WHO SEARO Multi-Stakeholder Consultation Webinar Report

Shaping the Next Global Strategy on Digital Health (2028-2033)

1. Webinar Details

Item	Information
Host Organization	NAAMII (Nepal Applied Mathematics and Informatics Institute for research) – a prospective WHO Collaborating Centre
Date	31st March, 2026
Time (with Time Zone)	11: 30 AM to 1: 30 PM NPT (+5:45 GMT)
Number of Participants	> 80 participants across three breakout rooms (each room had 19-20 active contributors)
Participant Profile	Multi-stakeholder: government officials (ministries of health, IT, finance), academia and researchers, private sector (vendors, startups, tech service providers), civil society, development partners (WHO country offices), clinicians (surgeons, physicians, public health professionals), health informaticians, policy makers, and digital health enthusiasts from across the SEAR region (Nepal, Bhutan, India, Thailand, Timor-Leste, etc.)

2. Summary of Discussions by Thematic Area

Theme 1: Governance, Leadership and Equity

Key Gaps Identified	Priority Actions Proposed (2028-2033)	Illustrative Examples / Country Reflections
Policy-implementation gap – many countries have a digital	**Participatory policy development** – laws and	**Nepal**: Digital health blueprint ready for

health strategy on paper but lack funded, accountable action. Frontline workers are poorly involved in policy formation.	strategies should be co-developed with all tiers of government (federal, provincial, local) and end-users.	endorsement; AI policy 2025 adopted but still lacks implementation guidance.
Digital divide and equity – remote areas lack connectivity and quality care; digital services often designed for urban, tech-savvy populations, leaving behind rural, elderly, and disabled groups.	**Inverted pyramid approach** – build digital health from community upwards, not only from hospital downwards. Prioritize service delivery, not just data collection.	**Bhutan**: Centralised GVtech agency provides national digital ID and interoperability; but last-mile connectivity and digital literacy remain challenges.
Fragmented governance – no central authority to coordinate across health, finance, IT ministries; poor strategic clarity for Digital health and AI adoption.	**Clear accountability frameworks** – define roles and responsibilities of each stakeholder (including private sector). Establish multi-ministerial councils for digital health and AI.	**India**: Ministries work in silos (health, women & child development); each handles separate parts of digital health schemes, leading to disjointed beneficiary targeting.
Equity in AI – AI models trained on foreign data may not be locally relevant and could exacerbate disparities.	**Local validation of AI** – require scientific validation of AI tools at local level before deployment. Ensure AI literacy for clinicians and community health workers.	**Regional**: Participants noted that AI products from Europe/USA often exclude local data, creating equity risks.
Limited digital leadership capacity – lack of stable, continuous leadership for digital transformation.	**Strengthen institutional mechanisms** – move from project-based to system-based leadership. WHO to support member states in building digital health governance units.	**Nepal**: Turnover of trained personnel hampers progress; need for community of practice and crowdsourcing as recommended in previous global strategy.

Theme 2: Digital Public Infrastructure, Interoperability and Data Systems

Key Gaps Identified	Priority Actions Proposed (2028-2033)	Illustrative Examples / Country Reflections
Lack of data sharing policies – many countries (e.g., Nepal) have no legal framework for data sharing, consent management, or privacy protection, which blocks interoperability.	**Mandate adoption of health informatics standards** – governments should require all public and private health systems to use standardised data structures (e.g., ICD-11, FHIR, open APIs).	**Bhutan**: First country to fully adopt ICD-11 nationwide into electronic patient information system (with WHO support).
Fragmented systems- cannot exchange data; AI tools deployed before governance frameworks exist.	**Establish minimum digital public infrastructure (DPI) set** – define core digital public infrastructure (national ID, health facility registry, health ID, data exchange layer) with common understanding across stakeholders.	**India**: Aadhaar as foundational DPI, but health-specific DPIs still fragmented; different states use different models.
Vendor lock-in – proprietary systems hinder long-term sustainability and interoperability.	**Promote open source and vendor-neutral policies** – require technology transfer clauses and open standards in procurement.	**IOM example**: Using OpenMRS (open source) for a global health platform across 70+ countries; technical support available through a community of developers (e.g., ThoughtWorks for Bahmni- OpenMRS platform).
Poor data quality for AI – data not validated by clinicians; legacy data often unstructured or paper-based.	**Regulatory framework for AI deployment** – testing, benchmarking, and certification of AI models (define false	**India**: Indian Council of Medical Research certifies some AI models, but no country-wide binding regulation; accountability still

	positives/negatives, use probes in test data).	rests with the doctor (AI as assistive only).
No clear AI governance – most countries lack legally binding AI legislation; AI moves faster than regulation.	**WHO role in standard-setting** – harmonise data standards, support plug-and-play interoperability (e.g., ICD-10/11 APIs), and facilitate cross-border data collaboration.	**Regional**: Only a small proportion of countries have AI-specific laws; participants called for use-case-based regulation rather than blanket rules.

Theme 3: Workforce Capacity and Competencies

Key Gaps Identified	Priority Actions Proposed (2028-2033)	Illustrative Examples / Country Reflections
Digital health not part of formal curriculum – medical, nursing, and public health students graduate without digital health or telemedicine training.	**Competency-based digital health curriculum** – develop standardised modules for different cadres (doctors, nurses, CHWs, administrators). WHO to lead consortium of universities.	**India (Maharashtra University of Health Sciences)**: 650+ healthcare colleges; no digital health in national medical curriculum; need for consortium approach.
Imbalance of supply and demand – some areas have excess IT workforce but low absorption in public sector; other areas have no digital health professionals.	**Labour market analysis** – conduct digital health workforce assessments to guide training and recruitment.	**Nepal**: Only one health informatics course started; insufficient to meet national needs.
Limited digital literacy among frontline health workers – over-reliance on technology without proper	**On-site mentoring and CPD** – integrate digital health into continuous professional development (CME/CPD) with	**Cambodia / Bhutan**: No clear capacity-building modules for digital health workforce;

training; poor supervision and documentation.	incentives (monetary and non-monetary).	supervisors often resistant to new technologies.
High turnover and low motivation – trained staff leave public sector; poor internet connectivity demotivates telemedicine users.	**Create career pathways** – recognise digital health as a specialisation; offer retention incentives and stable connectivity.	**Nepal**: Turnover and braindrain of health informatics graduates is a bottleneck.
Lack of multi-disciplinary teams – technologists, clinicians, and designers work in silos.	**Learning health system communities** – bring together clinicians, UX designers, developers, and AI experts to co-design solutions.	**Regional**: Need for human-centred design; involve end-users from conception to deployment.

