application, rather the need for it to fit within the larger digital health ecosystem which involves various factors such as policies, governance mechanism, strategies, institutionalization, architecture, and roadmap. He highlighted key milestones for digital transformation: i) digital health strategy; ii) national inventory of digital assets; iii) investment roadmap; iv) enterprise architecture; v) application with interventions; and vi) capacity of the health workforce. Finally, he emphasized the importance of countries undertaking a digital maturity assessment as a planning approach to design their digital transformation journey. Invited interventions were provided from Malaysia (by MS Datuk Dr Norhayati Rusli, Deputy DG of Health (Public Health), MOH), Oman (by Mr Wissam Mohammed Abudraz, Director of E-Health) and the Russian Federation (by Mr Oleg Sonin, Deputy Head, Department of International Affairs and Public Relations, MOH) who highlighted the use of digital health tools and platforms to manage the pandemic response and beyond. Digital health partners representing CONVERGE DH (Dr Surakameth Mahasirimongkol, Strategy and Planning Division, Ministry of Public Health, Thailand), AeHIN (Mr Jai Ganesh Udayasankaran, Executive Director) and USAID (Ms Kachina Chawla, Acting Health Office Director, India), reflected on their area of work and activities in the development of governance mechanisms, advancing strategies, data privacy, standards to strengthen digital health implementation in countries to build health systems resilience for UHC and global health security.

Session 3 on “Digital health @ population scale – Technology enablers” was moderated by Dr Garrett Mehl (WHO, DHI). The first keynote speaker, Mr. Satyanarayana Jeedigunta (Sr Digital Health Consultant, WHO SEARO), delved into the principles and importance of national digital health enterprise architecture. He highlighted two key principles of digital health enterprise architecture: domain principles and technology principles which must be well-deliberated and customized to country-needs. The second keynote speaker, Prof Vajira Dissanayake (Sri Lanka Medical Council) demonstrated how Sri Lanka digital health activities are well aligned with the national health information policy and strategic framework and health sector master plan. He further highlighted the use of WHO-ITU digital health building blocks to strengthen digital health governance and progress in Sri Lanka. Country intervention from Australia (by Mr Steve Miller, Director of Health Systems Policy and Rights team of the International Strategy Branch at the Australian Department of Health) and Nepal (by Dr Dipendra Raman Singh, DG Department of Health Services, Nepal) discussed harnessing digital health solutions to strengthen health systems and ensure equitable access to health services. However, challenges such as data security and digital literacy needs to be addressed to ensure sustainable adoption of digital health. During the partner organization intervention, Mr Mark Landry (The Global Fund) gave an overview of the organization’s digital framework and initiative on institutionalizing country health information system strengthening. Mr Graeme Grieve (HL7) explained HL7 FHIR standards for data exchange. He elaborated the main purpose of FHIR in enabling secure and exchange of healthcare information, and ensuring patients receive best possible health care services. Day 1 concluded with a field visit by the conference participants to the National Public Health Observatory in the MOHFW, Government of India.
Day 2: The high-level plenary session

Day 2 began with the high-level plenary session moderated by Dr Pem Namgyal (Director of Programme Management, WHO SEARO) and a keynote address from Dr Mansukh Mandaviya (Hon’ble Union Minister of Health and Family Welfare, Government of India) presenting a snapshot of India’s diverse digital health achievement such as India’s integrated health information platform (IHIP) for diseases surveillance, e-sanjeevani (the largest free online teleconsultation platform) and CoWIN (covid-19 vaccination platform). His excellency elaborated on the digital health aspects of Ayushman Bharat Digital Health Mission (ABDHM) and the use of unique patient IDs to facilitate the continuum of care across all levels of care as well as the development of health provider and health facility registries. He further emphasized on need to converge efforts “to build a culture of interoperability” in developing digital health solutions not only at the national level but also at a global scale, and the pressing need to supplement global investments rather than duplicate efforts. Mr. Joe Bejang (Hon’ble Minister of Health and Human Services, Republic of Marshall Islands) provided his insightful remarks on leveraging digital health innovations such as telemedicine which have reduced the impending need for medical evacuations and the necessities to hiring in-country specialists. His excellency gave prominent examples of how telehealth consultations between medical doctors and health assistants via radio call are conducted for emergency management of neonatal and obstetrics in rural areas. He also highlighted that despite various challenges in implementing digital health such as lack of infrastructure, nascent regulatory frameworks, policies, and standards, there remains strong commitment to leverage digital health to provide quality care in remote area, and that digital transformation is inevitable to reach UHC to last citizen. Dr Poonam Khetrapal Singh, Regional Director WHO SEARO, reflected on how digital solutions and tools have been used to advance progress in the Region’s 8 flagship areas envisioned as early as 2014. She recalled that WHO SEARO released the regional strategy for strengthening e-health and in 2020, WHO launched the global strategy on digital health unifying WHO efforts to support countries in strengthening their health systems through the effective implementation of digital health technologies. She highlighted those innovations such as Digital Implementation Digital Investment Guide (DIIG), WHO Clearing house and digital health atlas have been developed to support countries achieve an evidence-based digital health transformation. She further stressed WHO commitments: i) to reduce siloed approaches to digital solution; ii) to strengthen the digital health workforce, to enhance digital literacy and competency-based capacities; iii) to facilitate global collaboration and mechanisms that can help countries develop their digital strategy roadmaps and action plans; and iv) to align WHO norms and standards for countries to reap maximum benefits in their digital health transformation agenda.

