DAKSHIN
Development and Knowledge Sharing Initiative
GLOBAL SOUTH CENTRE OF EXCELLENCE

RIS
Research and Information System for Developing Countries
विकासशील देशों की अनुसंधान एवं सूचना प्रणाली

Workshop on Effective Delivery of Health Services through Digital Tools in Global South

6 May 2026

Report

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Published by

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Concept Note

In pursuit of addressing the complex challenges that the Global South faces in agriculture, the Development and Knowledge Sharing Initiative (DAKSHIN) is dedicated to promoting sustainable and resilient farming practices. Building on the success of its inaugural workshop on January 17, 2024, and a subsequent workshop on August 30, 2024, focusing on digital technologies in agriculture, this is the third workshop on agriculture organized by DAKSHIN. This event aims to foster cooperation and facilitate knowledge exchange among Global South countries to promote sustainable and equitable agricultural systems.

The Global South faces significant challenges in agricultural productivity, exacerbated by disruptions in global supply chains, escalating debt burdens, and food security crises intensified by the COVID-19 pandemic and geopolitical uncertainties. Agriculture in the tropics and sub-tropics in the countries of Global South struggles with poor natural resource management (NRM) practices, abiotic stress and the harsh realities of climate change, which threaten both productivity and ecosystem health. In response, sustainable agriculture offers long-term solutions by prioritizing the protection of natural resources, improving soil fertility, and promoting biodiversity. Agro-ecological approaches, which fuse ecological principles with traditional knowledge and modern agricultural practices, are particularly well-suited to the Global South. These approaches not only adapt to the Global South's unique environmental conditions but also enhance resilience to climate change and abiotic stress, supporting smallholder farmers by providing affordable, context-specific solutions. The workshop will emphasize agro-ecological principles, natural resource management, and holistic strategies that ensure agricultural sustainability. These approaches involve integrating biodiversity and ecological processes to maintain soil fertility, efficiently manage water and natural resources, implement precise agronomic practices, reduce greenhouse gas emissions, and enhance both the quality and quantity of yields.

Participants will explore ecosystem-based solutions that highlight the value of traditional knowledge and community engagement, while integrating modern agronomic and technological practices to build resilient, self-sustaining farming

systems. Insights gathered from extensive discussions with think tanks across the Global South reveal a shared commitment to sustainable and agro-ecological methods, which balance productivity with ecosystem preservation and climate resilience. Several organizations have expressed a strong interest in collaborating on these sustainable practices simultaneously leveraging technological solutions to more integrated and adaptive strategies.The workshop will delve into the intricacies of sustainable agro-ecological models, focusing on their capacity to sustain agriculture in diverse environmental and socio-economic contexts. Themes will include ecosystem-based approaches, the role of traditional knowledge, integration of agronomic and technological practices and strategies for enhancing soil health&biodiversity. The discussions will aim to engage stakeholders, think tanks, and agencies to co-create a comprehensive strategy that advances agro- ecological transitions across the Global South.

Objectives of the Workshop:

- Showcase innovative sustainable farming practices and best practices.
- Facilitate knowledge exchange and collaboration on agro-ecological approaches.
- Identify actionable policy recommendations for fostering just agricultural transitions.
- Promote natural resource conservation and ecosystem-based farming.
- Foster partnerships to implement climate-resilient and abiotic stress adaptive agricultural practices.
- Enhance environmental and social resilience through agro-ecological approaches.

Key Questions to Explore:

- How can traditional ecological knowledge be integrated into modern agricultural practices to address abiotic stress and enhance resilience?
- What strategies can enhance soil fertility, water management, and biodiversity while increasing productivity?
- How do agro-ecological transitions address the needs of smallholder farmers in diverse agro- climatic zones?
- What policy frameworks are essential for supporting sustainable agricultural practices, agro- ecological and just transitions in the agricultural sector?
- How can international cooperation and knowledge-sharing drive the adoption of sustainable farming systems in the Global South?

Agenda

Time (IST)	Details
10:30 am – 10:55 am	**Opening Session** **Welcome Remarks** • Professor Sachin Kumar Sharma, Director General, RIS • Professor Tuifuisa'a Dr Patila Malua Amosa, Vice Chancellor & President, National University of Samoa (NUS), Samoa **Setting the Context** • Dr Rajan Sudesh Ratna, Coordinator, DAKSHIN, RIS **Special Remarks** • Dr Pravakar Sahoo, Programme Director, Economics and Finance Division, NITI Aayog, Government of India • Ms Geetu Joshi, Economic Adviser, Department of Health & Family Welfare, Ministry of Health & Family Welfare (MoHFW), Government of India
10:55 am – 11:55 am	Discussion on effective delivery of health care services using digital tools – Experiences of Global South Moderator • Dr Monika Kochar, Advisor-Health, DAKSHIN, RIS **Lead Presentations** • Thailand - Dr Titipol Phakdeewanich, Director, Regional Center for Human Rights Study and Coordination, Faculty of Political Science, Ubon Ratchathani University • India - Dr Mona Duggal, Director, ICMR-National Institute for Research in Digital Health and Data Science (NIRDHDS), New Delhi **Panelists** • Ms Sharon Nisha Biribo, Lecturer, Umanad Prasad School of Medicine & Health Sciences, The University of Fiji, Fiji