Theme 4: Sustainable Financing, Partnerships and Ecosystem Enablement

Key Gaps Identified	Priority Actions Proposed (2028-2033)	Illustrative Examples / Country Reflections
Heavy reliance on external/donor funding – many initiatives are pilot-based and not integrated into national budgets.	**Domestic budget allocation** – governments must allocate dedicated, multi-year funding for digital health within national health budgets.	**Bhutan**: Projects often financed through short-term donor grants, not long-term operational budgets.
Lack of outcome-based financing – funding not linked to health impact or value generation.	**Value-based financing models** – demonstrate return on investment (health outcomes and economic gains) to attract sustainable funding.	**Canada example**: Return on Investment(ROI) model for remote care reduces emergency pressure and doctor shortages.

Weak public-private partnership (PPP) governance – no structured frameworks for engaging private sector innovators.	**Permissive policies for startups** – create innovation sandboxes and public procurement pathways for local digital health solutions.	**India (Karnataka)**: Thriving healthcare startup ecosystem but mostly for-profit; need public-good incentives.
Wastage of digital resources – duplicate servers, fragmented procurement, and lack of resource pooling.	**Resource pooling and open source reuse** – share infrastructure, software, and data across ministries and sectors. Develop common costed programmes.	**Regional**: Multiple entities buy separate servers for same purpose; open source software reuse can minimise wastage.
Siloed ecosystems – academia, private sector, and government work in isolation; no cross-pollination.	**Multi-ministerial coordination** – establish joint financing mechanisms across health, IT, finance, and education ministries.	**Nepal**: Three tiers of government (federal, province, local) need aligned budgeting.

3. Cross-Cutting Themes

Several issues emerged consistently across all four thematic areas:

1. Institutional Capacity and Fragmented Governance

Across governance, DPI, workforce, and financing, participants highlighted the absence of a central, empowered coordinating body for digital health. Ministries of health, IT, finance, and education often operate in silos, leading to duplicative efforts, misaligned policies, and fragmented funding. Even where national digital health strategies exist, implementation suffers from weak institutional mechanisms, high staff turnover, and lack of political continuity.

2. Data Quality and Validation

Poor data quality was repeatedly cited as a barrier to interoperability and AI. Much clinical data remains paper-based; when digitized, it often lacks standardised coding (e.g., ICD-10 vs ICD-11). Data validation by clinicians is rare, leading to AI models trained on noisy or unrepresentative

data. The lack of data sharing policies and consent management further restricts access for research and innovation.

3. Regulatory Fragmentation and Lag

AI has advanced far faster than regulatory frameworks. Most countries in the region lack legally binding AI legislation for health. Even where regulations exist (e.g., India's DPDP Act), they are not harmonized across states or sectors. Participants called for use-case-based regulation rather than one-size-fits-all rules, and for WHO to play a stronger normative role in defining standards, terminologies, and ethical guardrails.

4. Siloed Working and Lack of Multi-disciplinary Collaboration

A strong cross-cutting theme was that technologists, clinicians, policy makers, and end-users do not work together effectively. Digital health projects are often designed in isolation, leading to low adoption and deployment failures. Participants emphasised the need for "learning health system communities" that bring together all stakeholders – including patients and community health workers – from the design phase onward.

5. Equity and the Digital Divide

Equity was not a standalone issue but permeated every theme. Remote and rural areas lack connectivity, digital literacy, and access to quality care. Gender, disability, and socioeconomic status influence who benefits from digital health. AI models trained on foreign or urban data risk exacerbating disparities. Participants consistently called for an "inverted pyramid" approach that starts from community needs and builds upwards.

6. Trust and Human-Centred Design

Trust emerged as a foundational requirement. Patients and providers must trust that digital tools are safe, private, and effective. Human-centred design – involving end-users in co-creation – was identified as a key strategy to build trust and ensure adoption. This includes not only user interfaces but also workflows, supervision models, and feedback mechanisms.

4. Areas of Consensus

Participants across all three breakout rooms and country reflections reached strong agreement on the following points:

1. **Move from digital experimentation to transformation** – The next global strategy must help countries scale what works, not just pilot new technologies. Focus should shift from "digital health" as a separate domain to "digital in health" as a mainstream part of all health system functions.
2. **Community-up approach** – Instead of top-down hospital-centric digitalisation, countries should start with community health workers and primary care, then integrate upwards. Service delivery must be prioritised over data collection for dashboards.
3. **Open standards and open source** – To avoid vendor lock-in and enable interoperability, governments should mandate open standards (e.g., FHIR, ICD-11) and favour open source solutions. The Bhutan model of using a central government tech agency (GVtech) for self-sustained development was praised.
4. **Competency-based digital health education** – Digital health must be integrated into the core curriculum of all healthcare professions (medical, nursing, public health). WHO should lead the development of standardised, competency-based modules that can be adapted by member states.
5. **Equity as a central pillar** – The next strategy must explicitly address last-mile connectivity, digital literacy, gender mainstreaming, and inclusion of persons with disabilities. Equity should not be an afterthought but a design principle.
6. **Value-based financing** – Sustainable financing will follow from demonstrated value (health outcomes and economic return). Governments and donors should fund based on impact, not just activity.
7. **Regulatory framework for AI** – Countries need clear, enforceable AI governance that includes pre-deployment testing, post-market monitoring, and accountability (e.g., clinician remains responsible). WHO should provide guidance on benchmarking and ethical use.
8. **Multi-stakeholder and multi-ministerial coordination** – No single ministry can drive digital health alone. The next strategy should encourage the creation of national digital health councils that include health, IT, finance, education, and private sector representatives.