The keynote address was followed by country reflections: from Denmark by Ms Nina Bergstedt (Senior Adviser, Ministry of the Interior and Health) who highlighted the importance of sustainable innovation to make health systems efficient, and that innovation must be centered around clinical needs with focus on private and public partnership. She also highlighted the high potential of digital sandbox as solutions for innovation when there is strict data policy regulation. From Oman, Mr Bader Awladthani (DG of Information technology, MOH) stressed the importance of digital solutions should start from the patients viewpoint and acceptance. He also emphasized the critical role of WHO in supporting countries to accelerate the adoption of digital health while simultaneously building country capacity as well as sharing best practices and experiences among countries. From Mozambique, Mrs Bernardina De Sousa, (National Deputy Director for Professional Health Training, MOH) reflected on the need for strong digital health policy, regulatory frameworks along with infrastructure to enhance the use of teleconsultation in every country. She emphasized the need to enhance health worker capacity and build digital literacy for effective teleconsultation. From USA, Dr Preetha Rajaraman (Health Attaché and Regional representative for South Asia), reiterated the need for key enablers for advanced digital solutions such as telehealth to reach its full potential and benefit. She provided an overview of the different agencies within department of Human and Health services, USA who implement key enablers of digital health such as policy framework, evidence and evaluation of safe quality, data privacy and security, interoperability while engaging health care providers and consumer to ensure true value to end users. From the European Union, Dr Benoit Sauveroche (First Counsellor, Health and food Safety, Delegation of the European Union to India) highlighted important elements of enhancing trust in digital solutions and person centric interventions. He outlined three main pathways to enhance trust in digital solutions: i) to promote and communicate benefits of digital health; (ii) to address in a transparent way the identified risks; and iii) finally, to develop tools that implement a human-centric approach.

Dr Pem Namgyal (DPM WHO SEARO) closed the high-level plenary session by thanking all the high-level dignitaries and country delegates for their insightful reflections and commentaries reiterating a common stance that “digital technology is good, and innovation is necessary but most importantly people should be placed at the center”.

---

**Day 2: The high-level plenary session**

Day 2 began with the high-level plenary session moderated by Dr Pem Namgyal (Director of Programme Management, WHO SEARO) and a keynote address from Dr Mansukh Mandaviya (Hon’ble Union Minister of Health and Family Welfare, Government of India) presenting a snapshot of India’s diverse digital health achievement such as India’s integrated health information platform (IHIP) for diseases surveillance, e-sanjeevani (the largest free online teleconsultation platform) and CoWIN (covid-19 vaccination platform). His excellency elaborated on the digital health aspects of Ayushman Bharat Digital Health Mission (ABDHM) and the use of unique patient IDs to facilitate the continuum of care across all levels of care as well as the development of health provider and health facility registries. He further emphasized on need to converge efforts “to build a culture of interoperability” in developing digital health solutions not only at the national level but also at a global scale, and the pressing need to supplement global investments rather than duplicate efforts. Mr. Joe Bejang (Hon’ble Minister of Health and Human Services, Republic of Marshall Islands) provided his insightful remarks on leveraging digital health innovations such as telemedicine which have reduced the impending need for medical evacuations and the necessities to hiring in-country specialists. His excellency gave prominent examples of how telehealth consultations between medical doctors and health assistants via radio call are conducted for emergency management of neonatal and obstetrics in rural areas. He also highlighted that despite various challenges in implementing digital health such as lack of infrastructure, nascent regulatory frameworks, policies, and standards, there remains strong commitment to leverage digital health to provide quality care in remote area, and that digital transformation is inevitable to reach UHC to last citizen. Dr Poonam Khetrapal Singh, Regional Director WHO SEARO, reflected on how digital solutions and tools have been used to advance progress in the Region’s 8 flagship areas envisioned as early as 2014. She recalled that WHO SEARO released the regional strategy for strengthening e-health and in 2020, WHO launched the global strategy on digital health unifying WHO efforts to support countries in strengthening their health systems through the effective implementation of digital health technologies. She highlighted those innovations such as Digital Implementation Digital Investment Guide (DIIG), WHO Clearing house and digital health atlas have been developed to support countries achieve an evidence-based digital health transformation. She further stressed WHO commitments: i) to reduce siloed approaches to digital solution; ii) to strengthen the digital health workforce, to enhance digital literacy and competency-based capacities; iii) to facilitate global collaboration and mechanisms that can help countries develop their digital strategy roadmaps and action plans; and iv) to align WHO norms and standards for countries to reap maximum benefits in their digital health transformation agenda.