	• Dr Animesh Sinha, HIV/TB/Hepatitis Advisor, Médecins Sans Frontières (MSF) • Mr Shafayet Chowdhury, Business Development Manager, Pulse Healthcare Services, Bangladesh • Dr Sanjay Pattanshetty, Professor and Director, NIMS Institute of Public Health and Governance, NIMS University Rajasthan, India **Interactive Discussion and Q&A Session**
11:55 am – 12:00 pm	**Closing Remarks** • Dr Monika Kochar, Advisor-Health, DAKSHIN, RIS

Outcomes

Introduction

The workshop on "Effective Delivery of Health Services through Digital Tools" brought together policymakers, public health experts, academicians, digital health practitioners, and development partners from across the Global South to discuss how digital technologies can strengthen healthcare delivery systems. The workshop created a platform for cross-country learning, knowledge sharing, and collaboration on digital health innovations.

The discussions highlighted that countries of the Global South, despite their diverse contexts, continue to face common challenges in healthcare delivery, including geographical barriers, workforce shortages, fragmented health systems, inadequate infrastructure, and inequitable access to quality healthcare services. At the same time, digital tools such as telemedicine, interoperable health records, mobile health applications, artificial intelligence, and digital public infrastructure are increasingly emerging as practical solutions to improve accessibility, continuity of care, efficiency, and resilience of health systems.

The workshop focused not only on technological innovation, but also on the importance of adapting digital solutions to local realities, strengthening governance frameworks, ensuring equity, improving interoperability, enhancing digital literacy, and building sustainable systems that can support long-term health outcomes.

Opening Session

"Today's workshop focuses on digital health, equity, accessibility, and cross-learning among Global South countries."

Dr. Monika Kochar

Advisor-Health, DAKSHIN- GSCE

Dr. Monika Kochar opened the workshop by welcoming distinguished speakers, panelists, and participants joining from across the Global South. She emphasized that the workshop aimed to promote dialogue on digital health, equity, accessibility, and cross-learning among countries.

She introduced the eminent speakers for the opening session and highlighted the importance of collaborative learning in strengthening healthcare systems through digital innovation.

Dr. Kochar emphasized the growing importance of digital health solutions in ensuring equitable healthcare delivery across the Global South. She highlighted the value of cross-country learning and South-South cooperation and framed the workshop around improving accessibility, continuity of care, and scalable healthcare solutions through digital innovation.

Professor Sachin Kumar Sharma

Director General, RIS

Professor Sharma welcomed participants and emphasized that countries across the Global South continue to face major healthcare challenges despite the implementation of various interventions over the years. Professor Sharma complemented DAKSHIN for organizing the workshop and highlighted that it is as an important platform for knowledge exchange, collaboration, and cross-learning among Global South countries, enabling nations to share best practices and collectively identify solutions to common healthcare challenges.

"DAKSHIN seeks to provide a platform through which best practices can be shared among countries."

He noted that access to healthcare services, particularly in remote and underserved areas, remains a persistent concern and highlighted the growing importance of digital technologies in bridging these gaps. Reflecting on India's response during the COVID-19 pandemic, he cited the CoWIN platform as a landmark example of scalable digital innovation, demonstrating how technology enabled the management and tracking of vaccination services for more than a billion people. He also underlined the broader role of digital tools such as telemedicine in improving healthcare access for vulnerable populations.

Professor Tuifuisa'a Dr Patila Malua Amosa

Professor, Vice Chancellor & President, National University of Samoa (NUS), Samoa

Professor Amosa welcomed participants on behalf of the National University of Samoa and highlighted the healthcare challenges faced by many small island developing states, including geographical isolation, workforce shortages, and infrastructure limitations.

She emphasized that digital tools provide pathways to resilience by helping bridge distances and improving access to inclusive and culturally responsive healthcare.

Professor Amosa discussed the unique healthcare challenges faced by small island developing states, including geographical isolation, workforce shortages, and infrastructure limitations. She emphasized that telehealth, mobile health solutions, and data-driven innovations can help bridge geographical barriers and create more resilient and inclusive health systems. She also highlighted the importance of collaborative platforms such as the workshop in enabling countries to exchange experiences and identify scalable digital health solutions.

Dr. Rajan Sudesh Ratna

Coordinator, DAKSHIN, RIS

Dr. Ratna contextualized the workshop within the broader framework of Sustainable Development Goal 3 on health and wellbeing. He noted that many Global South countries remain far behind SDG targets despite significant efforts. He emphasized that the COVID-19 pandemic demonstrated the power of health diplomacy and south-south cooperation which saw successful delivery of vaccine and medicines. He highlighted the importance of collaboration, capacity building, and knowledge exchange and also expressed that DAKSHIN will be continuing to work in this area.