5. Divergences or Unresolved Questions

While there was broad consensus on many issues, several areas generated debate or remained unresolved:

1. **Centralized vs. decentralized governance** – Bhutan's highly centralized model (GVtech agency) was praised for coherence and resource efficiency. However, participants from federal countries (India, Nepal) noted that local governments need autonomy to address

region-specific health issues. The balance between national standards and local flexibility remains an open question.

2. **Role of private sector** – Some participants emphasized the need to engage private innovators and startups to drive digital health; others warned that over-commercialization could exacerbate inequity and that public-private partnerships must be carefully governed. The extent to which for-profit models should be allowed in public health digitalization was not fully resolved.
3. **Open source vs. proprietary sustainability** – While open source was widely favored for interoperability, questions arose about long-term technical support. The IOM/OpenMRS example showed that community support can work, but participants noted that many LMICs lack the in-house capacity to maintain open source systems without vendor assistance.
4. **AI accountability** – The statement that "the doctor is always accountable" was accepted by many, but some participants questioned whether this remains tenable as AI becomes more autonomous. Who is liable when an AI-assisted diagnosis fails and the clinician relied on the AI? This remains an unresolved legal and ethical debate.
5. **Financing models** – There was agreement on the need for domestic budget allocation, but no clear consensus on how to incentivise governments to prioritise digital health over other pressing health needs. Some suggested tying digital health investments to UHC and pandemic preparedness funds, while others argued for mandatory percentage of health budgets.

6. Consolidated Regional Summary for South-East Asia

Key Regional Priorities for SEAR

The South-East Asia Region faces a dual challenge: rapid digital transformation in urban centres alongside persistent last-mile connectivity gaps in remote and rural areas. Based on the consultations, the following priorities emerged:

1. **Strengthen governance and regulation** – Establish multi-ministerial digital health councils, clear data sharing and privacy laws, and AI regulatory frameworks. WHO should support member states in developing these through normative guidance and technical assistance.

2. **Build foundational digital public infrastructure (DPI)** – Prioritise national digital ID, health facility registry, health professional registry, and secure data exchange layers. Define a minimum set of DPIs with common standards to avoid fragmentation.
3. **Invest in workforce capacity** – Mandate digital health competencies in all health profession curricula. Create career pathways for health informatics specialists, data scientists, and AI ethicists. Use continuous professional development (CPD) and incentives to retain talent.
4. **Ensure equity and leave no one behind** – Design digital health solutions with offline-first capabilities, multi-language interfaces, and accessibility features. Target last-mile connectivity and digital literacy programs for rural, elderly, and disabled populations.
5. **Promote open standards and open source** – Adopt vendor-neutral procurement policies, require open APIs, and build regional knowledge sharing platforms for open source digital health solutions (e.g., OpenMRS, Bahmni).
6. **Move to value-based sustainable financing** – Link digital health funding to measurable health outcomes. Develop costed national digital health investment roadmaps that combine domestic budgets, development partner contributions, and innovative PPP models.

Strategic Directions for 2028-2033

- **From pilots to scale**: The next global strategy should provide concrete guidance on scaling successful digital health interventions, including financing mechanisms, regulatory pathways, and monitoring frameworks.
- **Digital as an enabler, not a goal**: Digital health should be evaluated by its contribution to UHC, health security, and health equity, not by the number of systems deployed.
- **Regional collaboration**: SEAR countries should establish peer learning networks, shared competency frameworks, and regional procurement mechanisms for digital health technologies.
- **Trust and ethics**: The strategy must embed trust-by-design principles, including data privacy, informed consent, algorithmic transparency, and community engagement.

Recommendations to Inform the Next Global Digital Health Strategy (2028-2033)

1. **Require member states to develop costed, multi-year digital health investment plans** aligned with national health sector strategies, with clear accountability for implementation.

2. **Establish a global competency framework for digital health workforce** (from data entry to chief digital health officer) and support regional curriculum development.
3. **Create a global AI in health regulatory toolkit** – including pre-market testing standards, post-market surveillance, and liability guidelines – that countries can adapt.
4. **Fund and promote open source digital public goods** for health, with a focus on LMICs. Include technical support and community building as part of global strategy.
5. **Mandate equity impact assessments** for all digital health deployments, measuring reach to underserved populations (rural, low-income, disabled, linguistic minorities).
6. **Strengthen WHO's normative role** in defining terminologies, interoperability standards (e.g., FHIR profiles for SEAR), and ethical AI principles.
7. **Support cross-border data collaboration** for disease surveillance and research, while respecting national sovereignty and privacy laws.

7. Annex

7.1 List of Speakers

Name	Designation / Affiliation
Dr. Bishesh Khanal	Founding Chairperson and Research Scientist, NAAMII
Dr. Karthik Adapa	Regional Advisor, Digital Health and AI, WHO SEARO
Mr. Pawan Kumar Ghimire	National Professional Officer (HIS), WHO Country office Nepal
Ms Sonam Yangchen	Health System Focal Officer, WHO Bhutan
Dr. Kiran Raj Pandey	Clinical Research Scientist, NAAMII

7.2 Breakout Presentations

Three breakout rooms were conducted, each covering all four themes. Key points from each room have been synthesised into the thematic summaries above. The breakout rooms recorded high engagement and produced rich, practical recommendations.