The keynote address was followed by country reflections: from Denmark by Ms Nina Bergstedt (Senior Adviser, Ministry of the Interior and Health) who highlighted the importance of sustainable innovation to make health systems efficient, and that innovation must be centered around clinical needs with focus on private and public partnership. She also highlighted the high potential of digital sandbox as solutions for innovation when there is strict data policy regulation. From Oman, Mr Bader Awladthani (DG of Information technology, MOH) stressed the importance of digital solutions should start from the patients viewpoint and acceptance. He also emphasized the critical role of WHO in supporting countries to accelerate the adoption of digital health while simultaneously building country capacity as well as sharing best practices and experiences among countries. From Mozambique, Mrs Bernardina De Sousa, (National Deputy Director for Professional Health Training, MOH) reflected on the need for strong digital health policy, regulatory frameworks along with infrastructure to enhance the use of teleconsultation in every country. She emphasized the need to enhance health worker capacity and build digital literacy for effective teleconsultation. From USA, Dr Preetha Rajaraman (Health Attaché and Regional representative for South Asia), reiterated the need for key enablers for advanced digital solutions such as telehealth to reach its full potential and benefit. She provided an overview of the different agencies within department of Human and Health services, USA who implement key enablers of digital health such as policy framework, evidence and evaluation of safe quality, data privacy and security, interoperability while engaging health care providers and consumer to ensure true value to end users. From the European Union, Dr Benoit Sauveroche (First Counsellor, Health and food Safety, Delegation of the European Union to India) highlighted important elements of enhancing trust in digital solutions and person centric interventions. He outlined three main pathways to enhance trust in digital solutions: i) to promote and communicate benefits of digital health; (ii) to address in a transparent way the identified risks; and iii) finally, to develop tools that implement a human-centric approach.

Dr Pem Namgyal (DPM WHO SEARO) closed the high-level plenary session by thanking all the high-level dignitaries and country delegates for their insightful reflections and commentaries reiterating a common stance that “digital technology is good, and innovation is necessary but most importantly people should be placed at the center”.

---
Day 2: Innovation for UHC and co-creating global digital public good (DPGs) for UHC

Session 4 on “Innovations for UHC” was moderated by Mr Kiran Anandampillia (National Health Authority, India) and keynote addresses were delivered by Ms Ruchira Shukla (International Finance Corporation, IMF) and Ms Yasmin Dias Guichot (World Economic Forum, WEF). Ms. Shukla’s focused on: i) emerging markets in healthcare; ii) IFC healthcare experience; and iii) HealthTech priority segments and strategies. She highlighted that the demand for health care in emerging markets has grown and is driven by demographic shift to aging populations and the shift in the burden of diseases profile from communicable diseases to noncommunicable diseases. She added that the private sector and out of pocket payments are expected to continue to considerably contribute to health expenditure in many emerging markets. She argued that health technology and innovative business models are expected to leapfrog in emerging healthcare markets to deliver better health outcomes, and at significantly lower costs. Ms Guichot (WEF) provided insights of the WEF’s long-term initiative on digital transformation asserting that the use of technology will improve access to health care and progress towards UHC but needs to be closely tied to systemic changes involving people and processes. She showcased three major digital health initiatives focusing on improving access to healthcare: (i) the digital health action alliance; (ii) the healthcare digital transformation; and (iii) Edison alliance and C4IR India. Member States interventions was provided by the Maldives (by Ms. Aisath Samiya, Permanent secretary, MOH) who showcased digital innovations that leverage patient engagement and enhance access to health in Maldives. She presented three key success factors of digital innovations: i) when those are person-centered and benefit individual to enhance their health status; ii) when designed with focus on interoperability; and iii) when those ensure data security and data protection. Partner organization invited interventions were presented by Dr Shibui Vijayan (Qure.ai) and Ms Rigveda Kadam (FIND) focusing on the mission of their respective institutes and on different use cases of digital technologies such as AI to ensure reliable diagnostics in timely and seamless deployment in the most remote locations. These presentations also highlighted that scaling up innovative solutions from development to roll-out should ensure: i) end-user involvement; ii) alignment in product design and manufacturing process; iii) focus on demand generation, engagement of country decision makers and stakeholder, including civil society and community; and iii) adequate planning and resources for country adoption. There was also consensus on the need for: i) innovation and product development based on stakeholder feedback; ii) a robust regulatory and policy environment to generate evidence and build capacity; and iii) strong data governance and access to data to enable digital innovations and ensure a successful digital transformation.