Dr. Ratna highlighted that many Global South countries remain behind in achieving Sustainable Development Goal 3 despite significant efforts. Referring to examples such as Rwanda's drone-based medicine delivery system, he emphasized the transformative potential of digital technologies.

Dr. Ratna stressed that the workshop was not only intended to showcase digital technologies, but also to examine how such solutions could be adapted, scaled, and replicated across different contexts. He further underscored the importance of collaboration, technical cooperation, networking, and capacity building among countries to strengthen healthcare systems and improve equitable access to quality healthcare services across the Global South.

"The workshop will explore common challenges, identify successful practices, and assess whether those models could be replicated elsewhere."

Dr. Pravakar Sahoo

Programme Director, Economics and Finance Division, NITI Aayog, Government of India

Dr. Pravakar Sahoo delivered his remarks from a macroeconomic and development perspective, emphasizing that countries of the Global South possess a major demographic advantage that can only be fully realized through stronger investments in health, education, and skilling. He reappreciated the efforts of DAKSHIN for organizing the workshop at the right time. Referring to India's Vision 2047 aspirations, he noted that improving health outcomes is essential for harnessing the productive potential of large populations. He highlighted that many low- and middle-income countries continue to face shortages of healthcare infrastructure, financial resources, and trained healthcare personnel, while millions of people still lack timely access to basic healthcare services. In this context, he described digital tools as critical enablers for improving accessibility, affordability, and efficiency in healthcare delivery.

Dr. Sahoo explained that telemedicine and digital platforms can bridge geographical barriers by connecting specialists concentrated in urban centers with rural and remote populations. He also noted that increasing digital penetration, including among less educated populations, creates opportunities for healthcare delivery through mobile applications and local language interfaces. Drawing from experiences during the COVID-19 pandemic, he emphasized that digital systems significantly strengthened healthcare management, service delivery, and insurance administration. He further stated that digital health solutions can reduce costs for both governments and citizens while optimizing limited human and financial resources.

"Digital health systems make services more cost-effective while reducing the burden on governments facing shortages of human and financial resources."

At the same time, Dr. Sahoo cautioned that several structural challenges must be addressed for digital health systems to succeed sustainably. He emphasized the need to bridge the digital divide, strengthen digital literacy among citizens and frontline healthcare workers, and ensure robust cybersecurity and data protection frameworks because healthcare data is highly sensitive. He also highlighted the importance of strong digital public infrastructure, effective regulatory mechanisms, and meaningful public-private collaboration, particularly in countries where private providers play a dominant role in healthcare delivery. He concluded by stressing that digital transformation must remain inclusive and ensure that even the most remote and underserved communities are integrated into evolving healthcare systems.

Ms. Geetu Joshi

Economic Advisor, Ministry of Health and Family Welfare, Government of India

Ms. Joshi complemented DAKSHIN for organizing the workshop which she felt is timely and important. She presented India's experience in advancing digital health and emphasized that the country's rapidly expanding digital infrastructure and youthful population provide a strong foundation for accelerating progress toward the Sustainable Development Goals. Representing the Ministry of Health and Family Welfare, she described India's healthcare sector as undergoing a profound transformation driven by government initiatives, policy reforms, and technological innovation. She highlighted the operationalization of more than 183,000 Ayushman Arogya Mandirs, which are strengthening

"Digital solutions are crucial for bridging the urban-rural divide and meeting the growing demand for quality healthcare."

access to comprehensive primary healthcare services, particularly preventive and community-based care for vulnerable populations.

Ms. Joshi emphasized that digital technologies are playing a critical role in bridging urban-rural disparities and improving the accessibility, affordability, and efficiency of healthcare delivery. She noted that many countries of the Global South, particularly small island developing states and remote geographies, continue to face fragmented healthcare systems, shortages of specialized services, and gaps in continuity of care. In this context, she explained that India's digital health journey is anchored in the Ayushman Bharat Digital Mission (ABDM), which seeks to establish an integrated and interoperable digital health ecosystem through unique health identifiers, health facility registries, and healthcare professional registries. She highlighted that more than 880 million **Ayushman Bharat Health Account** (ABHA) accounts and hundreds of millions of interoperable health records had already been created, enabling individuals to securely store and share prescriptions, diagnostic reports, and medical histories across healthcare providers nationwide.

She also discussed several major digital health initiatives undertaken by India. These included the U-WIN platform for digitized immunization services and eSanjeevani, which she described as the world's largest government telemedicine platform, delivering millions of consultations and extending specialist care to underserved and rural regions. Ms. Joshi further highlighted the growing role of artificial intelligence in healthcare and referred to the recently launched Strategy for AI in Healthcare for India (SAHI), which provides a framework for the responsible adoption of AI technologies in the health sector. Alongside this, she mentioned the Benchmarking Open Data Platform for Health AI (BODH), which supports the testing and validation of AI solutions using real-world datasets before large-scale deployment.