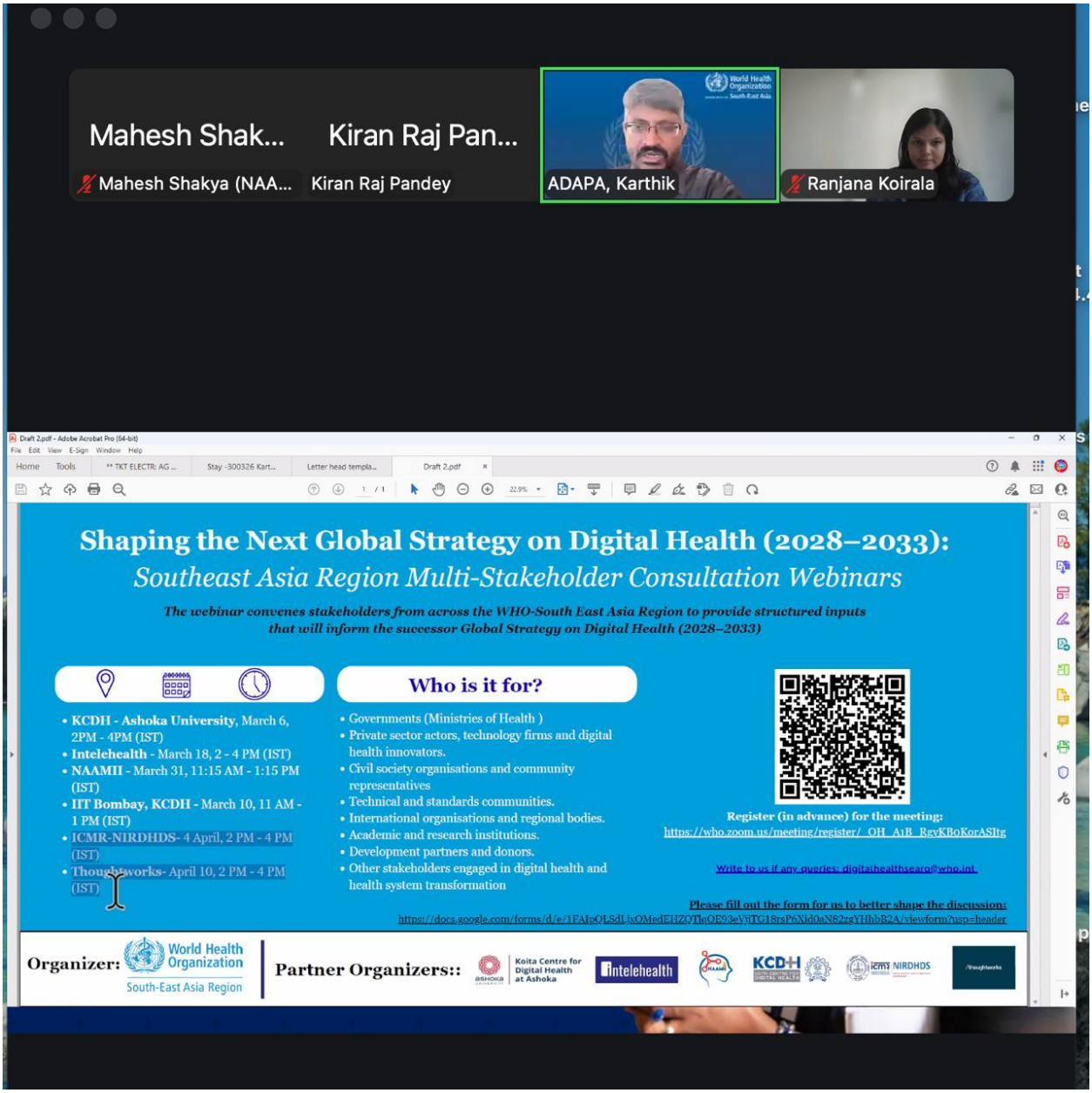
Breakout Room 1 focused on governance, digital public infrastructure, workforce capacity, and sustainable financing for digital health. Key gaps identified included the digital divide, last-mile connectivity challenges, limited integration across the data and AI lifecycle, and continued focus on hospital-centric systems rather than community-level digital health approaches. Participants also highlighted the lack of data-sharing policies, consent frameworks, and interoperability standards. Workforce challenges included fragmented training, low motivation among healthcare workers, lack of clear operational guidelines, and dependence on donor funding. Financing gaps included heavy reliance on external funding and poor alignment between health priorities and budget allocation. Priority actions included strengthening digital infrastructure, developing government-endorsed standards, improving AI literacy among physicians, establishing digital health degree programs, promoting open-source platforms, institutionalizing digital governance, and introducing impact-based budgeting. Cross-cutting themes included institutional capacity, regulatory fragmentation, data quality validation, and the need for better coordination across sectors.

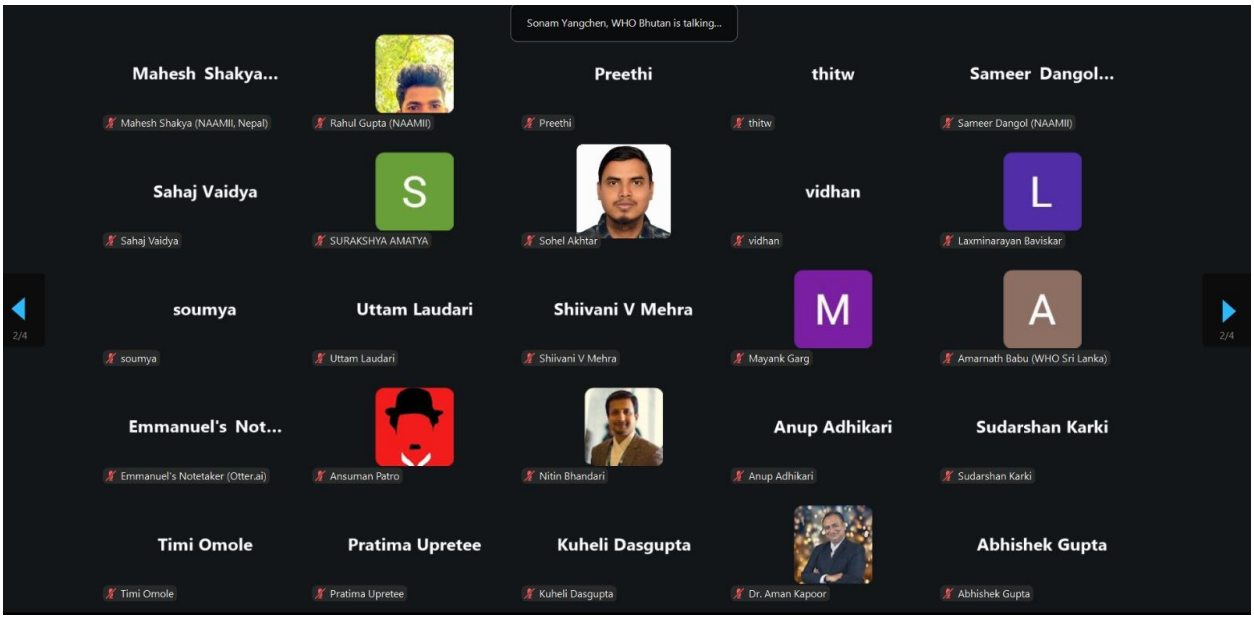
Breakout Room 2 discussions highlighted governance and policy implementation gaps, particularly the disconnect between policy formulation and implementation and the limited involvement of frontline workers in policy development. Governance and leadership were found to be fragmented, with unclear strategic direction for AI adoption and limited long-term financing mechanisms. In digital public infrastructure, key issues included fragmented health information systems, rural-urban disparities, duplicated identification systems, and low digital literacy among health workers. Workforce challenges included an imbalance between supply and demand for digital health professionals and inadequate training systems. Financing gaps included limited budget allocation and weak collaboration across sectors. Priority actions included participatory and inclusive policy development, alignment of policies across government levels, technical support for open-source systems, incentives and continuous training for the workforce, integration of digital health into academic curricula, expansion of telemedicine, resource pooling, startup-friendly policies, and strengthening public-private partnerships for sustainable financing and implementation.