Session 5 on “Co-creating global digital public goods (DPGs) for UHC” was moderated by Dr Nima Asgari-Jirhandeh (APO) and keynote addresses were delivered by Mr Herko Coomans (Global Digital Health Partnership (GDHP)) and Professor Alain Labrique (WHO DHI). Mr Coomans highlighted the role of global digital health partnership (GDHP) and what they can do to promote global DPGs for health. He explained how GDHP facilitate global collaboration and knowledge sharing in design and delivery of digital health services to support high-quality, sustainable health and care for all. He provided an overview of the international patient summary (IPS) which is a health record extract compromising of a standardized collection of clinical and contextual information that provides a snapshot of individual’s health information and healthcare and has the potential to serve as a global DPG. Professor Labrique (WHO, DHI) highlighted how DPGs can accelerate national digital health transformation. He introduced the WHO digital health Clearing house as a DPG offering curated digital health solutions. He also highlighted that DPGs can move beyond applications and include national digital strategies, standards and architectural blueprints which are the underlying foundations that accelerate digital transformation. Ministerial delegates invited interventions were presented from Bangladesh (by Dr Mohammad Sabbir Haider, Programme Manager, Directorate General of Health Services) and Thailand (by Dr Withita Jangiam, Deputy Director, Bureau of Digital Health, Office of the Permanent Secretary, Ministry of Public Health). The country interventions showcased countries digital health transformation journey and action plans to ensure UHC reaches last citizens. Partner organization invited intervention from Mr Sameer Kanwar (Digital Health India & South Asia Hub, Digital Square) who focused on four key aspects of the digital health transformation: i) digital health is an enabler and accelerator for health and UHC; ii) financing and prioritizing the digital transformation; iii) the need for multi-sectoral collaboration and partnership by leveraging existing collaboratives; and; iv) engagement with public and private health sector.

Closing remarks

The Conference closing remarks were delivered by Mr Manoj Jhalani (WHOSEARO) who provided a succinct summary of the Conference 5 main sessions. Mr Lav Agarwal (MOHFW, Government of India) provided the key takeaway messages and way forward: i) the Conference deliberations highlighted the unequivocal importance of digital health for UHC – by improving affordability, availability, and accessibility of health care services; ii) the critical role of leadership and governance in the adoption of digital solutions; iii) the important creation of digital enterprise architecture and interoperability; iv) the need for enabling policy to facilitate the implementation of digital solutions; v) the use of digital innovation such as artificial intelligence (AI) are potential game changers; and vi) collaborative co-creation of digital public good to accelerate progress towards UHC. Mr Lav Agarwal added that the Government of India through its G20 presidency will continue to advocate the agenda of digital health, and as a way forward continue to make impact in the field, and work towards taking UHC to the last citizen.
Closing remarks contd.

In his concluding remarks, Professor Alain Labrique (WHO DHI) acknowledged that every country around the world is in a different digital transformation journey and faces different challenges – in the attainment of basic reliable infrastructure, from strategic planning to architecture to developing solutions for local and global problems. He also highlighted the importance of global DPGs with shared standards to curtail fragmentation. He finally emphasized the need for collective efforts to ensure digital health solutions make health for all a reality. The Conference closed with final remarks from Hon’ble Union Minister of State, Ministry of Health and Family Welfare, Government of India, Dr Bharati Pravin Pawar, who highlighted that the timeliness and relevance of the Global Conference adds voice and attention that digital health and solutions are powerful enablers for UHC. She reiterated the commitment of the Government of India to promoting standardized digital solutions as global DPGs, and to supporting partnerships and collaboration for a global digital health transformation journey that takes UHC to the last citizen.