Ms. Joshi underscored that India's approach places strong emphasis on data governance, privacy protection, cybersecurity, and ethical safeguards to ensure citizen-centric healthcare systems. She stressed

that digital technologies should complement broader health systems strengthening rather than function as isolated interventions. Concluding her remarks, she reaffirmed India's commitment to collaboration, knowledge exchange, and South-South cooperation to support equitable access to quality healthcare services across the Global South.

Technical Session and Lead Presentations

Dr. Titipol Phakdeewanich

Director, Regional Center for Human Rights Study and Coordination, Ubon Ratchathani University, Thailand

"Building good health before fixing your body reflects Thailand's growing focus on preventive healthcare and self-care."

Dr. Titipol Phakdeewanich shared Thailand's experience in using locally adapted digital solutions to improve healthcare access in underserved rural communities, particularly in the northeastern region of the country. He explained that although Thailand has achieved universal health coverage through the "30 Baht Healthcare Scheme," significant barriers to healthcare access still persist, especially for populations living in remote and economically disadvantaged areas. He noted that northeastern Thailand remains one of the country's poorest regions, with a large proportion of the population engaged in agriculture and an increasingly aging demographic, which creates additional challenges for healthcare delivery and access.

Dr. Phakdeewanich emphasized that digital technologies are being integrated into community-based healthcare systems to address these challenges more effectively. He highlighted Thailand's long-established network of village health volunteers, who serve as a crucial link between communities and healthcare facilities by supporting primary healthcare delivery and facilitating referrals for patients unable to travel independently. According to him, digital tools and telemedicine are now strengthening the effectiveness of these community health systems rather than replacing human healthcare workers.

He presented a case study of a local government initiative called "Welmpon Ponpie" or "Happy Life," a healthcare application developed on the Line platform, which is widely used across East and Southeast Asia. The application was designed to support healthcare communication, monitor primary symptoms, facilitate consultations between patients and doctors, and reduce

overcrowding in hospitals. Dr. Phakdeewanich explained that the system provides communities with twenty-four-hour access to healthcare guidance and emergency support, which is especially valuable for rural populations where hospital visits are difficult, time-consuming, and financially burdensome.

He also highlighted the role of local governments and village health volunteers in helping elderly populations and digitally inexperienced users learn how to use the platform effectively. Beyond consultations, the application includes educational content and preventive healthcare information, reflecting Thailand's increasing focus on promoting healthy lifestyles and preventive healthcare rather than only treating illness. Another important feature discussed was the integration of GPS-enabled emergency response services, allowing emergency teams to quickly identify and reach patients requiring urgent care.

Reflecting on broader regional collaboration, Dr. Phakdeewanich emphasized that technologies cannot simply be copied from one country to another without local adaptation. He praised India's progress in digital health and noted that workshops such as this provide valuable opportunities for countries of the Global South to exchange experiences, learn from one another, and collaboratively explore context-specific digital health solutions.

Dr. Mona Duggal

Director, ICMR-National Institute for Research in Digital Health and Data Science (NIRDHDS), New Delhi

Dr. Mona Duggal presented an extensive overview of India's digital health transformation, with a particular focus on digital public goods (DPGs), digital public infrastructure (DPI), and the role of interoperable health systems in strengthening healthcare delivery across the Global South. She explained that although India has a central Ministry of Health, healthcare implementation is largely managed at the state level, making coordination and interoperability critical for effective service delivery in a country of over 1.4 billion people.

Dr. Duggal highlighted that healthcare systems in many Global South countries remain fragmented, creating challenges related to continuity of care, referral linkages, and timely access to services. She noted that the epidemiological transition from infectious diseases to chronic and non-communicable diseases has further increased the

need for integrated healthcare systems capable of managing long-term patient care. Tracing India's public health digitization journey, she explained that early digital initiatives in the 2000s focused mainly on hospital management systems and disease surveillance reporting, while the period between 2010 and 2020 saw the emergence of multiple program-specific digital solutions operating largely in silos. According to her, the COVID-19 pandemic became a major turning point that accelerated digital transformation and underscored the necessity of integrated digital health ecosystems.

She described the CoWIN platform as a landmark digital public good that demonstrated how large-scale digital systems can efficiently support vaccination management and healthcare delivery during emergencies. Dr. Duggal stressed that digitization is no longer optional but has become "a necessity" for the survival and effectiveness of public health systems. She also highlighted India's Strategy for AI in Health and ongoing efforts to ensure that artificial intelligence tools used in healthcare are trustworthy, validated, and supported through robust governance mechanisms.

"Digitization is no longer an opportunity alone. It has become a necessity and a critical component for the survival and effectiveness of public health systems."

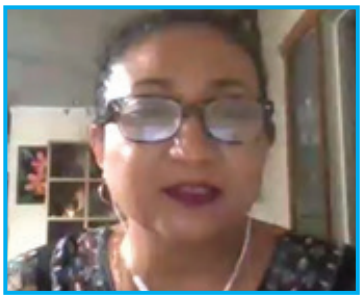
A major focus of her discussion was the distinction between digital public goods and digital public infrastructure. She explained that digital public goods include open-source software, open standards, open data, and open AI models that can be adapted to local contexts while supporting sustainable development goals. Digital public infrastructure, on the other hand, provides the foundational architecture that enables seamless data exchange and integrated service delivery at scale. She emphasized repeatedly that technologies developed in one country cannot simply be transplanted into another setting without adaptation to local infrastructure, governance frameworks, datasets, and healthcare realities.