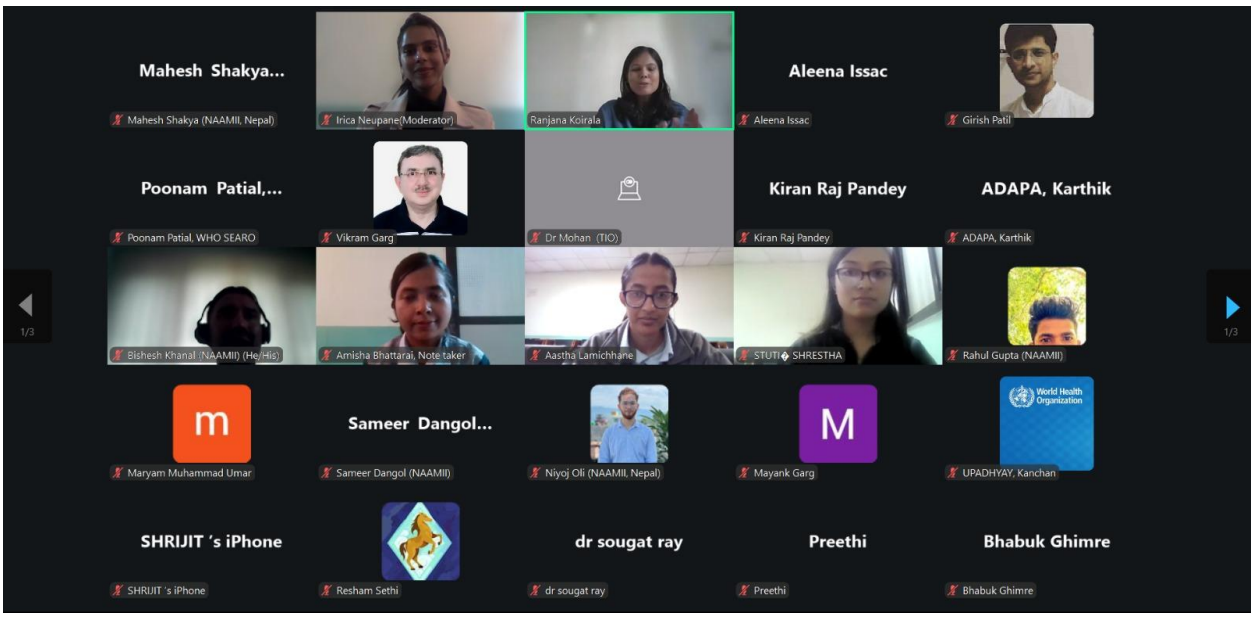
Breakout Room 3 identified key governance and coordination challenges, including restricted data sharing, paper-based systems, lack of electronic medical records, weak governance structures, unclear roles and responsibilities, and limited accountability across sectors. In digital public infrastructure, participants highlighted the absence of regulatory frameworks for AI, lack of interoperable systems, and challenges in disease classification and data standardization. Workforce challenges included limited digital literacy among healthcare workers, lack of supervision and documentation, absence of digital health in medical curricula, and over-reliance on under-trained rural health workers, which affects data quality and system implementation. Financing and ecosystem challenges included limited investment in digital

health and weak coordination among stakeholders. Priority actions included developing regulatory frameworks for AI, creating integrated and interoperable data systems, introducing competency-based digital health curricula, incorporating human-centred design, strengthening stakeholder coordination, promoting global partnerships, and ensuring transparency and ethical practices in digital health implementation.

7.3 Photos / Screenshot







7.4 Breakout Recording

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7.5 Pre- survey Webinar Analysis

Background

As part of the WHO SEARO consultation process for the development of the Global Strategy on Digital Health (2028–2033), a pre-survey was conducted among a diverse group of stakeholders across the digital health ecosystem. Respondents represented government agencies, international organizations, academia, private sector entities, civil society, and development partners, with presence across Nepal, India, and global settings. The survey aimed to capture comprehensive perspectives on the implementation of the current strategy and inform priorities for the next phase.

Stakeholder Profile and Areas of Work

Participants represented a wide range of stakeholder groups, including government bodies, academia, technical agencies, development partners, and private sector organizations. Their work spans digital health implementation, health systems strengthening, public health emergency response, community health information systems, supply chain, health financing, and AI-driven preventive health solutions. This diversity ensured that the findings reflect both policy-level insights and ground-level implementation realities, including perspectives from low-resource and global contexts.

Successes of the Current Global Strategy

The respondents explained that the current strategy had clear strategic objectives as well as outlines priority actions. They note that the current strategy led to growth in areas like telemedicine, electronic health records as well as digital surveillance systems. In India, the government-built core systems surrounding the global strategy like digital health IDs, health facility registry as well as consent-based data exchange. In Bangladesh, the success factors included the DHIS2 scaling up to reach 98% of community reporting. The COVID-19 pandemic led to an opportunity to adopt digital health worldwide. The use of telemedicine and EMRs were also institutionalized across the world. Digital health was able to stand as a core agenda for discussion among ministries. The strategy has successfully enabled countries to build digital health infrastructure, interoperability frameworks, and national platforms (e.g., India's ABDM). The strategy reportedly enhance awareness, policy alignment as well as adoption of digital initiatives.

Failures, Gaps, and Limitations

Participants notes that the area of human resources had not been addressed well in the current strategy. They also pointed out that the current strategy missed delivering interoperability since systems were still running in siloes. A large part of digital health infrastructure was dependent on donors which lead to abandonment after completion of project cycles. Many of the SEARO

countries are still practicing paper-based reporting in the grassroots levels. The strategy overlooks concepts like mental health, climate resilience as well as 'offline-first' altogether. A key gap remained in visibility of last-mile execution, as systems rely heavily on aggregated reporting. The reported failures also included limited access to vulnerable groups including last mile connectivity issues remaining unaddressed.

Outcomes of the Current Strategy

The outcomes of the implementation of the current strategy included the strategies being limited to written documents rather than being implemented. The reported outcomes also included the larger focus on hospital rather than going through the community, primary healthcare networks and to the secondary and tertiary care pathways. Digital health was utilized in DHIS2 as well as integrated disease surveillance systems. The implementation of the strategies has also led to improvement in health access through telemedicine helping reduce the burden of non-communicable diseases.

Key Lessons Learned

The participants reported a wide variety of lessons learnt that can be employed for designing the next global strategy. They included avoiding system fragmentation, enhancing national ownership, reducing digital health infrastructure barriers, setting up friendly legal frameworks and shifting to people-centric focus. Digital-friendly governance could be uplifted and the health workforce could also be strengthened. Countries were able to realize that digital tools enhanced swifter patient registration process, reduced hefty paperwork, provided opportunity for telemedicine expansion and helped made the pandemic efforts more efficient. The respondents also highlighted that technical standard was not merely enough for interoperability where the political structure also came into play. Most of the pilot projects of digital health seemed to succeed while the actual scaling up and mainstreaming lagged behind. The digital tools should be designed to collect disaggregated data for equity monitoring. The respondents also pushed for development of practical AI governance toolkit rather than only outlining principles. A key lesson was that building digital infrastructure alone is not sufficient and its effectiveness depend on how well it reflected actual field-level execution. The detailed nuances like the context of clinical R&D, staff competency across levels of care delivery and market access should also be focused upon to build the next global strategy. Another lesson learnt was the access to digital tools did not guarantee improved health outcomes. A sustained focus on behavior change, user engagement and long term adherence is required. Thus, the respondents stressed on needing to shift the focus more to the preventive and behavior focused digital health including enhanced focus on early risk detection rather than creating treatment centric models. The care personalization can also be AI driven with necessary ethical safeguards in place.

Top Priorities for the Next Strategy (2028–2033)

The Global Strategy on Digital Health (2028-2033) should prioritize making digital health simpler, more accessible, and people-centered, with a shift away from access-driven approaches and toward outcome-driven, preventive, and personalized care. A top priority is the creation of a strong digital public infrastructure, which includes integrated systems such as digital identity, health information exchange, consent management, and registries, all while ensuring interoperability and avoiding fragmented applications. The strategy should also emphasize the ethical and responsible use of artificial intelligence, backed up by strong governance, to enable real-time analytics, early detection, predictive care, and better decision-making.

Furthermore, there is a need to shift from hospital-centered models to continuous, community-based care that emphasizes prevention, behavior change, primary health care, and community health worker-centered systems. Data systems must be strengthened, which includes improving the quality and reliability of field-level data, developing long-term data infrastructure, ensuring data autonomy, and fostering trust through transparency and accountability. Investment in workforce training and regulatory harmonization is also required to ensure successful implementation. Overall, the strategy should encourage inclusive, cost-effective, and integrated solutions that reduce fragmentation while providing long-term health outcomes.

Barriers to Sustainable Implementation (Including Context-Specific Barriers)

Stakeholders identified a wide range of barriers across contexts. Governance and regulatory challenges, including weak leadership and lack of clear policies, limit effective implementation. Financial constraints and dependence on donor funding affect sustainability.

Workforce-related barriers, such as limited digital literacy and lack of training, hinder adoption. Infrastructure challenges, including poor connectivity and limited access to devices, remain significant in low-resource settings.

Interoperability issues continue to result in fragmented systems. In addition, context-specific barriers include low user engagement, lack of trust in data systems, weak alignment between stakeholders, and insufficient focus on preventive health and behavior change. Ethical concerns related to data privacy and security further limit adoption.

Enabling Factors for the Next Strategy

Key enabling factors include strong governance and leadership, supported by clear policy and regulatory frameworks. Sustainable financing models and long-term investment are essential for scaling digital health initiatives.

Interoperable digital infrastructure and real-time data systems are critical for effective implementation. Workforce capacity building and digital literacy must be prioritized. User-centered design and inclusive approaches will improve accessibility and engagement.

Collaboration across sectors, along with trust, transparency, and ethical practices, will be essential to ensure sustainability and impact.

Areas Requiring Stronger Global Coordination

Stakeholders emphasized the need for stronger global coordination in areas such as interoperability standards, data governance, and ethical use of AI. Harmonization of regulatory frameworks across countries is necessary to enable secure data sharing and cross-border collaboration.

Coordination is also needed in workforce training, capacity building, and knowledge sharing. Additionally, aligning approaches to real-time data collection and use, as well as strengthening emergency response systems, were identified as key priorities.

Role of Stakeholders in the Next Strategy

Stakeholders are expected to play critical roles in digital health implementation, capacity building, innovation, monitoring, and knowledge sharing. Organizations highlighted their potential contributions in areas such as AI-driven solutions, preventive health, community health systems, and digital health standards.

There is also a strong emphasis on collaboration, with stakeholders acting as facilitators, implementers, and knowledge-sharing partners.

Expectations from Stakeholders

Respondents emphasized the need for strong policy alignment, sustainable funding, and clear regulatory frameworks from governments and policymakers. Technology providers are expected to develop interoperable, secure, and user-friendly solutions.