Dr. Duggal also discussed several international repositories and collaborative initiatives, including the Global Digital Public Infrastructure Repository launched by India and G20 partners. She noted that these repositories include platforms such as CoWIN, Poshan Tracker, and various non-communicable disease management systems, enabling countries to access and adapt proven digital solutions. She stressed that international collaboration and responsible data sharing could help countries avoid duplicating efforts and accelerate innovation through shared learning and validated technologies.

Discussing the design principles for sustainable digital transformation, Dr. Duggal emphasized interoperability, scalability, inclusiveness, security, reliability, open standards, and user-friendly design. She then elaborated on the Ayushman Bharat Digital Mission (ABDM), describing it as India's effort to create a unified national digital health ecosystem connecting patients, healthcare providers, insurers, policymakers, and technology platforms through interoperable systems. She explained how ABHA health IDs, facility registries, healthcare professional registries, and unified healthcare interfaces are enabling seamless digital healthcare experiences across the country.

Dr. Duggal also highlighted examples from Indian states such as Kerala, where AI-enabled diabetic retinopathy screening and digital referral systems are already being integrated into district-level healthcare delivery. She discussed the eSanjeevani telemedicine platform, describing it as a scalable digital public good that has significantly improved healthcare access in rural and underserved areas while also expanding into tele-mental health services during the COVID-19 period. She noted that the platform has generated large volumes of real-world healthcare data that can support future innovation and evidence generation.

Finally, she elaborated on the work of the ICMR National Institute for Research in Digital Health and Data Science, which is focused on strengthening high-quality health data ecosystems and enabling responsible AI adoption in India. Through initiatives such as AI Kosh under the India AI Mission, validated datasets are being developed to test and evaluate AI tools before deployment in healthcare systems. She stressed that no AI system should be integrated into healthcare delivery without demonstrating effectiveness within the target population. Concluding her remarks, Dr. Duggal emphasized the importance of collaboration with organizations such as WHO-SEARO in developing evaluation frameworks, strengthening digital capacity, and advancing equitable healthcare delivery and universal health coverage across low- and middle-income countries.



Ms Sharon Nisha Biribo

Lecturer, Umanad Prasad School of Medicine & Health Sciences, The University of Fiji, Fiji

"Digital tools are not replacing the workforce. They are strengthening it, supporting it, and extending its reach to every island in the country."

Sharon Biribo shared Fiji's experience in leveraging digital health solutions to address the unique healthcare challenges faced by small island developing states. She explained that Fiji's geography, consisting of more than 300 islands separated by long sea journeys, unpredictable weather, and intermittent internet connectivity, makes continuity of care particularly difficult for remote and maritime communities. In response to these realities, Fiji's Digital Health Strategy 2023–2027 has prioritized the development of digital systems specifically designed for low-resource and low-connectivity settings.

Ms. Biribo highlighted the use of Tamanu, an electronic medical record system used across several Pacific countries, which functions fully offline and synchronizes patient data once connectivity becomes available. She explained that this system allows patient records to follow individuals across islands and healthcare facilities, significantly improving continuity of care. She also discussed Sova ni Bula, Fiji's national digital platform for non-communicable disease management, which supports offline functionality, simplifies clinical workflows, and uses GIS mapping to identify hotspots of conditions such as diabetes and hypertension. According to her, these tools are particularly important because non-communicable diseases account for the majority of deaths in Fiji.

She further described how Fiji has adapted telemedicine models to suit limited bandwidth environments by combining synchronous consultations with asynchronous "store-and-forward" approaches, where nurses upload patient information whenever connectivity becomes available for specialist review at referral hospitals. She noted that this model reduces unnecessary medical evacuations and supports timely clinical decision-making even in remote island settings. Mobile health applications are also being used for maternal health, disease screening, outbreak reporting, and chronic disease

follow-up, ensuring that healthcare services continue even during cyclones or prolonged outages.

Addressing workforce shortages, Ms. Biribo explained that many remote clinics in Fiji are staffed by only a single nurse while specialists remain concentrated in urban centers. She emphasized that digital tools therefore function not only as service delivery mechanisms but also as workforce multipliers. Telemedicine, digital literacy programs, clinical decision-support systems, and digitized WHO PEN protocols help frontline nurses manage chronic diseases safely and confidently while ensuring standardized care aligned with national guidelines. She also highlighted the importance of training healthcare workers and medical students in the use of digital tools and telemedicine platforms so that digital health becomes integrated into routine healthcare practice.

Ms. Biribo concluded by emphasizing that Fiji's approach is not simply about increasing workforce numbers but about strengthening and extending the reach of the existing workforce through technology, data-driven planning, and digitally enabled collaboration.