Healthcare providers should integrate digital tools into routine care, while global organizations should support coordination, standard-setting, and knowledge sharing. Academic institutions are expected to generate evidence, and funding bodies should support long-term, outcome-driven innovations.

Cross-Cutting Themes

Equity and Access
The strategy should prioritize underserved populations, promote offline-first solutions, and strengthen community-based approaches.

Ethics and Human Rights
Clear ethical frameworks are needed to ensure privacy, informed consent, and protection from misuse of data.

Trust and Data Governance
Transparent data governance systems and accountability mechanisms are essential to build trust.

Empowerment and Participation
Communities and frontline workers should be actively involved in the design and implementation of digital health solutions.

Transparency and Accountability
Clear roles, monitoring systems, and public reporting are necessary to ensure accountability.

Guidance on Emerging Technologies (AI)

Respondents emphasized the need for comprehensive guidance on the responsible use of AI, including governance frameworks, clinical validation, ethical safeguards, and transparency. AI should be positioned as a support tool rather than a replacement for human decision-making. Continuous monitoring, accountability mechanisms, and capacity building are essential to ensure safe and effective use.

Data Systems and SCOR Framework (Survey, Count, Optimize, Review, Enable)

Stakeholders highlighted the importance of strengthening data systems across all dimensions. There is a need to improve real-time data collection, particularly for behavioral and lifestyle risk factors. Civil registration and cause-of-death data require better accuracy and integration.

Health service data systems should move beyond reporting to enable actionable insights. Performance review mechanisms should incorporate real-time monitoring and outcome-based indicators. Finally, data must be effectively translated into policy and action through improved analytics, feedback loops, and accountability systems.

Partnerships and Collaboration

Strengthening partnerships across public, private, and civil society sectors requires clear roles, shared goals, and aligned accountability. Public-private partnerships should be supported by strong governance and ethical safeguards.

Collaboration should focus on interoperability, knowledge sharing, and co-creation of solutions. Community involvement and inclusion of diverse stakeholders are essential to ensure relevance and sustainability.

Conclusion

The pre-survey findings demonstrate that while the current Global Strategy on Digital Health has made significant progress in advancing infrastructure and adoption, substantial gaps remain in implementation, equity, and impact.

The next strategy presents an opportunity to transition toward integrated, preventive, and outcome-driven digital health systems. A strong focus on governance, interoperability, community engagement, real-time data use, and ethical implementation will be critical to achieving sustainable and equitable transformation.

7.6 Analysis of Post-Webinar Survey

Stakeholder Representation of Respondents

Participants in the survey represented a diverse range of stakeholders, primarily from academia and research, along with representation from government, international and regional organizations, and development partners/donors. The respondents were drawn from multiple countries within the region, including India, Nepal, Thailand, and Timor-Leste, as well as contributions from global-level participants. Overall, the responses reflect a strong presence of academic and research perspectives, complemented by inputs from policy, programmatic, and international stakeholders.

Theme 1 : Governance, Leadership and Equity

Key Issues

The responses under this theme highlight several governance-related challenges that are hindering the implementation of digital health. A frequent reports issue is the lack of national digital health strategies or policies which suggests that many settings do not still have a clear strategic direction to guide digital health initiatives. Another prominent concern was the presence of insufficient accountability and monitoring mechanisms. This suggest that there are gaps in oversight, performance tracking and enforcement of existing plans. Respondent pointed out there is poor alignment between national plans and global frameworks In addition, weak institutional leadership and coordination was identified as a barrier, limiting effective implementation and cross-sectoral collaboration,

Finally, respondents noted limited multi-stakeholder engagement in governance, reflecting insufficient involvement of key actors such as private sector, academia and communities in decision making process.

Recommendations

Respondents suggested some recommendations to address these challenges. The need to ensure policy development, reinforcement, government ownership and sustainability assurance was recognized as a corrective action. Participants highlighted policies that enhance sustainability and return on investment, alongside integrated plans applicable across different health system contexts is cruical. Participants strongly recommended to embed real-time execution visibility and accountability mechanisms within national digital health systems, particularly anchored at the last-mile level to support continuous monitoring and timely corrective action.

Respondents also emphasized the need for integrated governance with accountability mechanisms that enable scale with quality across all aspects of digital health. Strengthening coordination through mechanism such as a working committee at the federal level, implemented through public-private partnerships was suggested. The creation of aligned strategies with clear hierarchy and accountability structures was also recommended. Importance of engaging all stakeholders at all levels for effective monitoring, promoting discussion among independent researchers and establishing regulatory frameworks with defined accountability and measurable outcomes was stressed by participants. Improving infrastructure for connectivity was also noted as a supporting requirement for effective governance implementation.

Theme 2 : Digital Public Infrastructure, Interoperability and Data Systems

Key Issues

Respondents highlighted several issues in digital public infrastructure, interoperability and data system. Presence of fragmented systems with no national interoperability architecture was noted repeatedly across responses as a key barrier to effective digital health implementation. Inadequate connectivity and infrastructure was one of the major limitation identified, emphasizing insufficient internet access, hardware, and overall system capacity hinders the functionality and reach for digital health services. Likewise, lack of adoption of common standards was also highlighted as a significant challenge.

Recommendation

Several recommendations were provided to address the challenges in digital public infrastructure, interoperability, and data systems. Interministeral coordination and feasibility within a uniformed open service framework along with support by local, concrete engagement with motivated communities was one of the suggestion. There is a need for strengthening and operationalization of a unified national interoperability architecture that enables seamless, real-time data exchange across health systems through enforceable standards and open APIs, ensuring that data from multiple platforms converges into a coherent, decision-useful layer for program monitoring and service delivery. One suggestion to encourage the standards across both private and public health system was developing incentives. The need to connectivity and

interoperability, create a national system with a unified interoperability architecture, and develop an ecosystem with cross-communicating infrastructure was also recommended. Prioritizing an Offline-First architecture to ensure data synchronization when networks are available and establishing a consortium to harmonize data points aligned with national priorities were also highlighted. These measures were seen as critical to achieving an integrated, efficient, and functional digital health system.

Theme 3: Health Data, Analytics and Responsible Use of AI

Key Issues

Several gaps were highlighted by respondent in the theme health data, analytics, and the responsible use of AI. Poor data quality, completeness, and standardization was one of the major issue that was highlighted. Participants emphasized that absence of national AI governance or regulation was a key gap, with several participants pointing to the lack of formal policies or regulatory frameworks. Another significant issue identified was limited capacity to use data for decision-making which highlights challenges in applying data effectively. Also, concerns around data sovereignty and cross-border data risks were raised, reflecting the need to address ownership and confidentiality of health data.

Recommendations

Several recommendations were suggested to address the above challenges in health data, analytics, and the responsible use of AI. Emphasis was given to importance of ensuring clear indicator requirements, standard operating procedures, and implementation guidelines are consistently followed. There is a need for policies supporting local mechanisms, startups, and sustainable ROI, along with a government-driven approach to oversee AI and data governance. There was a strong recommendation to strengthen institutional capacity was, particularly by embedding decision-support tools, clear workflows, and accountability mechanisms within health systems, ensuring that data and AI insights are routinely used for timely decision-making at all levels. Suggestion was given to develop data quality frameworks for both healthcare-based and community-based data collection, collecting high-quality data for algorithm training, and improving data collection mechanisms while imposing proper regulatory frameworks. Respondents pointed the need to ensure confidentiality and data ownership, and to prioritize high-impact use cases, such as population health and early detection, rather than fragmented AI pilots that may not scale effectively within short timeframes.

Theme 4: Workforce capacity and competencies for digital health.

Key Issues

Key gaps identified include the repeated concern of a lack of digital literacy among frontline health workers, which has been highlighted multiple times. Similarly, the absence of structured digital health curricula or certification is also repeatedly noted. In addition, there is insufficient training related to AI and emerging technologies, further limiting workforce readiness, while ongoing brain drain and retention challenges continue to weaken capacity within the health system.

Recommendation

Recommendations include providing comprehensive and clear guidance through training or introductory modules followed by implementation guidance along with benefits and incentives. Policies should be established for local mechanisms supporting startups and sustainable ROI. Frontline digital capacity should be strengthened by embedding continuous, task-linked training and support within routine workflows rather than one-time trainings to enable consistent system use, improve data reliability, and strengthen last-mile execution. Certified courses relevant to the learner's use case should be developed, continuously updated, and include provisions for re-certification, supported by ToT programs for scale, with concerned employment arranged. Motivation of health professionals for digital learning should be promoted, and continuous professional development should serve as a platform to create literacy among all workers. Training for frontline health workers on the use of digital tools should be ensured with their engagement at all levels. An online digital health certification program for hospital staff should be developed and linked directly to professional license renewal or continuing education credits.

Theme 5: Equity, inclusion, ethics and protection of personal health data.

Key Issues

Weak legal frameworks for health data privacy and protection are repeatedly highlighted by participants, and digital health benefits not reaching rural or remote populations is also mentioned multiple times, indicating major inequities in access. Marginalized groups are excluded from digital health design, and ethical frameworks for AI are not yet developed or applied.

Recommendations

Ensure legal frameworks on data collection and data sharing while promoting inclusivity and gender equality across digital health implementation, and implement legal measures to ensure data privacy and protection. Establish policies for local mechanisms supporting startups and sustainable ROI. Ensure equitable access by embedding digital health delivery within existing community and frontline systems with a focus on consistent last-mile service availability in rural

and remote areas, supported by simple inclusive design and offline-capable solutions. Promote inclusive design co-developed with communities of interest and focus on related populations within the same nation. Promote digital health at the lowest level of health services through a bottom-up approach with government leadership to address disparities. Establish local region-wise independent ethics committees to oversee AI scaling and data use.

Theme 6: Sustainable financing, partnerships and innovation ecosystems.

Key Issues

Among key gaps, digital health not integrated into national health budgets is repeatedly highlighted by participants, along with over-reliance on donor or project-based funding and limited local innovation and startup ecosystems, all of which are mentioned multiple times, and weak public-private partnership frameworks are also repeatedly noted. Additionally, there are insufficient regional financing coordination mechanisms.

Recommendations

Ensure government ownership and sustainable data allocation for continuous implementation of digital health, and establish policies for local mechanisms supporting startups and sustainable ROI. Integrate digital health as a core, budgeted component of national health systems rather than project-based initiatives to ensure sustained financing, institutional ownership, and long-term continuity. Align financing with priority areas while highlighting mutual relationships and understanding among stakeholders. Increase government investment, including allocating matching funds for other partners, improve innovative and government-based funding, and support national health innovation ecosystems through public-private partnerships.

Priority Theme

Among the six themes, **Theme 1: Governance, Leadership and National Digital Health Strategies and Theme 2: Interoperability, Standards and Digital Public Infrastructure** is most frequently prioritized, followed by **Theme 3: Health Data, Analytics and Responsible Use of AI and Theme 6: Sustainable Financing, Partnerships and Innovation. And Theme 4: Workforce Capacity and Competencies is mentioned one time. While Theme 5:** Equity, inclusion, ethics and protection of personal health data was not mentioned by anyone.

Final Thoughts and Recommendations

While significant progress has been made in building digital health systems, the next phase should focus on ensuring these systems translate into consistent and accountable service delivery

at the last mile. A key priority is to move beyond platform creation toward strengthening execution visibility, enabling real-time understanding of what is working, where gaps exist, and who is responsible. Embedding simple, high-frequency data capture linked to clear decision-making workflows can help bridge the gap between data and action. Digital health strategies should prioritize integration with existing institutional structures rather than creating parallel systems to ensure sustainability and ownership. Aligning digital investments with routine administrative processes will be critical to ensure that digital health becomes an integral part of public system functioning rather than remaining a project-driven initiative. Focus should be given to rural areas to proceed with each digital health strategy with capable capacity along with national figures. Strategies should be linked to social determinants of health and gather inputs or studies from beneficiaries and communities. Public-private partnerships will be key to implementing an integrated approach. Research in digital health should not be confined to a single domain. More qualitative studies are needed to understand what drives and hinders adoption in clinical settings while quantitative research should guide ROI assessment to support scaling decisions.