Dr. Animesh Sinha

HIV, TB and Hepatitis Advisor, Médecins Sans Frontières (MSF)

"Digital health systems must be inclusive by design and not exclusive. It is often the most vulnerable who are left behind in the advance for digitization."

Dr. Animesh Sinha shared experiences from humanitarian and resource-constrained settings, drawing on tuberculosis programmes implemented by Médecins Sans Frontières (MSF) across Central Asia, South Asia, and Southeast Asia. He began by emphasizing that countries of the Global South continue to bear nearly 90 percent of the global burden of tuberculosis mortality and morbidity, making innovation in digital health particularly critical in these settings. Through examples from Tajikistan, Uzbekistan, India, and the Philippines, he demonstrated how digital tools can improve disease detection, treatment adherence, continuity of care, and targeted public health interventions.

Discussing the Zero TB Project in Tajikistan, Dr. Sinha explained how AI-assisted portable X-ray systems combined with GIS mapping enabled real-time identification of tuberculosis transmission hotspots, allowing health teams to move from generalized outreach approaches toward more targeted and data-driven interventions. In Uzbekistan, he described the implementation of video observed therapy (VDOT) for drug-resistant tuberculosis patients, where

nurses remotely supervised treatment adherence using smartphones and digital platforms. According to him, the initiative reduced patient travel burdens, minimized stigma, and eased pressure on healthcare workers while maintaining continuity of care.

Drawing from MSF's long-standing tuberculosis programme in Mumbai, Dr. Sinha highlighted how digital tools such as teleconsultations and medication delivery tracking systems became essential during the COVID-19 lockdowns in sustaining treatment continuity for thousands of patients with drug-resistant tuberculosis. He also discussed experiences from the Philippines, where mobile X-ray units integrated with AI-based computer-aided detection systems were used to screen more than 20,000 individuals, revealing tuberculosis prevalence rates significantly higher than national averages. Importantly, he noted that many detected cases were asymptomatic and would likely have remained undiagnosed through conventional symptom-based approaches.

Reflecting on operational lessons, Dr. Sinha emphasized that digital technologies alone cannot strengthen healthcare systems unless they are supported by trust, community engagement, reliable supply chains, and inclusive service delivery models. He stressed that sustainability requires long-term planning for training, maintenance, licensing, and system transition rather than focusing only on initial procurement. He also highlighted interoperability as a governance issue, noting that fragmented and siloed systems reduce efficiency and scalability. Another major concern he raised was equity, emphasizing that digital interventions must always include non-digital alternatives to avoid excluding vulnerable populations without stable connectivity or digital access.

Dr. Sinha further highlighted the importance of South-South learning and collaboration, noting that innovations developed in one region often have immediate relevance for other low-resource settings. He suggested that platforms such as DAKSHIN can play a valuable role by facilitating practitioner-led exchanges, documenting implementation failures as learning opportunities, promoting sovereign and open-source digital public goods, and convening stakeholders for greater accountability and collaboration in digital health.

Mr. Shafayet Chowdhury

Pulse Healthcare Services, Business Development Manager, Bangladesh

Mr. Shafayet Chowdhury presented the perspective of a private digital healthcare provider from Bangladesh and discussed how telehealth and digital platforms can improve healthcare accessibility and affordability for low-income and underserved populations. Speaking from the experience of Pulse Healthcare Services, a healthcare startup established in 2019, he explained that the organization was developed in response to the fragmented healthcare ecosystem and high population density in Bangladesh, where millions of people continue to face barriers in accessing timely healthcare services. He noted that the COVID-19 pandemic significantly increased the relevance and demand for digital healthcare solutions across the country.

"We came up with a very simple solution because accessibility and affordability have to go together if digital healthcare is to reach marginalized populations."

Mr. Chowdhury explained that the organization adopted a simple and inclusive "omni-channel" digital healthcare model to ensure that services remain accessible even for populations with limited digital literacy or internet connectivity. In addition to mobile and web applications, the platform provides healthcare access through hotline services, direct phone consultations, and social media platforms such as Facebook Messenger, allowing individuals to connect with doctors using whichever communication channel is most accessible to them. He emphasized that doctors also proactively contact patients when needed, ensuring continuity of care and reducing barriers to consultation.

Addressing affordability, Mr. Chowdhury highlighted that healthcare packages on the platform begin at approximately 50 Bangladeshi Taka per month, making digital healthcare services accessible to economically vulnerable populations. He stated that the organization developed its service model gradually over time, learning from implementation challenges and continuously adapting its approach to local realities. According to him, ensuring both affordability and accessibility has been central to expanding healthcare access for people living in remote and marginalized communities.

He also discussed the importance of partnerships and ecosystem integration in strengthening continuity of care. Pulse Healthcare Services collaborates with government hospitals, private clinics, and major healthcare institutions across Bangladesh to facilitate referrals and coordinated care pathways. Patients consulting

through the digital platform can be referred to nearby healthcare facilities based on proximity and healthcare needs, ensuring that teleconsultation services remain linked to physical healthcare systems. Mr. Chowdhury noted that some government hospitals also utilize the company's telemedicine infrastructure, reflecting increasing public-private collaboration in Bangladesh's evolving digital healthcare ecosystem.

Concluding his remarks, Mr. Chowdhury emphasized that meaningful partnerships, technology-enabled coordination, and inclusive digital solutions are gradually helping Bangladesh build a more integrated and accessible healthcare system capable of reaching populations traditionally excluded from healthcare services.

Dr. Sanjay Pattanshetty

Professor and Director, NIMS Institute of Public health and Governance, NIMS University, Jaipur

Dr. Sanjay Pattanshetty discussed the importance of strengthening international cooperation and policy alignment to ensure the effective delivery of digital health services across countries of the Global South. Speaking from a broader public health governance perspective, he emphasized that digital health cannot be viewed only as a technological issue, but must also be understood within the larger frameworks of global health security, intellectual property rights, trade agreements, and cross-sectoral collaboration. He highlighted that achieving effective and equitable digital healthcare delivery requires harmonization between health policies, technology governance, and international regulatory systems.

"When we talk about digital health services, we also need to think about digital literacy, interoperability, data security, and the broader framework of global digital health security."

Dr. Pattanshetty noted that while many successful digital health practices and innovations were discussed during the workshop, several structural challenges continue to limit their scalability and sustainability. He identified digital literacy, workforce capacity, interoperability, data security, and technological inequality as some of the most critical barriers facing countries of the Global South. According to him, digital health systems can only succeed when healthcare workers and communities possess the skills and confidence required to engage with these technologies effectively. He also stressed that interoperability and secure data-sharing mechanisms are essential for building integrated and trustworthy digital health ecosystems.

He further emphasized the importance of multi-sectoral and intergovernmental collaboration, stating that digital health governance extends beyond the mandate of a single ministry or sector. Instead, ministries responsible for health, information technology, education, trade, and finance must work together to create supportive policy environments for digital transformation. He highlighted the role of platforms such as DAKSHIN in promoting technical cooperation, knowledge exchange, and dialogue on issues such as interoperability, digital governance, and innovation sharing among Global South countries.

Dr. Pattanshetty concluded by emphasizing that the ultimate objective of digital transformation should be to improve equitable access to healthcare while strengthening public trust and inclusiveness. He stressed that countries must collectively work toward a broader vision of "global digital health security" that supports resilient, accessible, and people-centered healthcare systems.

Key Takeaways

- **Digital health solutions must be designed around local realities and integrated with existing health systems.** Experiences from Fiji, Thailand, Bangladesh, and India demonstrated that successful digital interventions are those adapted to local contexts, whether through offline-first systems for remote islands, community-based digital platforms for rural populations, or multilingual and low-cost telehealth services. Digital tools should complement and strengthen existing healthcare delivery mechanisms rather than function as standalone technological solutions.
- **Telemedicine and digitally enabled frontline workers are critical for improving healthcare access, continuity of care, and workforce efficiency.** Country experiences highlighted how teleconsultations, asynchronous care models, clinical decision-support systems, and digital training can extend specialist expertise to underserved populations, reduce professional isolation, support task sharing, and improve service delivery in geographically dispersed and resource-constrained settings.
- **Interoperable digital health ecosystems are essential for seamless patient care and efficient health system management.** India's experience with the Ayushman Bharat Digital Mission, electronic health records, and integrated registries illustrated the importance of creating connected digital infrastructures that support continuity of care, improve referral pathways, enable data sharing, and reduce fragmentation across healthcare programmes and facilities.
- **Digital public infrastructure, digital public goods, and open, adaptable technologies offer scalable pathways for health system transformation across the Global South.** Reusable platforms such as CoWIN, eSanjeevani, U-WIN, and other open-source solutions provide opportunities for countries to adapt proven models rather than build systems from scratch. However, successful adoption requires local customization, appropriate governance frameworks, and sustainable financing mechanisms.
- **Data, artificial intelligence, and digital analytics can significantly strengthen disease surveillance, service planning, and clinical decision-making.** Examples from India, Fiji, Tajikistan, and the Philippines demonstrated the potential of AI-assisted diagnostics, GIS mapping, digital surveillance platforms, and data-driven planning to identify high-risk populations, target interventions more effectively, and improve healthcare outcomes.
- **Digital transformation must be accompanied by investments in digital literacy, workforce development, trust, and governance.** Participants emphasized that technology alone cannot address health system challenges. Building digital skills among healthcare workers and communities, strengthening cybersecurity and privacy protections,

ensuring ethical use of AI, and establishing robust regulatory frameworks are essential for sustainable and equitable digital health adoption.

- **Equity must remain at the centre of digital health strategies.** Speakers consistently stressed that digital innovations should reduce rather than widen existing disparities. Hybrid service delivery models, offline functionality, community support mechanisms, affordable access, and alternative non-digital pathways are necessary to ensure that vulnerable and marginalized populations are not excluded from healthcare services.
- **Public-private collaboration can accelerate innovation, affordability, and service integration.** Bangladesh's telehealth model demonstrated how partnerships among governments, healthcare providers, insurers, and technology companies can expand access, strengthen referral systems, and improve continuity of care while maintaining affordability for low-income populations.
- **South-South cooperation emerged as a key enabler for advancing digital health across the Global South.** Participants emphasized the importance of sharing practical implementation experiences, adapting successful models to local contexts, jointly validating emerging technologies, strengthening capacity-building efforts, and learning not only from successes but also from implementation challenges and failures.
- **DAKSHIN was recognized as a platform for South-South dialogue, knowledge exchange, and partnership building in digital health. T**hroughout the workshop, speakers highlighted the value of sharing experiences across countries facing similar health system challenges. Professor Sharma described DAKSHIN as a platform for showcasing best practices and learning from other countries. Dr. Ratna emphasized its role in facilitating networking, technical cooperation, capacity building, and policy dialogue among countries of the Global South. Dr. Animesh Sinha further suggested that platforms such as DAKSHIN could support practitioner-led learning, facilitate exchange of implementation experiences across countries, document lessons from both successes and failures, and promote collaboration around open and adaptable digital health solutions. The discussions indicated that DAKSHIN can serve as a convening platform that connects policymakers, researchers, practitioners, and institutions to support mutual learning and strengthen cooperation on digital health priorities.

RIS

Research and Information System for Developing Countries

विकासशील देशों की अनुसंधान एवं सूचना प्रणाली

RIS specialises in issues related to international economic development, trade, investment and technology. It is envisioned as a forum for fostering effective policy dialogue and capacity-building among developing countries on global and regional economic issues. The focus of the work programme of RIS is to promote South-South Cooperation and collaborate with developing countries in multilateral negotiations in various forums. Through its following centres/forums, RIS promotes policy dialogue and coherence on regional and international economic issues.

The word "DAKSHIN" (दक्षिण) is of Sanskrit origin, meaning "South." The Hon'ble Prime Minister of India, Shri Narendra Modi, inaugurated DAKSHIN – Global South Centre of Excellence in November 2023. The initiative was inspired by the deliberations of Global South leaders during the Voice of the Global South Summits. DAKSHIN stands for Development and Knowledge Sharing Initiative. Hosted at the RIS, DAKSHIN has established linkages with leading think tanks and universities across the Global South and is building a dynamic network of scholars working on Global South issues.

AIC at RIS has been working to strengthen India's strategic partnership with ASEAN in its realisation of the ASEAN Community. AIC at RIS undertakes research, policy advocacy and regular networking activities with relevant organisations and think-tanks in India and ASEAN countries, with the aim of providing policy inputs, up-to-date information, data resources and sustained interaction, for strengthening ASEAN-India partnership.

CMEC has been established at RIS under the aegis of the Ministry of Ports, Shipping and Waterways (MoPS&W), Government of India. CMEC is a collaboration between RIS and Indian Ports Association (IPA). It has been mandated to act as an advisory/technological arm of MoPSW to provide the analytical support on policies and their implementation.

FITM is a joint initiative by the Ministry of Ayush and RIS. It has been established with the objective of undertaking policy research on economy, intellectual property rights (IPRs) trade, sustainability and international cooperation in traditional medicines. FITM provides analytical support to the Ministry of Ayush on policy and strategy responses on emerging national and global developments.

BEF aims to serve as a dedicated platform for fostering dialogue on promoting the concept in the Indian Ocean and other regions. The forum focuses on conducting studies on the potential, prospects and challenges of blue economy; providing regular inputs to practitioners in the government and the private sectors; and promoting advocacy for its smooth adoption in national economic policies.

FIDC, has been engaged in exploring nuances of India's development cooperation programme, keeping in view the wider perspective of South-South Cooperation in the backdrop of international development cooperation scenario. It is a tripartite initiative of the Development Partnership Administration (DPA) of the Ministry of External Affairs, Government of India, academia and civil society organisations.

FISD aims to harness the full potential and synergy between science and technology, diplomacy, foreign policy and development cooperation in order to meet India's development and security needs. It is also engaged in strengthening India's engagement with the international system and on key global issues involving science and technology.

As part of its work programme, RIS has been deeply involved in strengthening economic integration in the South Asia region. In this context, the role of the South Asia Centre for Policy Studies (SACEPS) is very important. SACEPS is a network organisation engaged in addressing regional issues of common concerns in South Asia.

Knowledge generated endogenously among the Southern partners can help in consolidation of stronger common issues at different global policy fora. The purpose of NeST is to provide a global platform for Southern Think-Tanks for collaboratively generating, systematising, consolidating and sharing knowledge on South South Cooperation approaches for international development.

DST-Satellite Centre for Policy Research on STI Diplomacy at RIS aims to advance policy research at the intersection of science, technology, innovation (STI) and diplomacy, in alignment with India's developmental priorities and foreign policy objectives.

— Policy research to shape the international development agenda —

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